



Light Output Ratio:	48.0%	
Luminaire Power:	23.5 W	
SHR Nominal:	0.00	Calculated using the TM5
SHR Maximum:	1.00	fine grid method.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 15 September 2022

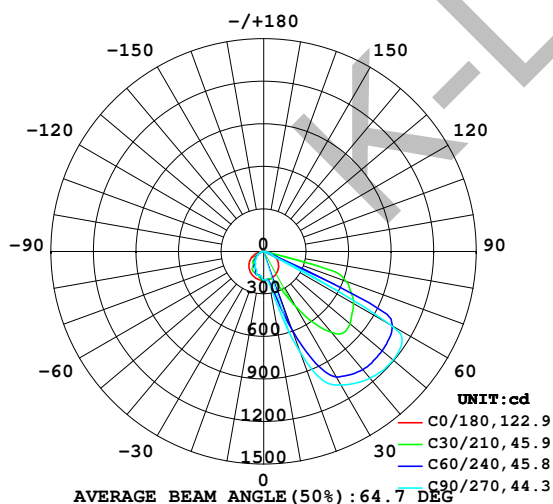
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 1.852m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

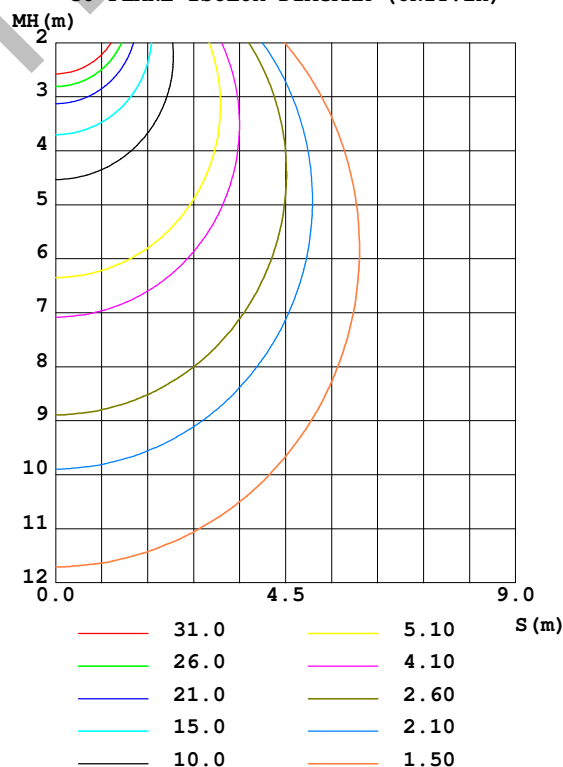
Test:U:230.66V I:0.1061A P:23.499W PF:0.9600 Freq:49.99Hz Lamp Flux:3484.08x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4948
MFR.: K-LITE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 71.11 lm/W
MODEL	KL-2770	Imax (cd)	1191	S/MH (C0/180)	1.30	
NOMINAL POWER(W)	24	LOR(%)	48.0	S/MH (C90/270)	0.89	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1671.1	η UP, DN (C0-180)	0.0, 41.5	
NOMINAL FLUX(lm)	3484.08	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 6.5	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	230	η down (%)	48.0	CIBSE SHR MAX	1.00	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 15 September 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 1.852m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

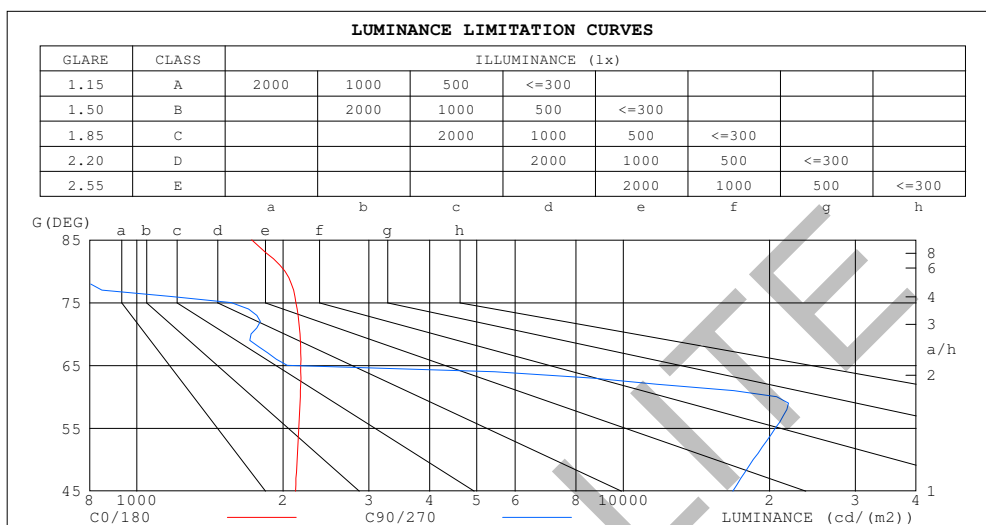
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	202.5	200.7	227.7	200.8	202.6	172.9	172.2	172.7	0- 10	18.70	18.70	1.12, 0.54
20	194.3	378.8	765.7	396.0	193.4	168.5	150.8	168.6	10- 20	68.20	86.90	5.2, 2.49
30	180.3	820.9	1087	831.4	179.1	134.8	129.7	133.9	20- 30	173.0	259.9	15.6, 7.46
40	161.4	963.3	1166	951.3	160.0	109.5	100.3	109.1	30- 40	280.5	540.5	32.3, 15.5
50	137.3	969.5	1190	949.5	135.7	84.28	72.17	84.00	40- 50	361.7	902.2	54, 25.9
60	108.4	917.5	1034	892.7	106.4	57.51	48.98	57.70	50- 60	405.7	1308	78.3, 37.5
70	74.05	427.0	58.73	287.4	71.92	33.44	29.84	33.66	60- 70	267.3	1575	94.3, 45.2
80	35.05	25.70	12.97	22.75	33.76	14.53	11.20	13.53	70- 80	84.18	1659	99.3, 47.6
90	0.0670	0.0047	0.0052	0.0065	0.0096	0.0149	0.0133	0.0094	80- 90	11.40	1671	100, 48
100	0.0079	0.0052	0.0088	0.0065	0.0039	0.0784	0.1301	0.0672	90-100	0.0239	1671	100, 48
110	0.0180	0.0054	0.0086	0.0086	0.0106	0.0799	0.0933	0.0706	100-110	0.0377	1671	100, 48
120	0.0151	0.0070	0.0094	0.0107	0.0106	0.1010	0.1083	0.0894	110-120	0.0401	1671	100, 48
130	0.0185	0.0087	0.0113	0.0137	0.0155	0.1156	0.1373	0.1053	120-130	0.0436	1671	100, 48
140	0.0251	0.0132	0.0143	0.0171	0.0229	0.0899	0.1504	0.0937	130-140	0.0422	1671	100, 48
150	0.0293	0.0159	0.0194	0.0197	0.0298	0.0744	0.1148	0.0883	140-150	0.0337	1671	100, 48
160	0.0340	0.0190	0.0222	0.0236	0.0397	0.0685	0.0977	0.0976	150-160	0.0229	1671	100, 48
170	0.0327	0.0228	0.0273	0.0301	0.0505	0.0785	0.0959	0.0902	160-170	0.0158	1671	100, 48
180	0.0254	0.0227	0.0278	0.0288	0.0246	0.0224	0.0273	0.0288	170-180	0.0038	1671	100, 48
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 15 September 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 1.852m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.66V I:0.1061A P:23.499W PF:0.9600 Freq:49.99Hz Lamp Flux:3484.08x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4948
MFR.: K-LITE	SUR.:	Shielding Angle:



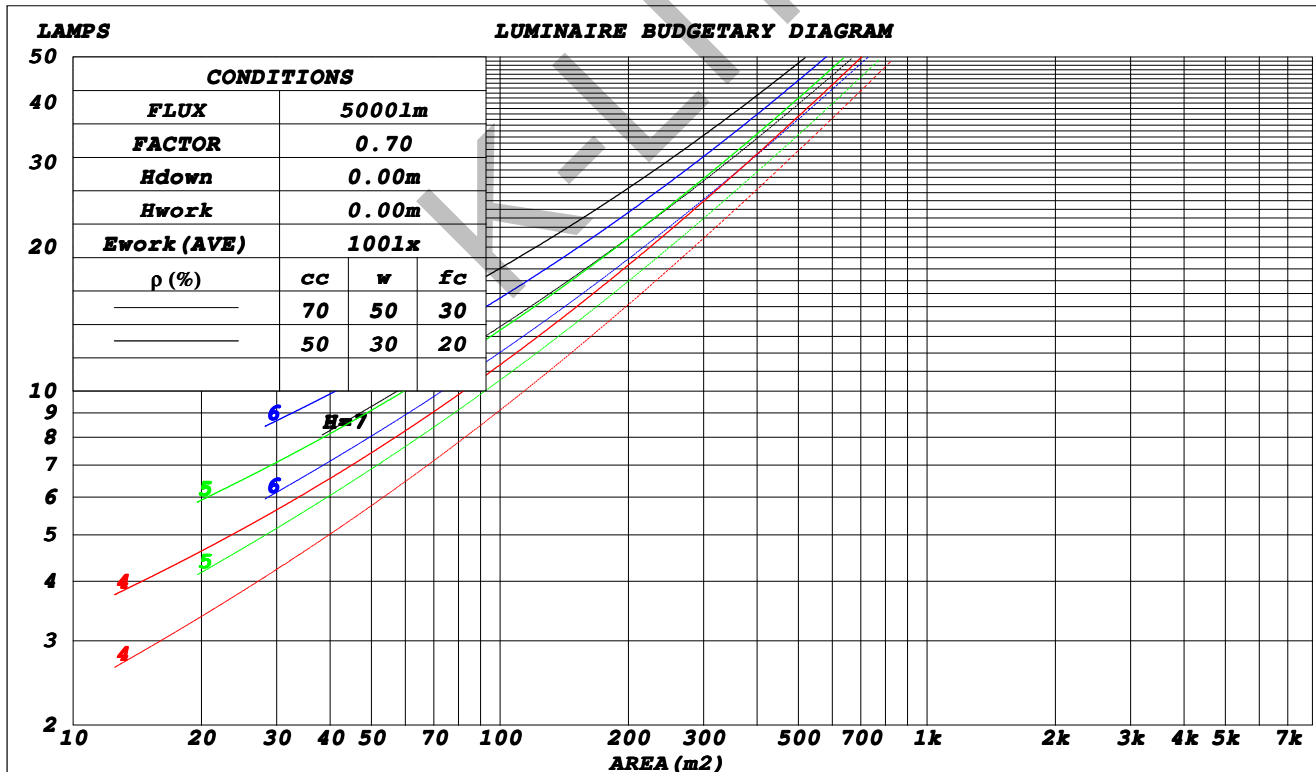
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 15 September 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 1.852m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.66V I:0.1061A P:23.499W PF:0.9600 Freq:49.99Hz Lamp Flux:3484.08x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4948
MFR.: K-LITE	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	.57	.57	.57	.56	.56	.56	.53	.53	.53	.51	.51	.51	.49	.49	.49	.48
1.0	.50	.48	.46	.49	.47	.45	.47	.45	.44	.45	.43	.42	.43	.42	.41	.40
2.0	.43	.39	.36	.42	.39	.36	.40	.37	.35	.38	.36	.34	.37	.35	.33	.32
3.0	.37	.33	.29	.36	.32	.29	.34	.31	.28	.33	.30	.28	.32	.29	.27	.26
4.0	.32	.27	.24	.31	.27	.24	.30	.26	.23	.29	.26	.23	.28	.25	.23	.22
5.0	.28	.23	.20	.27	.23	.20	.26	.22	.19	.25	.22	.19	.24	.21	.19	.18
6.0	.25	.20	.17	.24	.20	.16	.23	.19	.16	.22	.19	.16	.22	.18	.16	.15
7.0	.22	.17	.14	.21	.17	.14	.21	.17	.14	.20	.16	.14	.19	.16	.14	.13
8.0	.20	.15	.12	.19	.15	.12	.19	.15	.12	.18	.14	.12	.17	.14	.12	.11
9.0	.18	.13	.11	.17	.13	.11	.17	.13	.10	.16	.13	.10	.16	.13	.10	.09
10.0	.16	.12	.09	.16	.12	.09	.15	.12	.09	.15	.11	.09	.14	.11	.09	.08



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: K-LITE
 Test Date: 15 September 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
 Humidity: 65.0%
 Test Distance: 1.852m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:230.66V I:0.1061A P:23.499W PF:0.9600 Freq:49.99Hz Lamp Flux:3484.08x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4948
MFR.: K-LITE	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.151	.086	.027	.147	.084	.027	.141	.081	.026	.135	.078	.025	.130	.075	.024		
2.0	.147	.080	.025	.144	.079	.024	.138	.077	.024	.133	.074	.023	.128	.072	.023		
3.0	.138	.073	.022	.135	.072	.022	.130	.071	.021	.126	.069	.021	.121	.067	.021		
4.0	.128	.067	.020	.126	.066	.019	.121	.064	.019	.117	.063	.019	.113	.062	.019		
5.0	.119	.061	.018	.117	.060	.017	.113	.059	.017	.109	.058	.017	.106	.056	.017		
6.0	.111	.055	.016	.109	.055	.016	.105	.054	.016	.102	.053	.016	.098	.052	.015		
7.0	.103	.051	.014	.101	.050	.014	.098	.049	.014	.095	.049	.014	.092	.048	.014		
8.0	.096	.047	.013	.094	.046	.013	.091	.046	.013	.089	.045	.013	.086	.044	.013		
9.0	.090	.043	.012	.088	.043	.012	.086	.042	.012	.083	.042	.012	.081	.041	.012		
10.0	.084	.040	.011	.083	.040	.011	.081	.039	.011	.078	.039	.011	.076	.038	.011		

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.091	.091	.091	.078	.078	.078	.053	.053	.053	.031	.031	.031	.010	.010	.010	
1.0	.087	.075	.064	.074	.064	.055	.051	.044	.038	.029	.026	.022	.009	.008	.007	
2.0	.084	.063	.046	.072	.054	.040	.049	.038	.028	.028	.022	.016	.009	.007	.005	
3.0	.081	.055	.034	.069	.047	.030	.047	.033	.021	.027	.019	.012	.009	.006	.004	
4.0	.077	.049	.027	.066	.042	.023	.046	.029	.016	.026	.017	.010	.009	.006	.003	
5.0	.074	.044	.021	.064	.038	.019	.044	.027	.013	.025	.016	.008	.008	.005	.003	
6.0	.071	.040	.018	.061	.035	.015	.042	.024	.011	.024	.014	.006	.008	.005	.002	
7.0	.068	.037	.015	.058	.032	.013	.040	.022	.009	.023	.013	.005	.008	.004	.002	
8.0	.065	.034	.013	.056	.030	.011	.039	.021	.008	.022	.012	.005	.007	.004	.002	
9.0	.062	.032	.011	.053	.028	.010	.037	.019	.007	.021	.011	.004	.007	.004	.001	
10.0	.059	.030	.010	.051	.026	.009	.035	.018	.006	.021	.011	.004	.007	.004	.001	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:15 September 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:1.852m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.66V I:0.1061A P:23.499W PF:0.9600 Freq:49.99Hz Lamp Flux:3484.08x1 lm										
NAME: SUDO EXTENDED - ASY FRAME					TYPE:PATH FINDERS			WEIGHT:		
SPEC.:WW, NICHIA					DIM.: 490 x 87 x 85			SERIAL No.:4948		
MFR.: K-LITE					SUR.:			Shielding Angle:		
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	18.6	20.2	18.9	20.5	20.7	22.9	24.6	23.2	24.8	25.0
3H	20.1	21.6	20.4	21.8	22.1	22.7	24.2	23.0	24.5	24.7
4H	20.5	22.0	20.9	22.3	22.5	22.6	24.0	22.9	24.3	24.6
6H	20.8	22.2	21.2	22.5	22.7	22.5	23.8	22.8	24.1	24.4
8H	20.9	22.2	21.2	22.5	22.8	22.4	23.7	22.8	24.0	24.3
12H	20.9	22.1	21.2	22.4	22.7	22.4	23.6	22.7	23.9	24.2
4H 2H	21.0	22.4	21.3	22.7	23.0	23.5	25.0	23.8	25.2	25.5
3H	22.9	24.1	23.2	24.4	24.7	23.3	24.6	23.7	24.9	25.2
4H	23.5	24.7	23.9	25.0	25.3	23.3	24.4	23.6	24.7	25.1
6H	24.0	25.0	24.4	25.3	25.7	23.2	24.2	23.6	24.5	24.9
8H	24.0	25.0	24.5	25.3	25.7	23.1	24.1	23.5	24.4	24.8
12H	24.1	24.9	24.5	25.3	25.7	23.1	23.9	23.5	24.3	24.7
8H 4H	23.4	24.4	23.9	24.7	25.1	23.3	24.3	23.8	24.7	25.0
6H	23.9	24.7	24.4	25.1	25.5	23.3	24.0	23.7	24.5	24.9
8H	24.0	24.7	24.5	25.1	25.6	23.2	23.9	23.7	24.3	24.8
12H	24.1	24.7	24.6	25.1	25.6	23.2	23.8	23.7	24.2	24.7
12H 4H	23.4	24.3	23.8	24.6	25.1	23.3	24.2	23.8	24.6	25.0
6H	23.9	24.6	24.4	25.0	25.5	23.3	23.9	23.7	24.4	24.8
8H	24.0	24.6	24.5	25.0	25.5	23.2	23.8	23.7	24.3	24.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.6 / - 0.7					+ 0.4 / - 0.4				
1.5H	+ 0.8 / - 0.3					+ 1.9 / - 3.1				
2.0H	+ 1.5 / - 7.0					+ 1.1 / - 2.7				

CIE Pub.117, 3484 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 4.3$)
 Area: 0.1 m²

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:K-LITE
 Test Date:15 September 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.417
 Humidity:65.0%
 Test Distance:1.852m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.66V I:0.1061A P:23.499W PF:0.9600 Freq:49.99Hz Lamp Flux:3484.08x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
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MFR.: K-LITE	SUR.:	Shielding Angle:

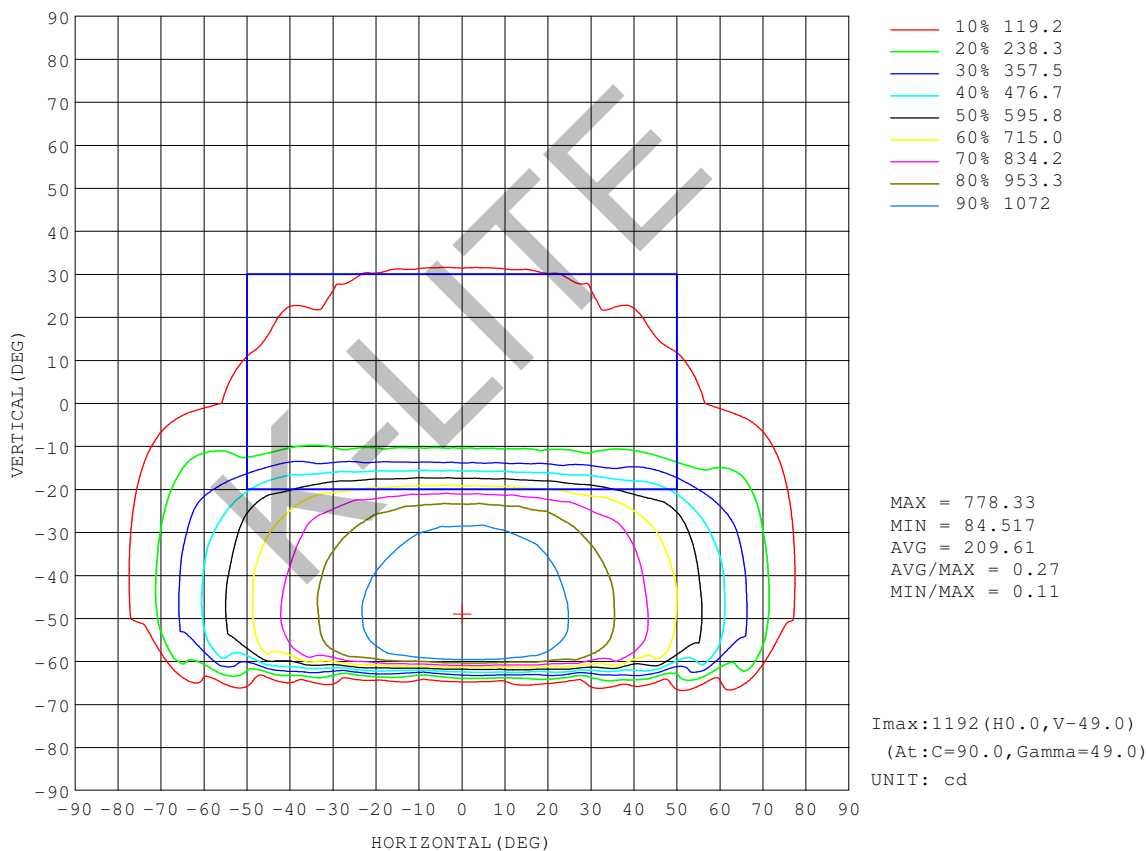
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	24	17	14	23	17	14	23	17	13	10
0.80	29	23	19	29	23	19	28	22	19	15
1.00	34	28	24	33	28	24	32	29	24	20
1.25	38	32	29	37	32	28	36	31	28	24
1.50	41	35	32	40	35	31	38	34	31	27
2.00	45	40	37	44	40	36	42	38	36	32
2.50	47	43	40	46	42	39	44	41	38	34
3.00	49	45	42	47	44	42	45	43	41	36
4.00	51	48	45	49	47	45	47	45	43	39
5.00	52	49	47	51	48	47	48	47	45	41
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:15 September 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:1.852m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:230.66V I:0.1061A P:23.499W PF:0.9600 Freq:49.99Hz Lamp Flux:3484.08x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4948
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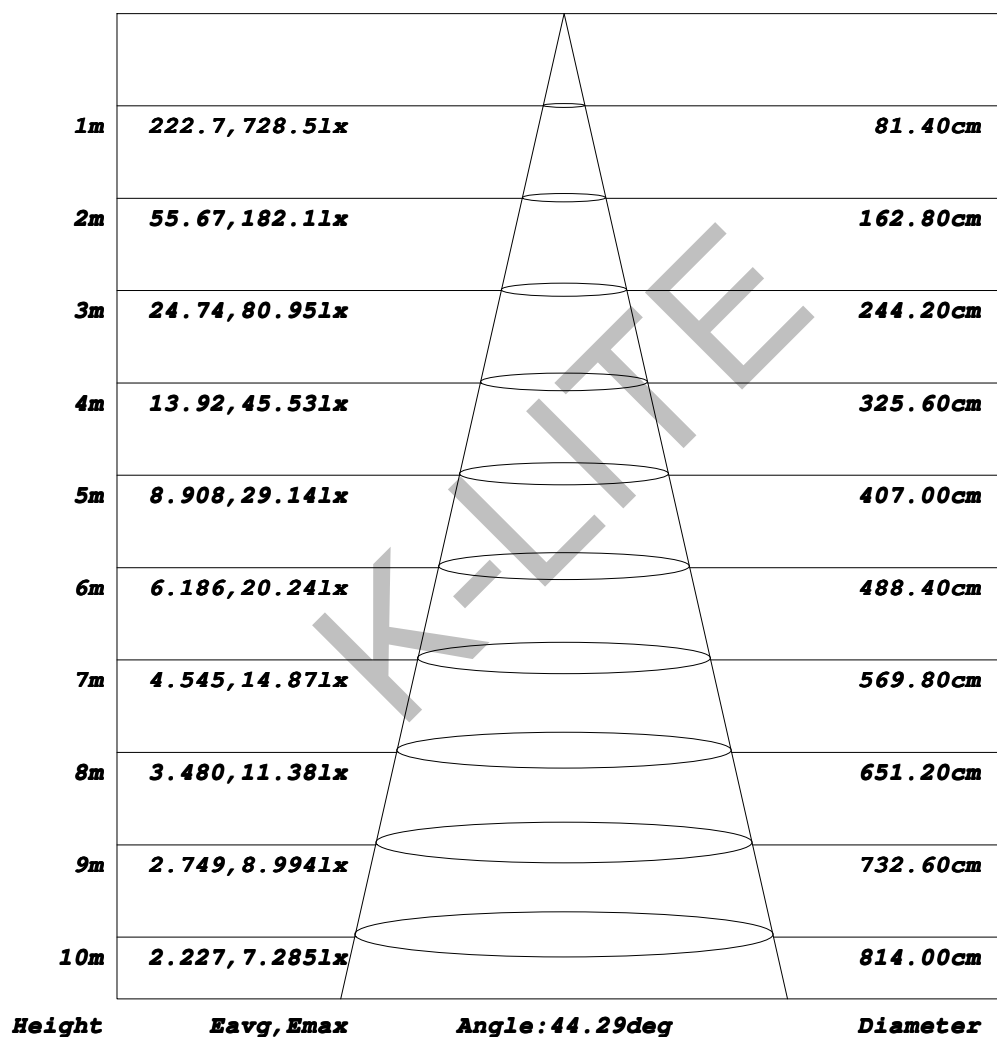


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Remarks:

AAI Figure

Test:U:230.66V I:0.1061A P:23.499W PF:0.9600 Freq:49.99Hz Lamp Flux:3484.08x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4948
MFR.: K-LITE	SUR.:	Shielding Angle:

Flux out:126.1 lm


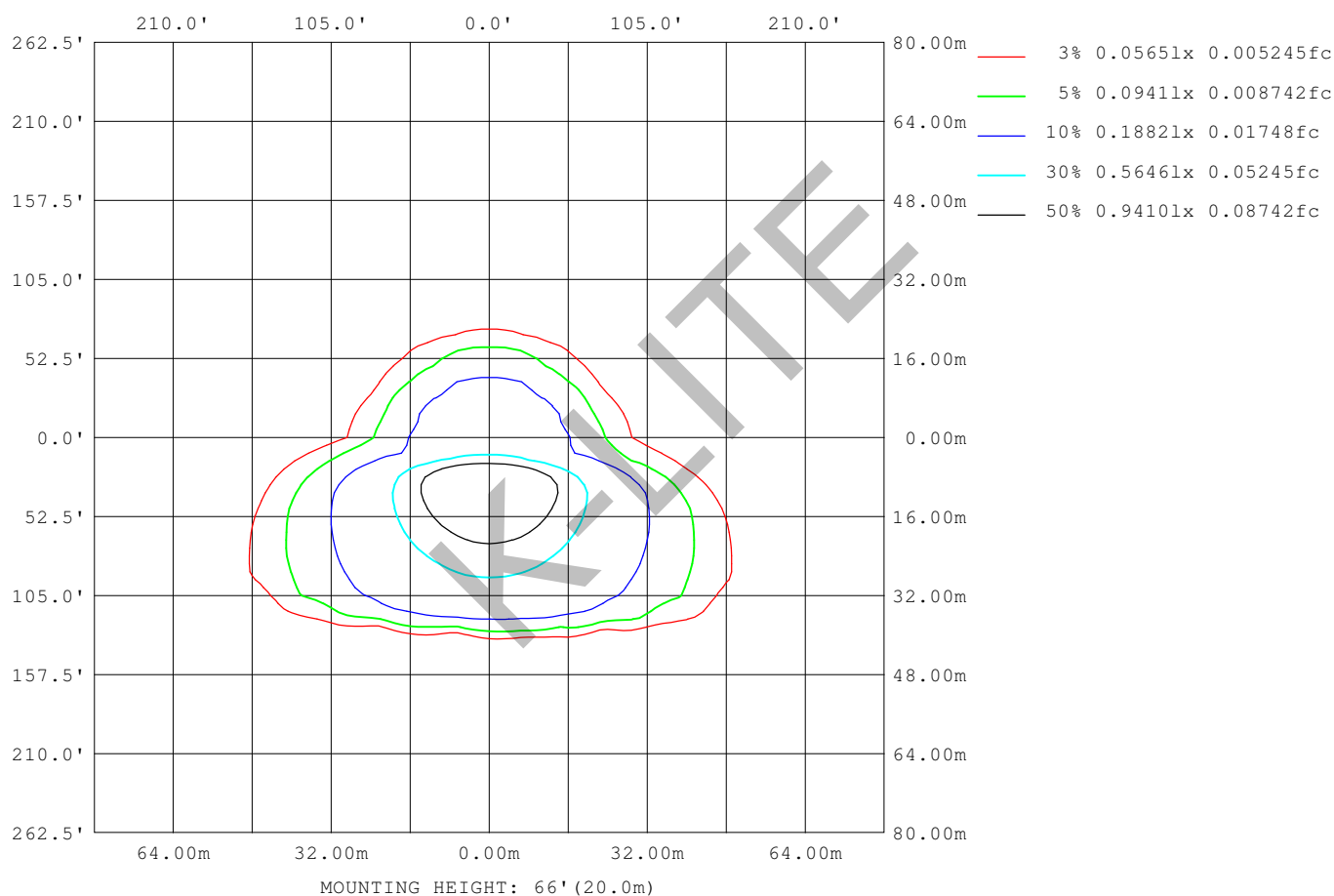
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 15 September 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 1.852m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:230.66V I:0.1061A P:23.499W PF:0.9600 Freq:49.99Hz Lamp Flux:3484.08x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4948
MFR.: K-LITE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 15 September 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 1.852m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:230.66V I:0.1061A P:23.499W PF:0.9600 Freq:49.99Hz Lamp Flux:3484.08x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4948
MFR.: K-LITE	SUR.:	Shielding Angle:

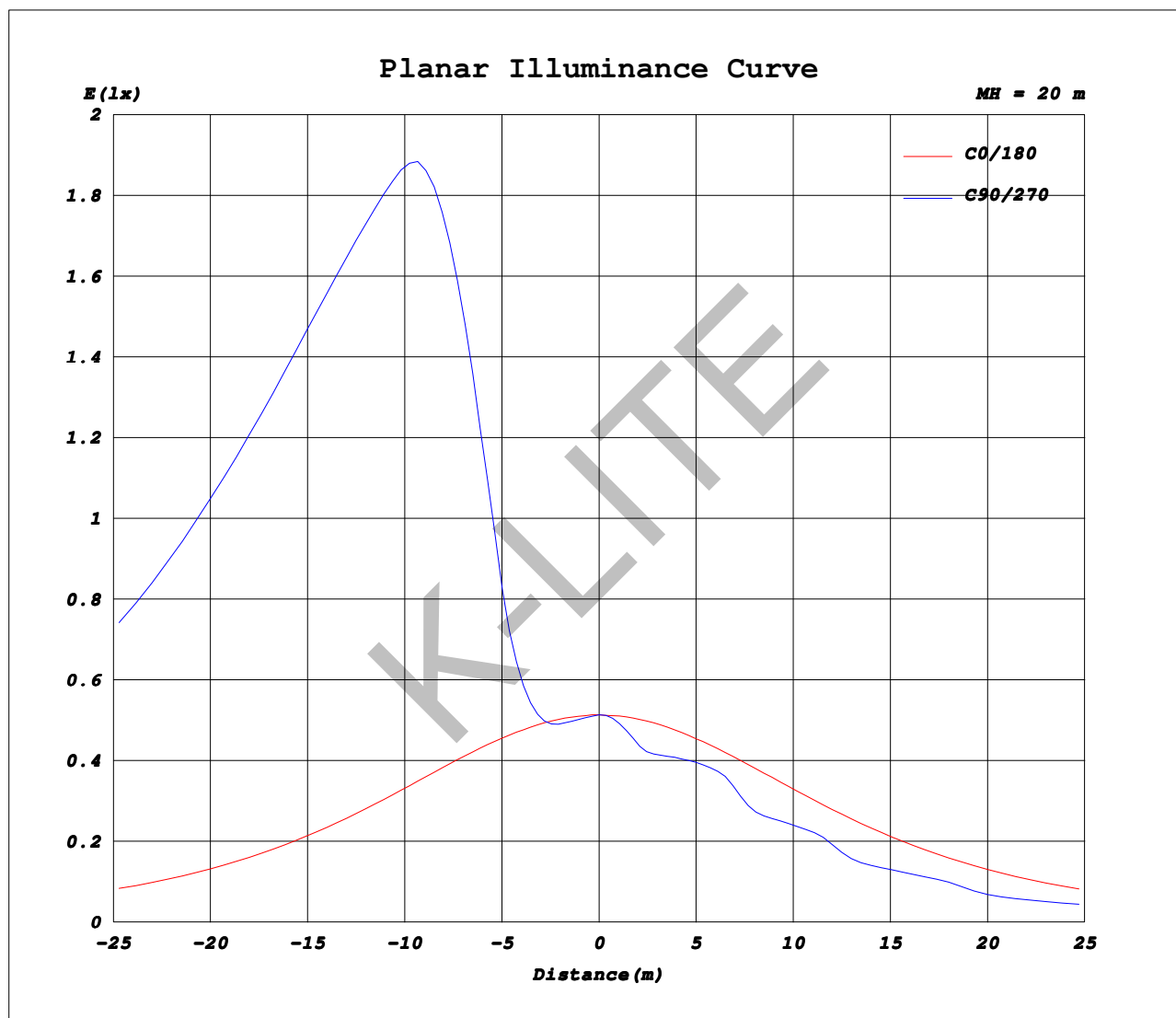
AvgL	cd/m2
L_0~180 (65) av	2149
L_0~180 (75) av	2084
L_0~180 (85) av	1749
L_90~270 (65) av	1467
L_90~270 (75) av	1118
L_90~270 (85) av	618
L_45 (65) av	10897
L_45 (75) av	1049
L_45 (85) av	669

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:15 September 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:1.852m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 15 September 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 1.852m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.66V I:0.1061A P:23.499W PF:0.9600 Freq:49.99Hz Lamp Flux:3484.08x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4948
MFR.: K-LITE	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206
5	205	204	203	202	201	200	200	200	200	200	200	200	200	200	201	202	202	204	205
10	202	201	199	198	199	203	212	219	228	228	228	219	212	203	198	198	198	200	203
15	199	196	194	199	222	260	319	366	415	428	420	374	326	265	225	200	194	195	199
20	194	191	192	224	312	445	594	687	756	766	762	698	610	464	328	229	192	190	193
25	188	184	201	296	510	712	869	956	1007	1012	1006	957	876	727	539	318	204	183	187
30	180	177	227	441	724	918	1021	1061	1087	1087	1082	1054	1004	915	748	484	243	176	179
35	171	171	286	613	876	992	1062	1105	1131	1134	1127	1095	1038	973	880	656	328	171	170
40	161	167	390	748	919	1007	1088	1136	1164	1166	1159	1120	1062	994	908	771	449	173	160
45	150	169	505	806	926	1018	1094	1154	1180	1187	1177	1130	1075	1005	913	796	547	183	148
50	137	181	585	795	922	1017	1090	1159	1185	1190	1182	1130	1076	1003	896	770	605	214	136
55	123	211	604	762	900	1006	1079	1143	1173	1179	1168	1118	1064	981	871	750	596	265	122
60	108	254	570	732	861	974	1048	1082	1065	1034	1040	1068	1029	943	843	714	552	303	106
65	91.8	283	518	680	821	902	577	302	88.5	86.2	86.6	252	453	872	786	663	508	310	89.8
70	74.0	265	455	619	654	200	64.2	59.7	58.1	58.7	58.0	58.4	61.8	71.4	503	596	446	268	71.9
75	55.0	209	382	364	51.4	46.8	46.6	44.4	41.2	40.5	40.4	43.4	45.2	46.2	48.1	289	367	209	52.9
80	35.0	145	154	32.1	29.4	22.0	13.8	13.6	12.9	13.0	12.7	13.3	13.5	19.4	26.1	31.6	53.6	144	33.8
85	15.0	58.6	12.5	6.68	5.89	5.55	5.04	4.93	4.61	4.65	4.51	4.74	4.78	5.20	5.50	6.14	7.49	49.0	15.5
90	0.07	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.01
95	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00
100	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
105	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
110	0.02	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
115	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
120	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01
125	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01
130	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
135	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.02	0.02
140	0.03	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.02
145	0.03	0.02	0.02	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03
150	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03
155	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03
160	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.03	0.02	0.02	0.02	0.03	0.03	0.04
165	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.05
170	0.03	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.05
175	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04
180	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:15 September 2022
γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:1.852m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.66V I:0.1061A P:23.499W PF:0.9600 Freq:49.99Hz Lamp Flux:3484.08x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4948
MFR.: K-LITE	SUR.:	Shielding Angle:

Table--2

UNIT: cd

C (DEG) γ (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206		
5	205	203	200	197	193	190	187	186	184	186	187	190	192	197	200	203	205		
10	201	194	183	175	171	171	172	172	172	172	172	171	171	174	183	193	201		
15	194	180	168	169	171	172	173	173	173	173	173	172	171	169	168	178	194		
20	185	166	165	168	169	168	161	155	151	155	160	168	169	168	166	165	184		
25	174	159	162	164	150	138	134	135	135	135	134	137	148	164	163	160	172		
30	160	155	157	141	128	131	131	132	130	132	131	131	129	139	157	156	158		
35	147	149	140	123	125	118	104	103	103	103	104	116	125	124	138	150	147		
40	137	141	115	118	101	98.0	99.3	101	100	101	99.4	98.2	99.5	119	115	142	138		
45	129	127	109	95.1	91.9	94.3	86.6	80.6	78.0	80.5	86.0	94.4	92.3	93.5	110	124	130		
50	119	100	96.4	84.9	83.7	70.7	70.9	72.3	72.2	72.4	71.1	70.6	82.7	85.3	94.0	99.6	121		
55	109	90.8	75.0	76.1	63.6	66.1	65.6	61.1	57.7	60.8	65.4	66.4	64.0	74.7	75.8	91.7	110		
60	95.9	78.3	68.3	56.8	58.2	48.1	47.7	48.7	49.0	48.8	47.9	48.0	58.1	57.3	68.8	75.6	96.2		
65	72.6	57.3	47.9	48.1	41.1	43.3	42.5	39.7	37.9	39.6	42.4	43.5	41.5	47.3	48.6	58.2	69.5		
70	55.3	44.4	38.4	34.9	32.0	29.5	30.5	30.5	29.8	29.8	29.1	29.3	32.0	35.3	37.8	42.9	56.5		
75	35.2	31.0	26.9	22.8	24.5	22.0	18.4	17.7	17.4	16.9	16.5	19.3	23.5	23.1	27.4	31.6	35.3		
80	19.5	17.1	16.4	14.9	14.1	12.4	12.6	12.0	11.2	11.8	12.4	12.2	12.5	14.6	16.7	17.6	19.9		
85	6.80	6.45	6.49	6.23	6.60	6.45	6.12	5.08	6.12	5.10	6.05	6.51	6.46	5.48	6.77	6.75	7.16		
90	0.02	0.02	0.02	0.02	0.01	0.00	0.01	0.01	0.01	0.00	0.02	0.00	0.02	0.00	0.01	0.02	0.02		
95	0.01	0.02	0.03	0.03	0.05	0.09	0.09	0.01	0.01	0.01	0.06	0.07	0.05	0.03	0.03	0.02	0.01		
100	0.01	0.02	0.05	0.07	0.09	0.10	0.12	0.13	0.13	0.13	0.12	0.10	0.08	0.06	0.04	0.02	0.01		
105	0.02	0.03	0.05	0.07	0.08	0.09	0.09	0.10	0.10	0.09	0.09	0.08	0.06	0.05	0.05	0.03	0.02		
110	0.02	0.04	0.06	0.07	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.06	0.05	0.04	0.03		
115	0.02	0.05	0.07	0.09	0.09	0.10	0.11	0.10	0.10	0.10	0.10	0.09	0.08	0.07	0.06	0.05	0.03		
120	0.03	0.03	0.07	0.09	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.08	0.07	0.03	0.03		
125	0.03	0.04	0.08	0.10	0.11	0.12	0.13	0.13	0.13	0.13	0.13	0.12	0.10	0.09	0.08	0.04	0.04		
130	0.04	0.05	0.06	0.11	0.12	0.13	0.14	0.14	0.14	0.13	0.12	0.11	0.11	0.10	0.06	0.05	0.04		
135	0.04	0.05	0.05	0.10	0.12	0.14	0.15	0.15	0.15	0.13	0.13	0.13	0.12	0.10	0.06	0.06	0.04		
140	0.04	0.05	0.07	0.07	0.11	0.13	0.15	0.15	0.15	0.14	0.14	0.14	0.12	0.07	0.07	0.07	0.05		
145	0.04	0.05	0.06	0.07	0.08	0.10	0.14	0.15	0.15	0.14	0.14	0.11	0.08	0.08	0.07	0.07	0.05		
150	0.04	0.05	0.06	0.07	0.08	0.08	0.10	0.11	0.11	0.11	0.10	0.08	0.09	0.09	0.08	0.07	0.06		
155	0.04	0.05	0.06	0.07	0.07	0.08	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.07	0.06		
160	0.05	0.06	0.06	0.07	0.07	0.08	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.08	0.07	0.06		
165	0.05	0.06	0.07	0.07	0.08	0.09	0.10	0.10	0.11	0.11	0.12	0.12	0.12	0.10	0.08	0.08	0.07		
170	0.06	0.06	0.07	0.08	0.08	0.09	0.09	0.09	0.10	0.10	0.10	0.11	0.10	0.08	0.07	0.07	0.06		
175	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04		
180	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02		

C Range: 0 - 360DEG

C Interval: 10.0DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:K-LITE

Test Date:15 September 2022

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.417

Humidity:65.0%

Test Distance:1.852m [K=1.0000]

Remarks:



Light Output Ratio:	39.1%	
Luminaire Power:	23.13 W	
SHR Nominal:	0.00	Calculated using the TM5
SHR Maximum:	1.00	fine grid method.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 15 September 2022

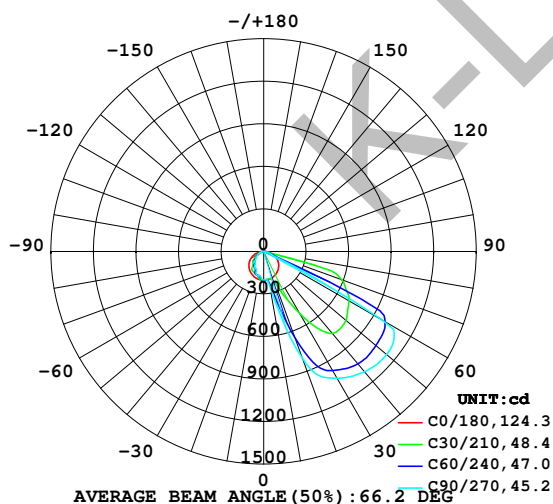
γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 1.852m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

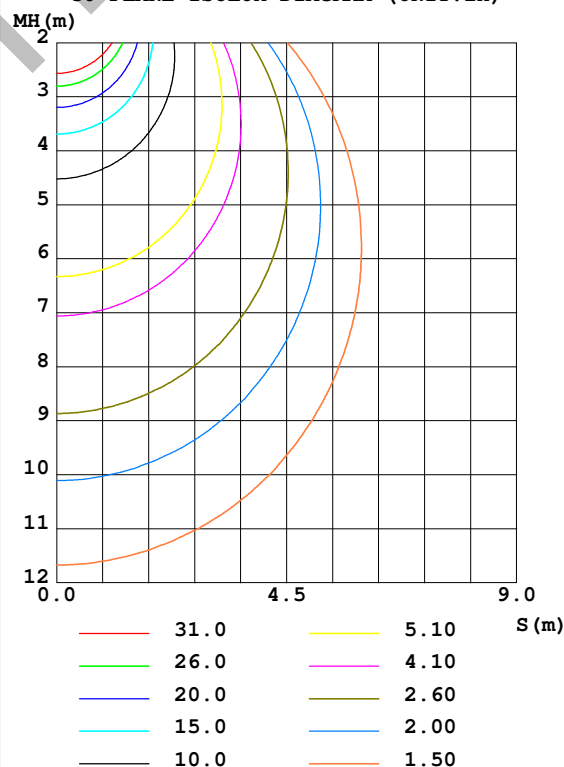
Test:U:230.67V I:0.1047A P:23.127W PF:0.9576 Freq:50.00Hz Lamp Flux:4147.2x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4949
MFR.: K-LITE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 70.14 lm/W
MODEL	KL-2770	Imax (cd)	1132	S/MH (C0/180)	1.30	
NOMINAL POWER(W)	24	LOR(%)	39.1	S/MH (C90/270)	0.90	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1622.1	η UP, DN (C0-180)	0.0, 33.5	
NOMINAL FLUX(lm)	4147.2	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 5.6	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	230	η down (%)	39.1	CIBSE SHR MAX	1.00	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 15 September 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 1.852m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

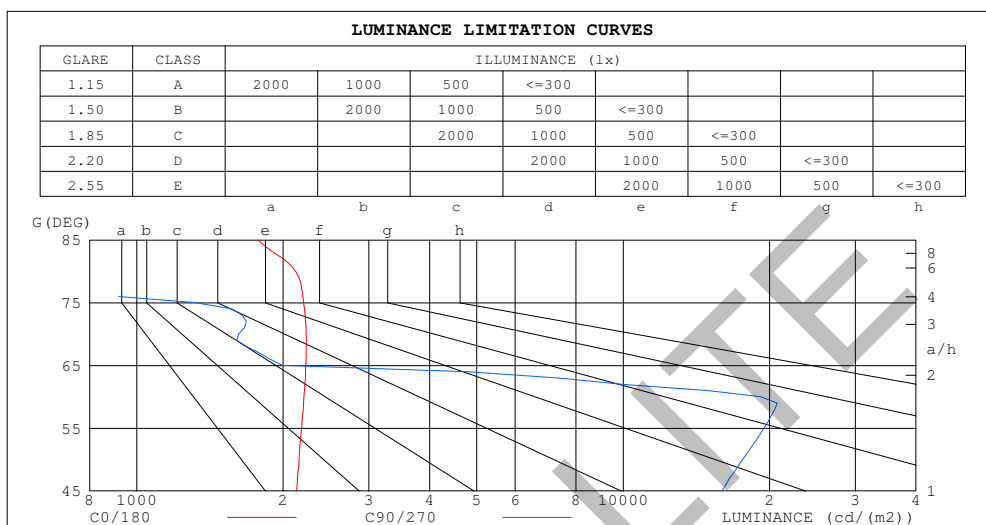
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	201.1	204.1	242.0	204.4	201.2	181.5	174.9	180.9	0- 10	19.00	19.00	1.17, 0.46
20	193.3	434.6	805.2	438.4	192.5	171.1	158.7	170.8	10- 20	71.99	90.99	5.61, 2.19
30	179.8	840.9	1032	828.0	178.6	138.2	132.1	136.5	20- 30	175.7	266.7	16.4, 6.43
40	161.6	914.0	1108	902.6	159.8	112.6	100.2	111.4	30- 40	274.3	541.0	33.4, 13
50	138.4	918.6	1131	902.6	136.4	85.65	71.85	85.32	40- 50	349.3	890.3	54.9, 21.5
60	110.2	870.1	959.0	849.5	107.5	57.83	48.53	57.70	50- 60	389.1	1279	78.9, 30.8
70	76.15	342.3	55.41	255.6	73.10	34.81	28.98	34.31	60- 70	251.8	1531	94.4, 36.9
80	36.78	22.83	11.80	19.16	34.56	14.59	13.51	13.40	70- 80	79.69	1611	99.3, 38.8
90	0.0762	0.0042	0.0042	0.0066	0.0096	0.0141	0.0154	0.0143	80- 90	11.04	1622	100, 39.1
100	0.0069	0.0026	0.0047	0.0043	0.0013	0.0430	0.0535	0.0250	90-100	0.0123	1622	100, 39.1
110	0.0148	0.0042	0.0049	0.0062	0.0108	0.0538	0.0564	0.0463	100-110	0.0216	1622	100, 39.1
120	0.0121	0.0056	0.0066	0.0090	0.0125	0.0782	0.0788	0.0700	110-120	0.0292	1622	100, 39.1
130	0.0153	0.0079	0.0099	0.0123	0.0165	0.0953	0.1110	0.0882	120-130	0.0355	1622	100, 39.1
140	0.0206	0.0130	0.0128	0.0166	0.0202	0.0813	0.1260	0.0865	130-140	0.0361	1622	100, 39.1
150	0.0243	0.0153	0.0192	0.0201	0.0248	0.0638	0.1125	0.0770	140-150	0.0304	1622	100, 39.1
160	0.0300	0.0170	0.0214	0.0244	0.0357	0.0603	0.0847	0.0878	150-160	0.0210	1622	100, 39.1
170	0.0293	0.0210	0.0249	0.0265	0.0526	0.0706	0.0900	0.0861	160-170	0.0147	1622	100, 39.1
180	0.0260	0.0241	0.0290	0.0307	0.0266	0.0244	0.0295	0.0299	170-180	0.0036	1622	100, 39.1
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 15 September 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 1.852m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.67V I:0.1047A P:23.127W PF:0.9576 Freq:50.00Hz Lamp Flux:4147.2x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4949
MFR.: K-LITE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1774	437
80	2121	680
75	2204	1317
70	2229	1620
65	2226	1992
60	2206	19183
55	2183	19466
50	2156	17603
45	2131	15949

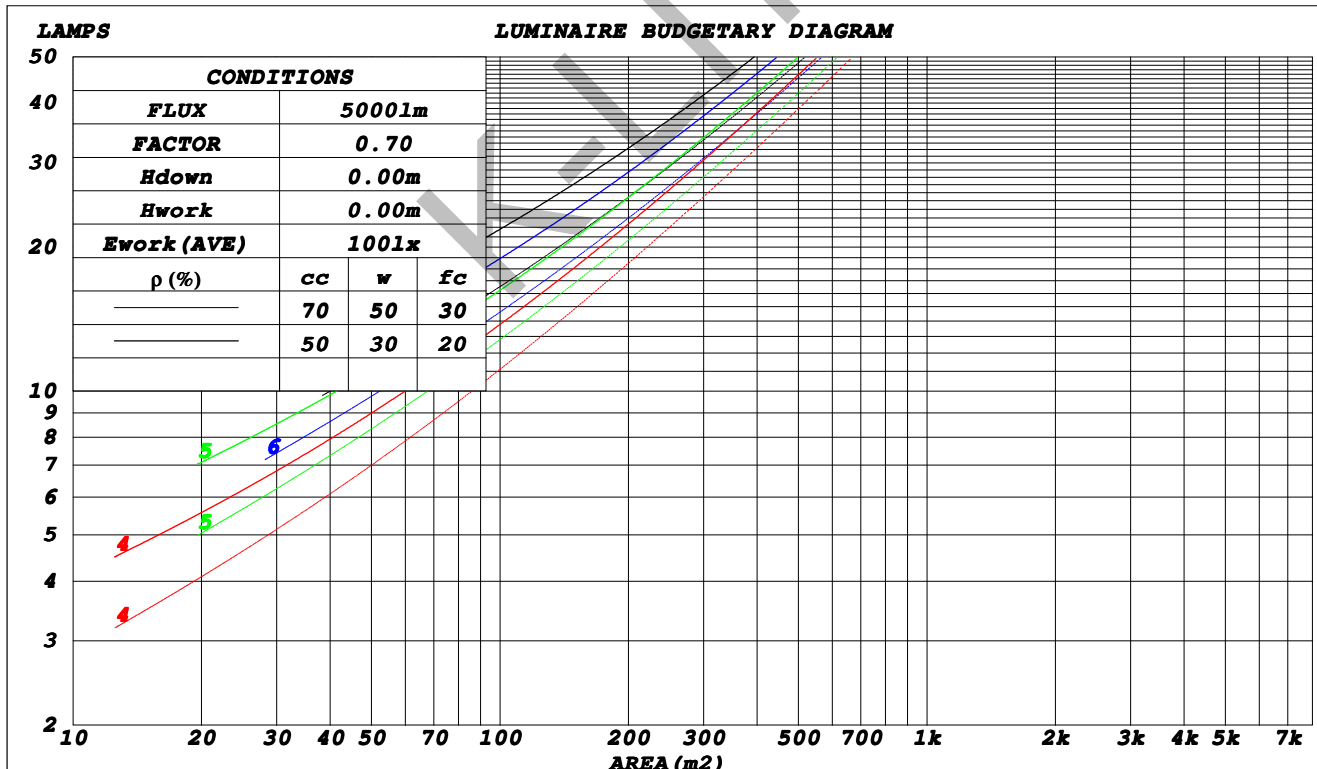
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 15 September 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 1.852m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.67V I:0.1047A P:23.127W PF:0.9576 Freq:50.00Hz Lamp Flux:4147.2x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4949
MFR.: K-LITE	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	.47	.47	.47	.45	.45	.45	.43	.43	.43	.42	.42	.42	.40	.40	.40	.39
1.0	.41	.39	.37	.40	.38	.37	.38	.37	.36	.36	.35	.34	.35	.34	.33	.33
2.0	.35	.32	.30	.34	.32	.29	.33	.31	.29	.31	.30	.28	.30	.29	.27	.27
3.0	.30	.27	.24	.29	.26	.24	.28	.26	.23	.27	.25	.23	.26	.24	.23	.22
4.0	.26	.22	.20	.26	.22	.19	.25	.22	.19	.24	.21	.19	.23	.21	.19	.18
5.0	.23	.19	.16	.22	.19	.16	.22	.18	.16	.21	.18	.16	.20	.18	.16	.15
6.0	.20	.16	.14	.20	.16	.14	.19	.16	.14	.18	.16	.13	.18	.15	.13	.12
7.0	.18	.14	.12	.18	.14	.12	.17	.14	.12	.16	.14	.11	.16	.13	.11	.11
8.0	.16	.13	.10	.16	.12	.10	.15	.12	.10	.15	.12	.10	.14	.12	.10	.09
9.0	.15	.11	.09	.14	.11	.09	.14	.11	.09	.13	.11	.09	.13	.10	.09	.08
10.0	.13	.10	.08	.13	.10	.08	.13	.10	.08	.12	.10	.08	.12	.09	.08	.07



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: K-LITE
 Test Date: 15 September 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
 Humidity: 65.0%
 Test Distance: 1.852m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:230.67V I:0.1047A P:23.127W PF:0.9576 Freq:50.00Hz Lamp Flux:4147.2x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4949
MFR.: K-LITE	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.122	.069	.022	.119	.068	.022	.114	.065	.021	.109	.063	.020	.105	.061	.020		
2.0	.119	.065	.020	.116	.064	.020	.112	.062	.019	.107	.060	.019	.103	.058	.018		
3.0	.112	.059	.018	.109	.059	.018	.105	.057	.017	.101	.056	.017	.098	.054	.017		
4.0	.104	.054	.016	.102	.053	.016	.098	.052	.016	.095	.051	.015	.092	.050	.015		
5.0	.096	.049	.014	.095	.049	.014	.091	.048	.014	.088	.047	.014	.086	.046	.014		
6.0	.090	.045	.013	.088	.044	.013	.085	.044	.013	.082	.043	.013	.080	.042	.012		
7.0	.083	.041	.012	.082	.041	.012	.079	.040	.012	.077	.039	.011	.075	.039	.011		
8.0	.078	.038	.011	.077	.038	.011	.074	.037	.011	.072	.036	.011	.070	.036	.010		
9.0	.073	.035	.010	.072	.035	.010	.070	.034	.010	.068	.034	.010	.066	.033	.010		
10.0	.068	.033	.009	.067	.032	.009	.065	.032	.009	.064	.032	.009	.062	.031	.009		

ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)										
0.0	.075	.075	.075	.064	.064	.064	.043	.043	.043	.025	.025	.025	.008	.008	.008		
1.0	.071	.061	.053	.060	.052	.045	.041	.036	.031	.024	.021	.018	.008	.007	.006		
2.0	.068	.052	.038	.058	.044	.033	.040	.031	.023	.023	.018	.013	.007	.006	.004		
3.0	.066	.045	.028	.056	.039	.024	.039	.027	.017	.022	.016	.010	.007	.005	.003		
4.0	.063	.040	.022	.054	.034	.019	.037	.024	.013	.021	.014	.008	.007	.005	.003		
5.0	.060	.036	.018	.052	.031	.015	.036	.022	.011	.021	.013	.006	.007	.004	.002		
6.0	.058	.033	.014	.050	.028	.013	.034	.020	.009	.020	.012	.005	.006	.004	.002		
7.0	.055	.030	.012	.047	.026	.011	.033	.018	.008	.019	.011	.005	.006	.004	.001		
8.0	.053	.028	.011	.045	.024	.009	.031	.017	.007	.018	.010	.004	.006	.003	.001		
9.0	.050	.026	.009	.043	.022	.008	.030	.016	.006	.017	.009	.003	.006	.003	.001		
10.0	.048	.024	.008	.041	.021	.007	.029	.015	.005	.017	.009	.003	.005	.003	.001		

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:15 September 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:1.852m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.67V I:0.1047A P:23.127W PF:0.9576 Freq:50.00Hz Lamp Flux:4147.2x1 lm										
NAME: SUDO EXTENDED - ASY FRAME					TYPE:PATH FINDERS			WEIGHT:		
SPEC.:NW, NICHIA					DIM.: 490 x 87 x 85			SERIAL No.:4949		
MFR.: K-LITE					SUR.:			Shielding Angle:		
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions						Viewed crosswise				
x = 2H y = 2H						Viewed endwise				
3H						17.8	19.5	18.1	19.7	19.9
4H						22.0	23.6	22.3	23.8	24.1
6H						21.8	23.3	22.1	23.5	23.8
8H						21.7	23.1	22.0	23.4	23.6
12H						21.6	22.9	21.9	23.2	23.5
2H						20.1	21.4	20.4	21.7	22.0
3H						20.1	21.4	20.5	21.7	22.0
4H						20.1	21.4	20.5	21.7	22.0
6H						20.1	21.4	20.5	21.7	22.0
8H						20.1	21.4	20.5	21.7	22.0
12H						20.1	21.4	20.5	21.7	22.0
2H						20.2	21.6	20.5	21.9	22.1
3H						22.0	23.3	22.4	23.6	23.9
4H						22.7	23.8	23.1	24.2	24.5
6H						23.2	24.2	23.6	24.5	24.9
8H						23.2	24.1	23.6	24.5	24.9
12H						23.3	24.1	23.7	24.5	24.9
4H						22.6	23.5	23.0	23.9	24.3
6H						23.1	23.9	23.5	24.3	24.7
8H						23.2	23.9	23.6	24.3	24.7
12H						23.3	23.8	23.7	24.3	24.8
4H						22.6	23.4	23.0	23.8	24.2
6H						23.1	23.7	23.5	24.2	24.6
8H						23.2	23.7	23.6	24.2	24.7
12H						23.3	23.8	23.7	24.3	24.8
Variations with the observer position at spacings:										
S = 1.0H						+ 0.6 / - 0.7				
1.5H						+ 0.7 / - 0.3				
2.0H						+ 1.5 / - 7.4				

CIE Pub.117, 4147 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 4.9$)
Area: 0.1 m²

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:15 September 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:1.852m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.67V I:0.1047A P:23.127W PF:0.9576 Freq:50.00Hz Lamp Flux:4147.2x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4949
MFR.: K-LITE	SUR.:	Shielding Angle:

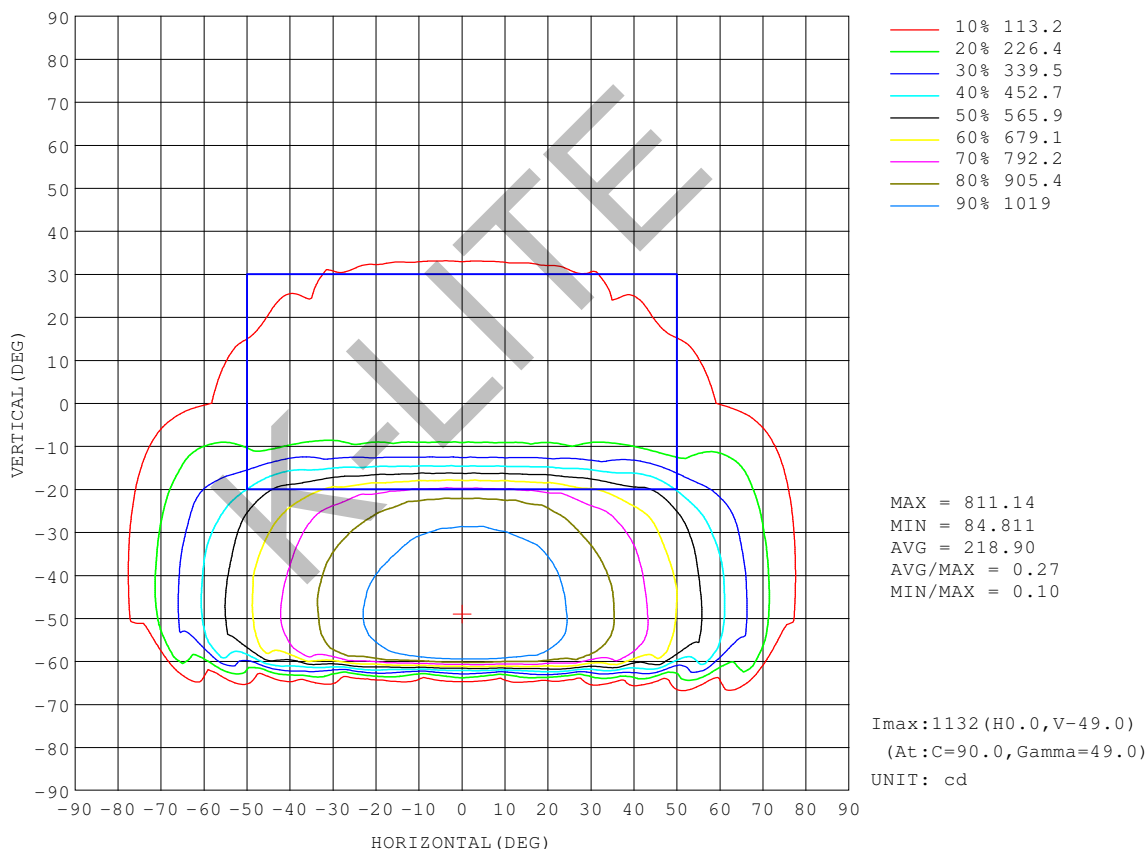
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	19	14	11	19	14	11	19	14	11	8
0.80	24	19	16	23	19	16	23	18	15	12
1.00	28	23	20	27	23	20	26	24	20	17
1.25	31	27	24	30	26	23	29	26	23	20
1.50	33	29	26	33	29	26	31	28	26	22
2.00	36	33	30	36	32	30	34	32	29	26
2.50	38	35	32	37	34	32	36	33	31	28
3.00	40	37	35	39	36	34	37	35	33	30
4.00	41	39	37	40	38	37	39	37	36	32
5.00	42	40	39	41	40	38	40	38	37	33
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:15 September 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:1.852m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:230.67V I:0.1047A P:23.127W PF:0.9576 Freq:50.00Hz Lamp Flux:4147.2x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4949
MFR.: K-LITE	SUR.:	Shielding Angle:

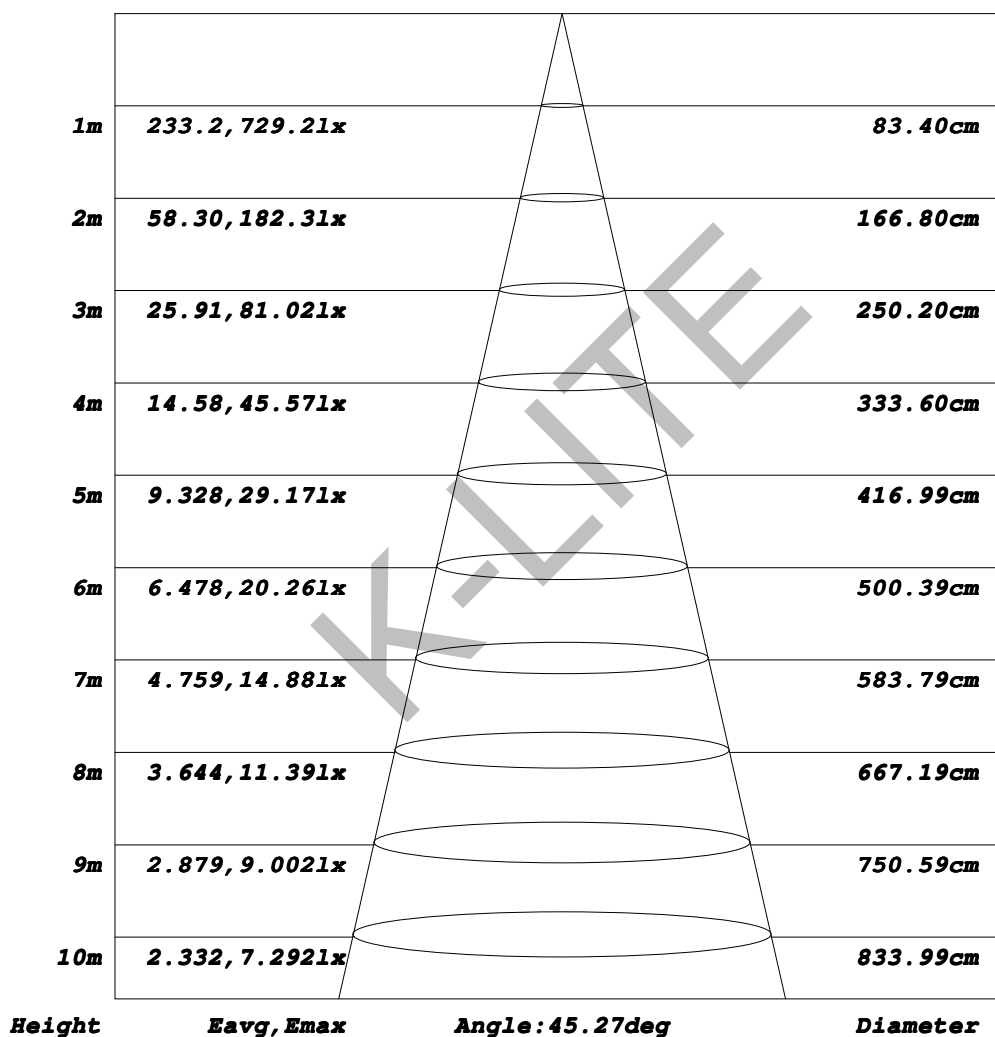


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:15 September 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:1.852m [K=1.0000]
Remarks:

AAI Figure

Test:U:230.67V I:0.1047A P:23.127W PF:0.9576 Freq:50.00Hz Lamp Flux:4147.2x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4949
MFR.: K-LITE	SUR.:	Shielding Angle:

Flux out:132.0 lm


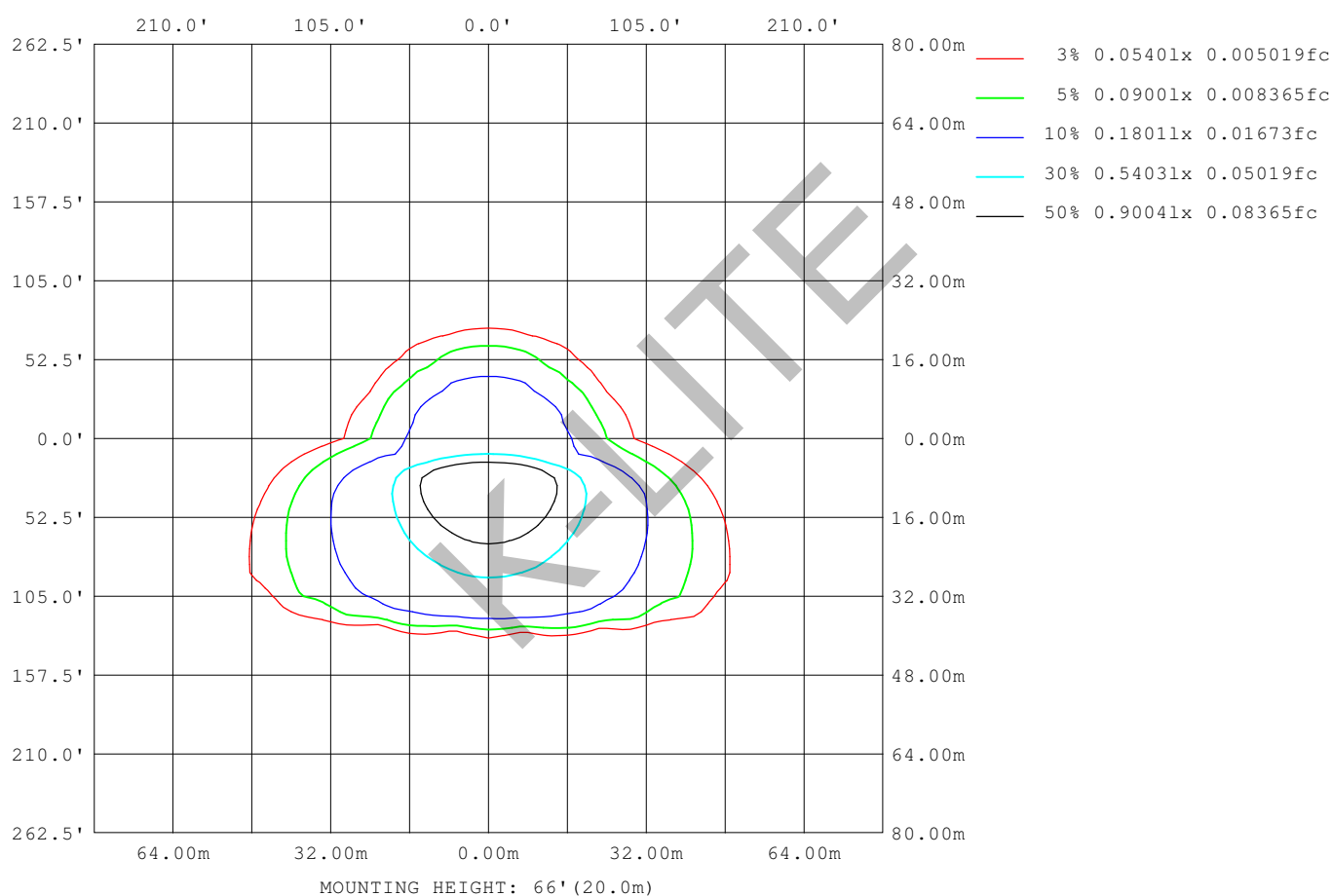
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 15 September 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 1.852m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:230.67V I:0.1047A P:23.127W PF:0.9576 Freq:50.00Hz Lamp Flux:4147.2x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4949
MFR.: K-LITE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:15 September 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:1.852m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:230.67V I:0.1047A P:23.127W PF:0.9576 Freq:50.00Hz Lamp Flux:4147.2x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4949
MFR.: K-LITE	SUR.:	Shielding Angle:

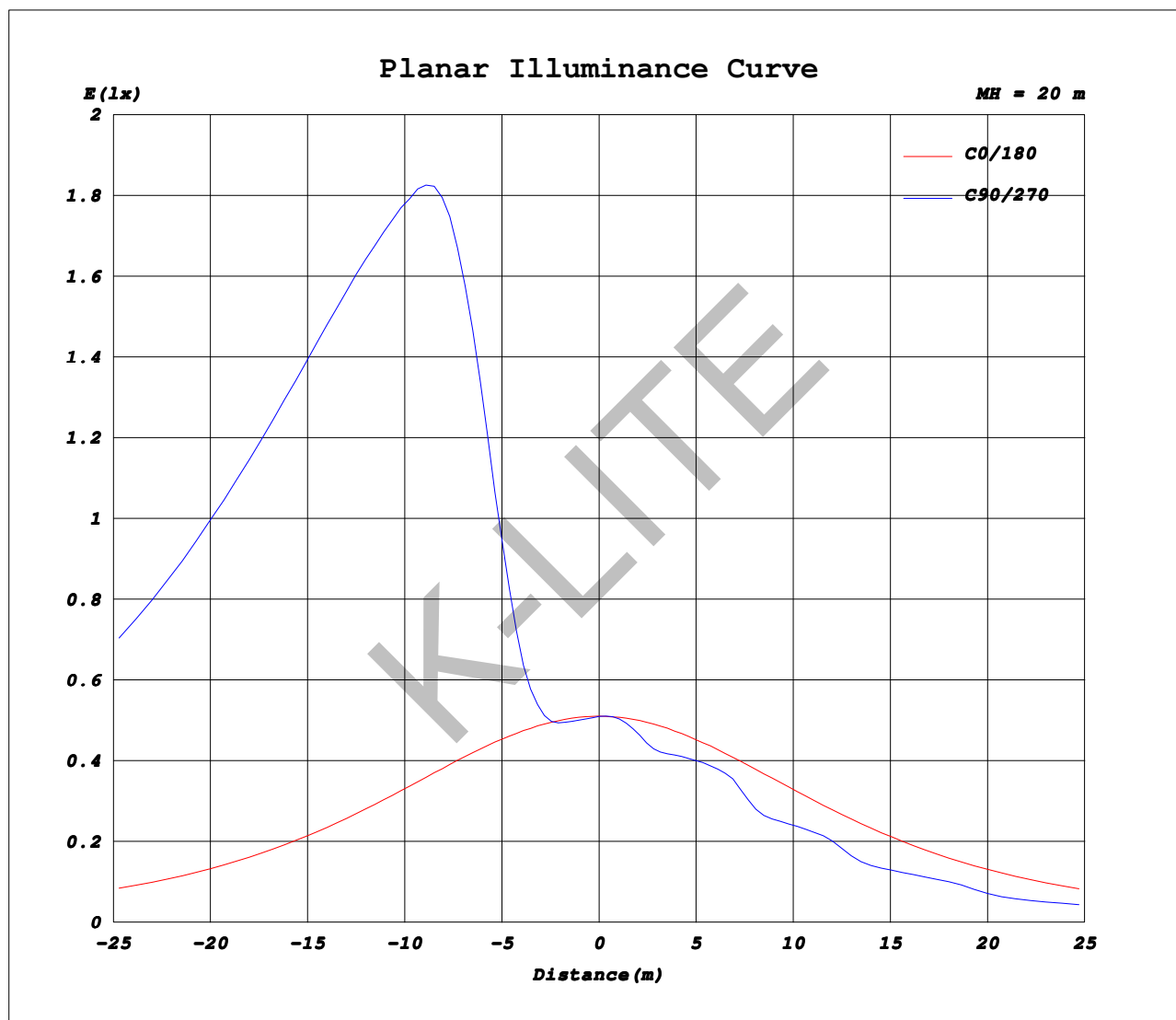
AvgL	cd/m2
L_0~180 (65) av	2189
L_0~180 (75) av	2141
L_0~180 (85) av	1785
L_90~270 (65) av	1478
L_90~270 (75) av	1011
L_90~270 (85) av	607
L_45 (65) av	10405
L_45 (75) av	1055
L_45 (85) av	642

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:15 September 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:1.852m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 15 September 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 1.852m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.67V I:0.1047A P:23.127W PF:0.9576 Freq:50.00Hz Lamp Flux:4147.2x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4949
MFR.: K-LITE	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204
5	203	202	202	201	201	201	201	200	201	201	200	201	200	200	201	201	201	202	203
10	201	199	199	199	201	207	220	230	242	242	242	231	220	208	201	199	198	200	201
15	198	196	196	204	236	288	365	418	467	473	469	421	368	292	238	205	195	195	197
20	193	191	196	242	364	505	649	734	796	805	797	735	650	509	368	245	196	190	193
25	187	185	211	346	574	762	890	943	972	976	969	940	882	756	576	356	214	184	186
30	180	179	251	502	773	909	970	1004	1029	1032	1024	996	949	889	767	518	266	178	179
35	171	173	333	659	858	944	1009	1045	1072	1077	1068	1034	982	922	847	675	357	176	170
40	162	174	443	754	871	957	1034	1075	1103	1108	1096	1056	1005	943	862	755	474	181	160
45	151	183	548	767	878	963	1042	1091	1120	1128	1115	1068	1018	953	868	755	561	196	149
50	138	205	595	757	874	963	1033	1096	1125	1131	1118	1069	1019	952	853	734	590	234	136
55	125	243	575	724	854	952	1022	1085	1110	1116	1102	1058	1009	932	829	712	568	283	123
60	110	283	542	695	817	923	989	1024	1000	959	974	1007	970	896	803	680	527	314	108
65	94.0	293	491	644	779	852	507	252	85.9	84.2	84.6	225	382	827	748	630	485	307	91.0
70	76.2	255	431	587	610	75.4	61.7	56.0	55.7	55.4	55.3	55.0	59.3	69.1	442	566	426	260	73.1
75	57.0	201	362	345	49.6	43.8	43.5	41.0	36.0	34.1	34.4	40.1	42.4	43.8	45.9	199	352	202	53.9
80	36.8	139	156	30.2	26.8	18.9	12.8	12.3	11.8	11.8	11.7	12.2	12.5	17.4	21.0	29.8	38.6	140	34.6
85	15.4	56.5	11.1	6.13	5.25	4.80	4.33	4.09	3.84	3.81	3.74	3.92	4.08	4.50	4.82	5.58	6.79	38.2	15.7
90	0.08	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.01
95	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
105	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.01
110	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
115	0.02	0.01	0.01	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
120	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01
125	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01
130	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
135	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.02	0.02
140	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
145	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02
150	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02
155	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03
160	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.03	0.03	0.04
165	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.05
170	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.05
175	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.04
180	0.03	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.03

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:15 September 2022
γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:1.852m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.67V I:0.1047A P:23.127W PF:0.9576 Freq:50.00Hz Lamp Flux:4147.2x1 lm		
NAME: SUDO EXTENDED - ASY FRAME	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: 490 x 87 x 85	SERIAL No.:4949
MFR.: K-LITE	SUR.:	Shielding Angle:

Table--2

UNIT: cd

C (DEG) γ (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204		
5	204	204	203	202	199	198	196	196	194	195	196	198	199	202	203	204	204		
10	202	199	193	186	178	175	175	175	175	175	174	175	177	185	192	199	202		
15	197	189	175	172	173	175	175	176	176	175	175	174	173	172	174	188	197		
20	190	175	168	171	171	172	168	163	159	163	167	171	171	170	168	173	190		
25	181	163	165	167	158	140	134	134	135	135	133	139	156	166	165	162	180		
30	170	158	159	148	129	131	132	133	132	132	132	131	128	145	159	157	168		
35	155	151	148	123	126	124	108	104	103	104	107	122	125	123	144	151	153		
40	142	144	117	119	106	97.6	99.0	100	100	100	98.9	97.2	104	119	116	143	141		
45	131	131	109	100	91.7	94.5	91.7	85.4	81.7	84.8	90.7	93.9	91.6	97.6	109	130	132		
50	121	104	101	84.7	86.6	73.0	70.4	72.0	71.8	71.8	70.3	72.1	85.9	84.7	98.4	101	122		
55	110	90.9	75.1	78.8	63.5	66.1	66.7	65.4	62.2	65.0	66.5	65.7	63.2	77.8	75.0	91.4	111		
60	97.1	81.0	68.6	56.7	59.0	50.8	47.4	48.4	48.5	48.2	47.3	50.1	58.8	56.6	68.7	78.9	97.8		
65	76.7	57.2	50.1	50.7	41.0	43.3	43.8	42.7	40.7	42.1	43.0	42.9	40.9	49.9	48.2	57.8	72.2		
70	55.3	47.0	40.8	34.9	34.7	29.8	30.2	29.5	29.0	28.4	27.5	27.3	33.7	34.9	40.1	45.4	56.8		
75	36.7	31.2	27.1	23.0	24.7	24.2	19.7	18.8	18.2	18.2	18.5	21.4	21.5	23.0	27.2	31.7	35.8		
80	20.1	17.1	16.5	15.2	14.0	13.7	14.7	13.0	13.5	12.8	14.3	13.2	13.0	13.8	16.7	17.8	20.2		
85	7.17	6.45	5.93	6.30	6.94	7.38	7.21	7.19	6.78	7.14	7.08	7.16	6.64	5.68	5.52	6.73	7.76		
90	0.02	0.02	0.02	0.01	0.01	0.00	0.02	0.01	0.02	0.01	0.03	0.01	0.03	0.00	0.02	0.01	0.02		
95	0.01	0.02	0.03	0.03	0.03	0.03	0.04	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.01		
100	0.01	0.02	0.03	0.04	0.05	0.04	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.02	0.02	0.01	0.01		
105	0.01	0.02	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.03	0.03	0.03	0.02	0.02		
110	0.01	0.03	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.04	0.04	0.02	0.02		
115	0.02	0.04	0.05	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.05	0.05	0.04	0.02		
120	0.02	0.03	0.06	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.06	0.05	0.03	0.02		
125	0.02	0.03	0.06	0.08	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.08	0.07	0.06	0.04	0.03		
130	0.03	0.04	0.06	0.09	0.10	0.10	0.11	0.11	0.11	0.11	0.10	0.09	0.09	0.08	0.06	0.04	0.04		
135	0.03	0.04	0.05	0.08	0.10	0.11	0.12	0.12	0.12	0.11	0.11	0.11	0.10	0.09	0.06	0.05	0.04		
140	0.03	0.04	0.05	0.07	0.10	0.11	0.12	0.13	0.13	0.12	0.12	0.12	0.10	0.07	0.06	0.06	0.05		
145	0.04	0.04	0.05	0.06	0.08	0.10	0.12	0.13	0.13	0.12	0.12	0.11	0.09	0.07	0.07	0.06	0.05		
150	0.03	0.04	0.05	0.06	0.07	0.08	0.10	0.11	0.11	0.11	0.10	0.08	0.08	0.08	0.07	0.06	0.05		
155	0.04	0.05	0.05	0.06	0.06	0.07	0.08	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.06		
160	0.04	0.05	0.05	0.06	0.06	0.07	0.08	0.09	0.08	0.09	0.09	0.09	0.09	0.08	0.08	0.07	0.06		
165	0.05	0.06	0.06	0.07	0.07	0.08	0.09	0.09	0.10	0.10	0.11	0.11	0.11	0.10	0.08	0.07	0.07		
170	0.05	0.06	0.07	0.07	0.07	0.08	0.08	0.09	0.09	0.09	0.10	0.10	0.09	0.08	0.07	0.07	0.06		
175	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03		
180	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02		

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