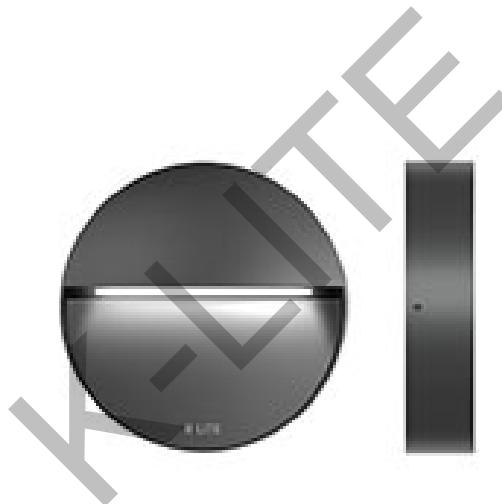




Light Output Ratio:	49.1%	
Luminaire Power:	12.06 W	
SHR Nominal:	0.00	Calculated using the TM5
SHR Maximum:	1.10	fine grid method.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 12 September 2022

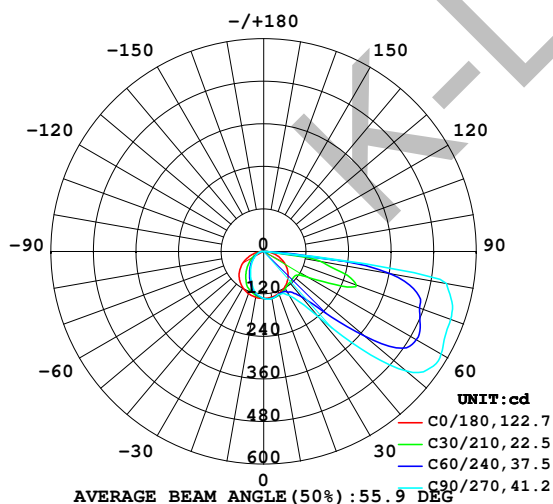
γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 1.852m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

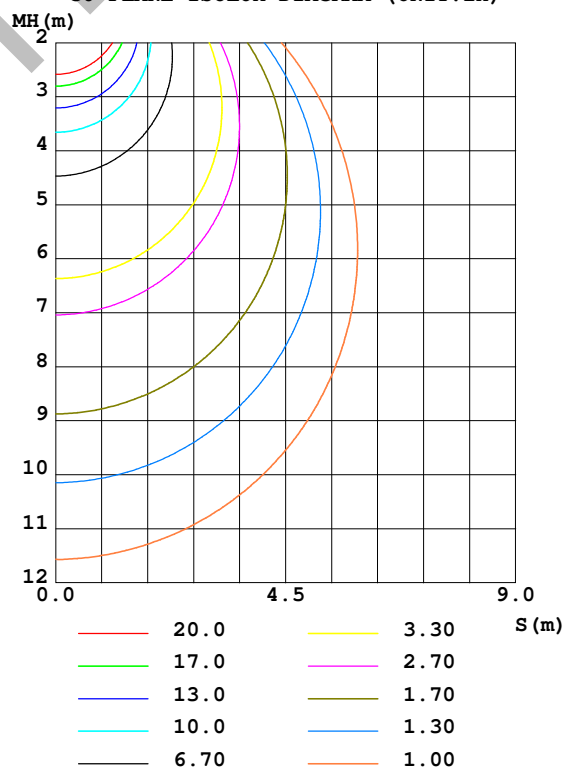
Test:U:230.69V I:0.0534A P:12.064W PF:0.9793 Freq:49.99Hz Lamp Flux:1742.04x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4933
MFR.: K-LITE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 70.83 lm/W
MODEL	KL-2766	I _{max} (cd)	581.5	S/MH (C0/180)	1.32	
NOMINAL POWER (W)	12	LOR (%)	49.1	S/MH (C90/270)	0.90	
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	854.51	η UP, DN (C0-180)	0.0, 40.7	
NOMINAL FLUX (lm)	1742.04	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 8.4	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE (V)	230	η down (%)	49.1	CIBSE SHR MAX	1.10	

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: 12 September 2022

γ Range: 0 - 90DEG
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:

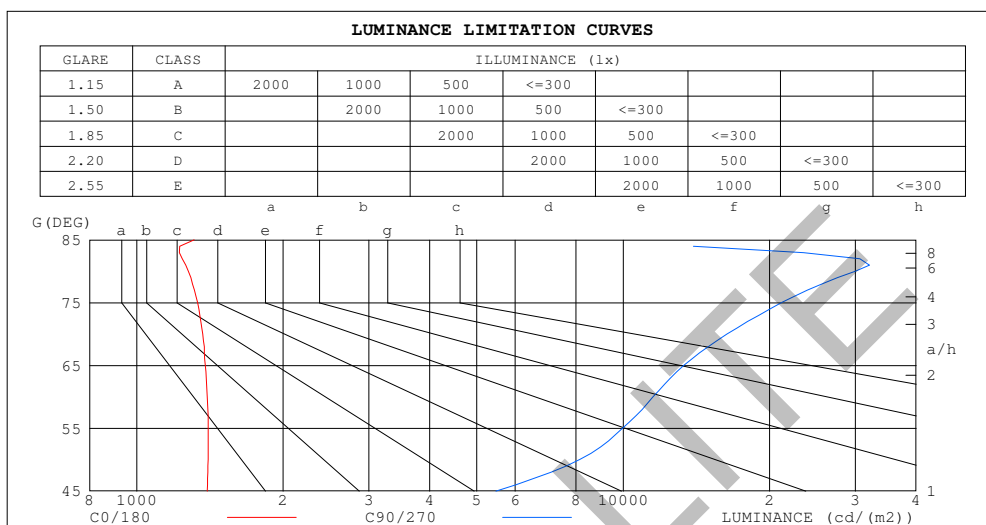
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	131.0	134.6	135.0	134.7	131.6	124.3	120.9	124.1	0- 10	12.52	12.52	1.46, 0.72
20	126.2	129.2	128.9	129.3	126.7	110.4	98.01	109.9	10- 20	35.32	47.84	5.6, 2.75
30	117.9	123.5	143.2	126.0	118.3	88.19	74.99	87.78	20- 30	52.87	100.7	11.8, 5.78
40	105.6	133.0	242.2	137.6	106.1	67.26	56.38	67.12	30- 40	69.05	169.8	19.9, 9.75
50	89.45	202.7	524.9	224.6	89.95	48.96	41.53	49.12	40- 50	105.1	274.9	32.2, 15.8
60	69.35	386.4	578.2	418.6	69.52	33.49	28.95	33.80	50- 60	161.9	436.8	51.1, 25.1
70	46.41	381.2	560.9	403.1	45.70	20.74	18.54	21.13	60- 70	188.0	624.7	73.1, 35.9
80	22.00	268.4	523.3	289.5	20.33	10.35	9.794	10.77	70- 80	178.4	803.1	94, 46.1
90	0.1266	0.0063	0	0	0	0	0	0.0025	80- 90	51.41	854.5	100, 49.1
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
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: 12 September 2022

γ Range: 0 - 90DEG
 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:230.69V I:0.0534A P:12.064W PF:0.9793 Freq:49.99Hz Lamp Flux:1742.04x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4933
MFR.: K-LITE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1312	796
80	1276	30036
75	1333	21163
70	1367	16345
65	1384	13334
60	1397	11525
55	1403	9970
50	1402	8138
45	1396	5476

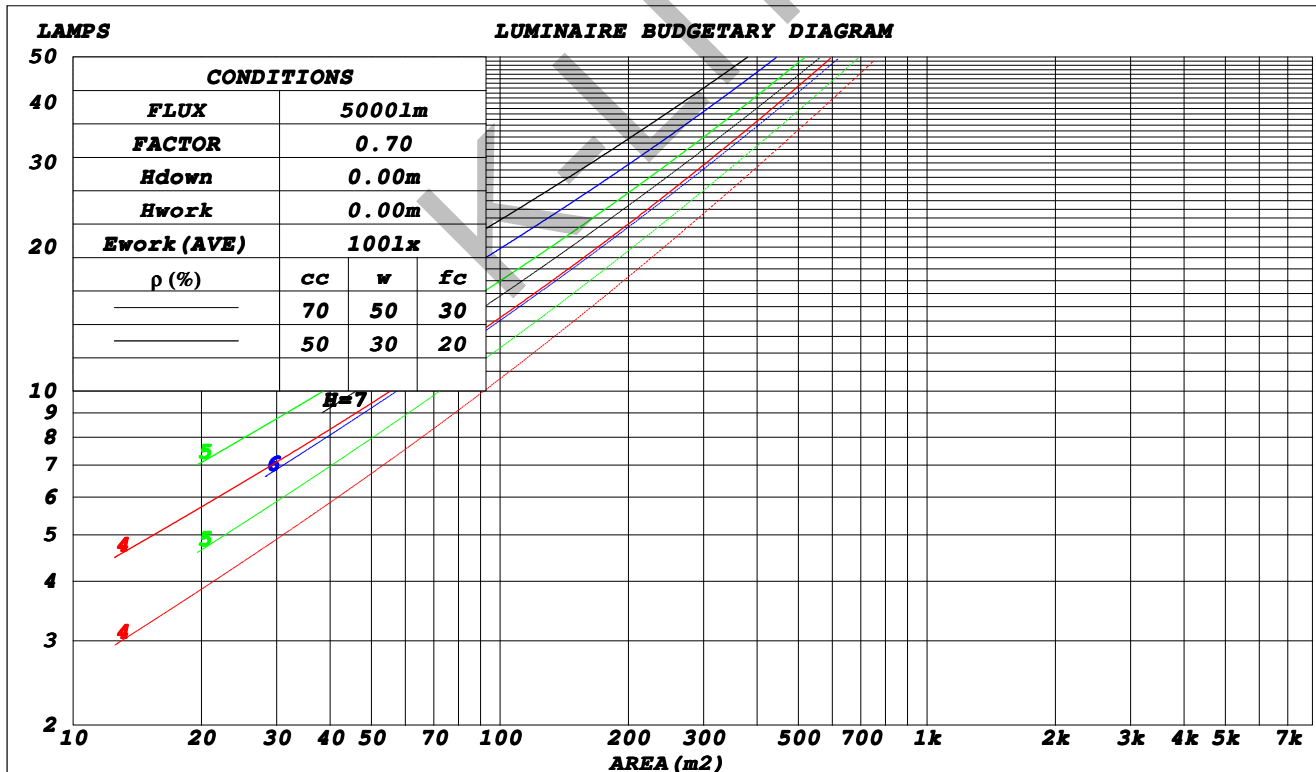
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 12 September 2022

γ Range: 0 - 90DEG
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:230.69V I:0.0534A P:12.064W PF:0.9793 Freq:49.99Hz Lamp Flux:1742.04x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4933
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	.58	.58	.58	.57	.57	.57	.55	.55	.55	.52	.52	.52	.50	.50	.50	.49
1.0	.47	.44	.41	.46	.43	.41	.44	.41	.39	.42	.40	.38	.40	.38	.37	.36
2.0	.39	.34	.30	.38	.33	.30	.36	.32	.29	.34	.31	.28	.32	.30	.27	.26
3.0	.32	.27	.23	.31	.27	.23	.30	.26	.22	.28	.25	.22	.27	.24	.21	.20
4.0	.28	.22	.18	.27	.22	.18	.25	.21	.17	.24	.20	.17	.23	.20	.17	.15
5.0	.24	.19	.14	.23	.18	.14	.22	.18	.14	.21	.17	.14	.20	.17	.14	.12
6.0	.21	.16	.12	.21	.16	.12	.20	.15	.12	.19	.15	.12	.18	.14	.12	.10
7.0	.19	.14	.10	.18	.14	.10	.18	.13	.10	.17	.13	.10	.16	.13	.10	.09
8.0	.17	.12	.09	.17	.12	.09	.16	.12	.09	.15	.11	.09	.15	.11	.09	.07
9.0	.15	.11	.08	.15	.11	.08	.15	.10	.08	.14	.10	.08	.13	.10	.08	.06
10.0	.14	.10	.07	.14	.10	.07	.13	.09	.07	.13	.09	.07	.12	.09	.07	.06



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 12 September 2022

γ Range: 0 - 90DEG
 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:230.69V I:0.0534A P:12.064W PF:0.9793 Freq:49.99Hz Lamp Flux:1742.04x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4933
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	.223	.127	.040	.219	.125	.040	.213	.122	.039	.206	.119	.038	.200	.116	.037			
2.0	.198	.108	.033	.195	.107	.033	.188	.105	.033	.183	.102	.032	.177	.100	.032			
3.0	.175	.093	.028	.172	.092	.028	.166	.090	.027	.161	.088	.027	.156	.087	.027			
4.0	.155	.081	.024	.153	.080	.024	.148	.078	.023	.143	.077	.023	.139	.075	.023			
5.0	.139	.071	.021	.137	.070	.020	.132	.069	.020	.128	.068	.020	.124	.067	.020			
6.0	.126	.063	.018	.124	.063	.018	.120	.061	.018	.116	.060	.018	.113	.059	.018			
7.0	.115	.057	.016	.113	.056	.016	.109	.055	.016	.106	.054	.016	.103	.054	.016			
8.0	.105	.051	.014	.104	.051	.014	.101	.050	.014	.098	.049	.014	.095	.049	.014			
9.0	.097	.047	.013	.096	.047	.013	.093	.046	.013	.090	.045	.013	.088	.045	.013			
10.0	.090	.043	.012	.089	.043	.012	.087	.042	.012	.084	.042	.012	.082	.041	.012			

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	.093	.093	.093	.080	.080	.080	.055	.055	.055	.031	.031	.031	.010	.010	.010	
1.0	.093	.076	.060	.080	.065	.052	.055	.045	.036	.031	.026	.021	.010	.008	.007	
2.0	.092	.064	.041	.079	.055	.036	.054	.038	.025	.031	.022	.015	.010	.007	.005	
3.0	.089	.056	.030	.076	.049	.026	.052	.034	.019	.030	.020	.011	.010	.006	.004	
4.0	.085	.050	.024	.073	.043	.021	.050	.030	.014	.029	.018	.009	.009	.006	.003	
5.0	.081	.045	.019	.070	.039	.017	.048	.027	.012	.028	.016	.007	.009	.005	.002	
6.0	.077	.042	.016	.066	.036	.014	.046	.025	.010	.026	.015	.006	.009	.005	.002	
7.0	.073	.038	.014	.063	.033	.012	.043	.023	.009	.025	.014	.005	.008	.004	.002	
8.0	.069	.035	.012	.060	.031	.011	.041	.022	.008	.024	.013	.005	.008	.004	.001	
9.0	.066	.033	.011	.056	.029	.010	.039	.020	.007	.023	.012	.004	.007	.004	.001	
10.0	.062	.031	.010	.054	.027	.009	.037	.019	.006	.022	.011	.004	.007	.004	.001	

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: K-LITE
 Test Date: 12 September 2022

γ Range: 0 - 90DEG
 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:230.69V I:0.0534A P:12.064W PF:0.9793 Freq:49.99Hz Lamp Flux:1742.04x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4933
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	12.5	14.4	12.8	14.6	14.8	23.1	24.9	23.4	25.2	25.4
3H	14.1	15.9	14.5	16.2	16.4	26.6	28.3	26.9	28.6	28.9
4H	14.9	16.6	15.2	16.9	17.1	28.5	30.2	28.8	30.4	30.7
6H	15.3	16.9	15.6	17.2	17.5	30.5	32.1	30.8	32.4	32.7
8H	15.5	17.0	15.8	17.3	17.7	31.3	32.8	31.6	33.1	33.4
12H	15.5	17.1	15.9	17.4	17.7	31.3	32.8	31.7	33.1	33.5
4H 2H	19.0	20.7	19.3	21.0	21.2	23.7	25.4	24.0	25.7	25.9
3H	21.0	22.5	21.3	22.8	23.1	27.4	29.0	27.8	29.3	29.6
4H	21.7	23.1	22.1	23.5	23.8	29.6	31.0	29.9	31.3	31.7
6H	22.1	23.4	22.5	23.7	24.1	31.7	33.0	32.1	33.4	33.8
8H	22.1	23.3	22.6	23.7	24.1	32.6	33.8	33.0	34.2	34.6
12H	22.2	23.3	22.6	23.7	24.1	32.7	33.8	33.1	34.2	34.6
8H 4H	24.4	25.6	24.8	26.0	26.4	29.9	31.1	30.3	31.5	31.9
6H	25.2	26.2	25.7	26.6	27.1	32.3	33.3	32.7	33.7	34.2
8H	25.4	26.3	25.9	26.8	27.2	33.3	34.2	33.7	34.6	35.1
12H	25.5	26.3	25.9	26.7	27.2	33.3	34.1	33.8	34.6	35.1
12H 4H	25.1	26.2	25.5	26.6	27.0	29.9	31.0	30.3	31.4	31.8
6H	26.2	27.1	26.6	27.5	28.0	32.3	33.3	32.8	33.7	34.1
8H	26.5	27.3	27.0	27.7	28.2	33.3	34.2	33.8	34.6	35.1
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.4 / - 0.3					+ 0.1 / - 0.2				
2.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.2				

CIE Pub.117, 1742 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 1.9$)
 Area: 0.1 m²

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:K-LITE
 Test Date:12 September 2022

γ Range: 0 - 90DEG
 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:230.69V I:0.0534A P:12.064W PF:0.9793 Freq:49.99Hz Lamp Flux:1742.04x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4933
MFR.: K-LITE	SUR.:	Shielding Angle:

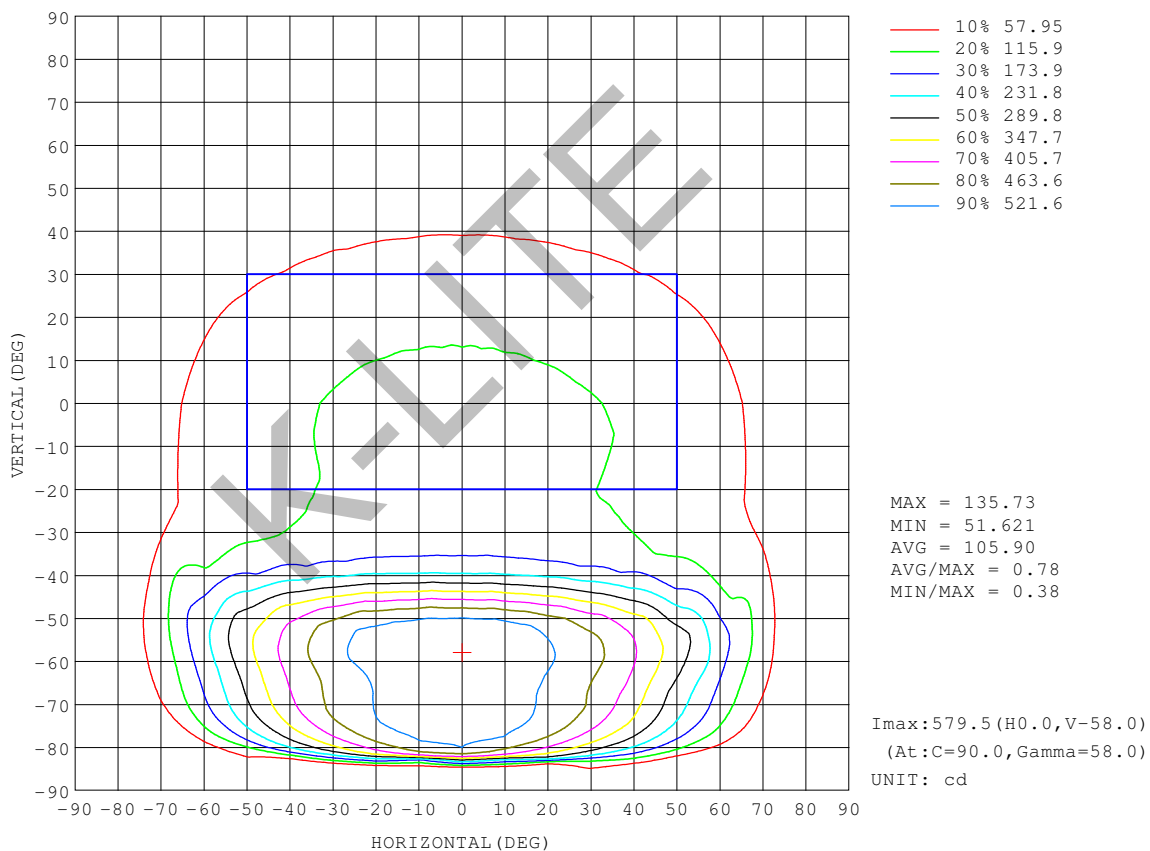
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	22	15	11	21	15	11	21	15	11	7
0.80	26	19	14	26	19	14	25	18	14	10
1.00	30	23	18	29	23	18	28	24	18	13
1.25	34	27	22	33	26	22	31	26	21	17
1.50	37	30	25	36	29	25	34	28	24	19
2.00	41	35	30	40	34	30	38	33	29	24
2.50	44	38	34	42	37	33	40	36	33	27
3.00	46	41	37	45	40	36	42	39	35	30
4.00	49	45	41	47	44	41	45	42	39	34
5.00	51	47	44	49	46	43	47	44	42	37
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:12 September 2022

γ Range: 0 - 90DEG
 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:230.69V I:0.0534A P:12.064W PF:0.9793 Freq:49.99Hz Lamp Flux:1742.04x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4933
MFR.: K-LITE	SUR.:	Shielding Angle:

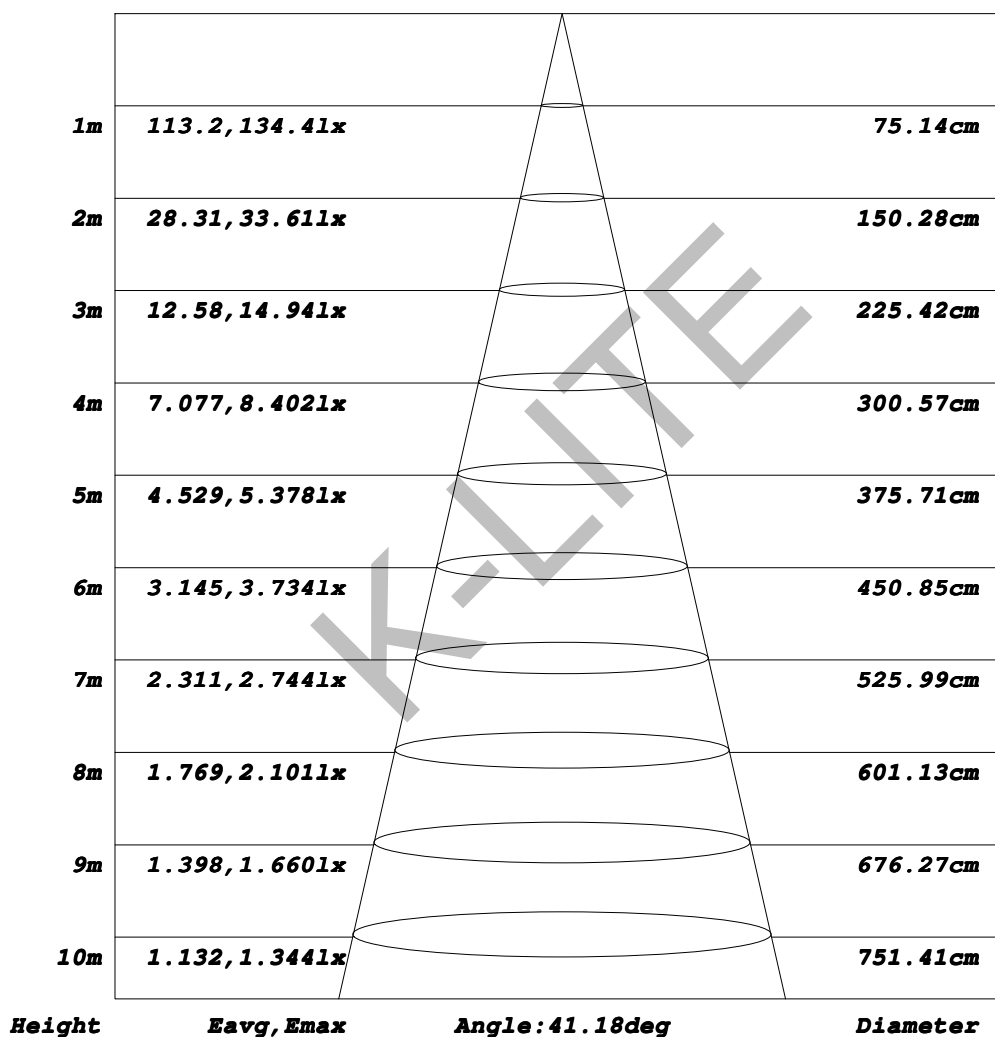


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:12 September 2022

γ Range: 0 - 90DEG
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:230.69V I:0.0534A P:12.064W PF:0.9793 Freq:49.99Hz Lamp Flux:1742.04x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4933
MFR.: K-LITE	SUR.:	Shielding Angle:

Flux out:52.42 lm


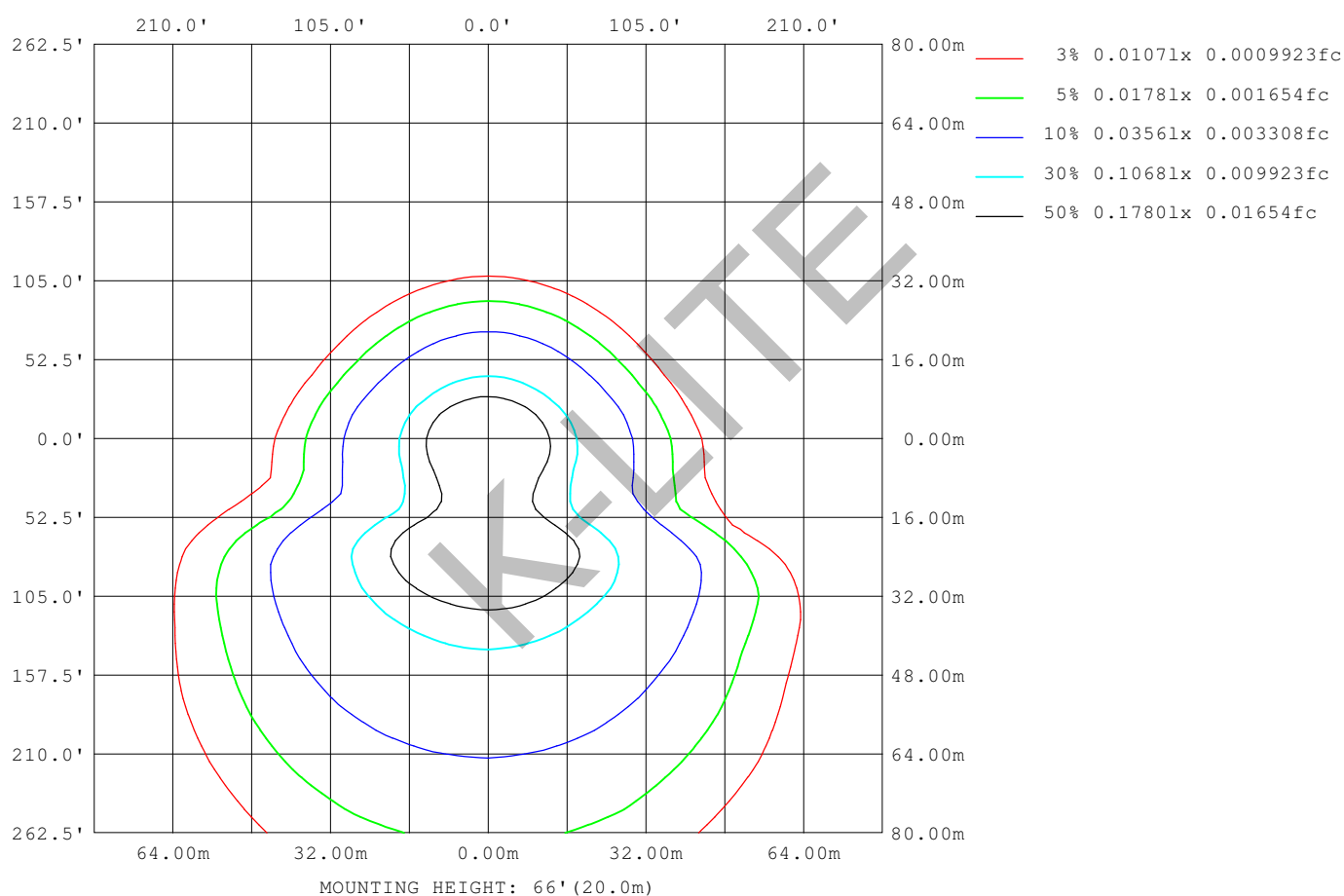
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 12 September 2022

γ Range: 0 - 90DEG
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:230.69V I:0.0534A P:12.064W PF:0.9793 Freq:49.99Hz Lamp Flux:1742.04x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4933
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: 12 September 2022

γ Range: 0 - 90DEG
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:230.69V I:0.0534A P:12.064W PF:0.9793 Freq:49.99Hz Lamp Flux:1742.04x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4933
MFR.: K-LITE	SUR.:	Shielding Angle:

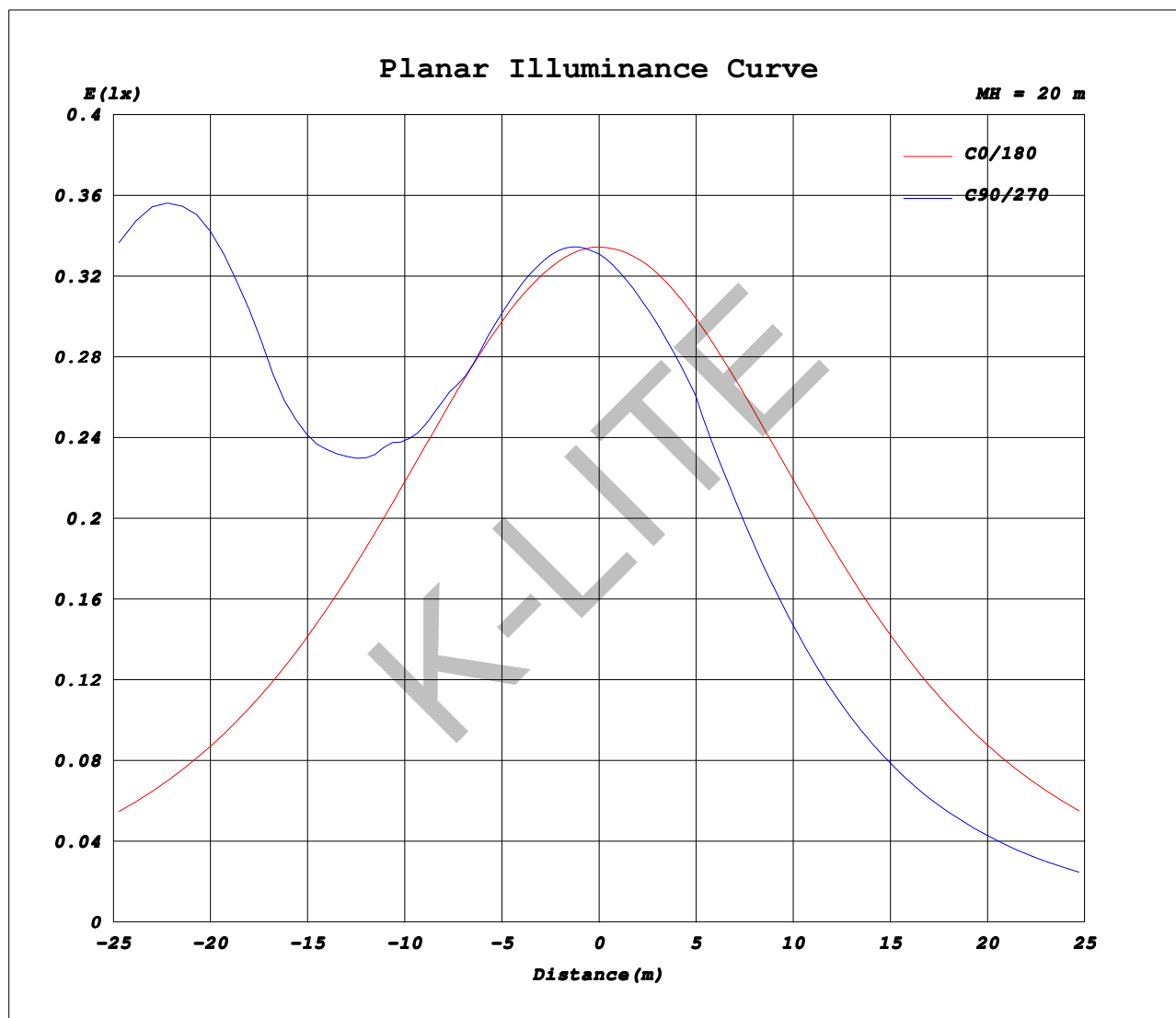
AvgL	cd/m2
L_0~180 (65) av	1372
L_0~180 (75) av	1302
L_0~180 (85) av	1235
L_90~270 (65) av	6967
L_90~270 (75) av	10888
L_90~270 (85) av	700
L_45 (65) av	5355
L_45 (75) av	7045
L_45 (85) av	3053

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:12 September 2022

γ Range: 0 - 90DEG
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: 12 September 2022

γ Range: 0 - 90DEG
 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:

```

γ Range: 0 - 90DEG
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:230.69V I:0.0534A P:12.064W PF:0.9793 Freq:49.99Hz Lamp Flux:1742.04x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:WW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4933
MFR.: K-LITE	SUR.:	Shielding Angle:

Table--2

UNIT: cd

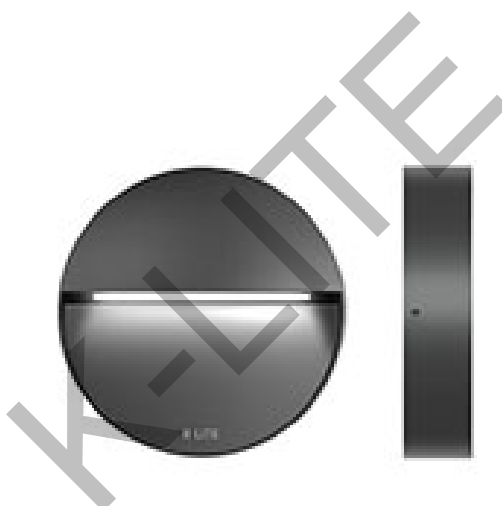
[illegible]

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 12 September 2022

```

γ Range: 0 - 90DEG
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:	43.5%	
Luminaire Power:	12.22 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: 12 September 2022

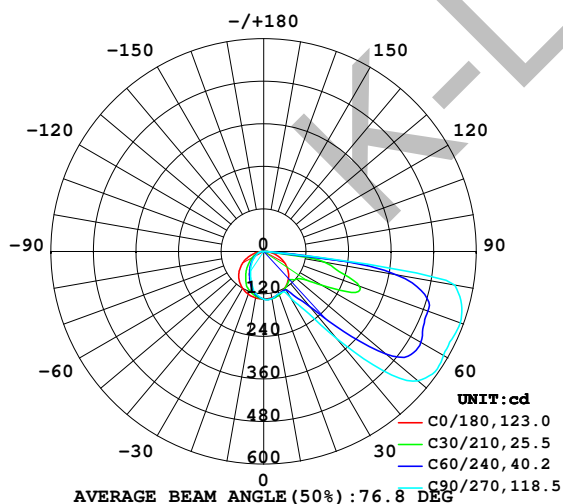
γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 1.852m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

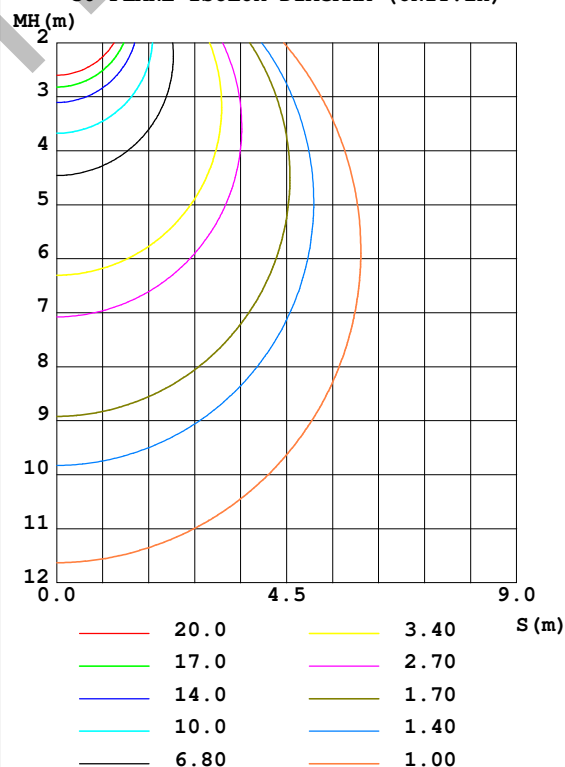
Test:U:230.66V I:0.0540A P:12.216W PF:0.9810 Freq:49.98Hz Lamp Flux:2073.6x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4932
MFR.: K-LITE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 73.91 lm/W
MODEL	KL-2766	I _{max} (cd)	591.1	S/MH (C0/180)	1.33	
NOMINAL POWER (W)	12	LOR (%)	43.5	S/MH (C90/270)	0.90	
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	902.90	η UP, DN (C0-180)	0.0, 36.4	
NOMINAL FLUX (lm)	2073.6	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 7.1	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE (V)	230	η down (%)	43.5	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: 12 September 2022

γ Range: 0 - 90DEG
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:

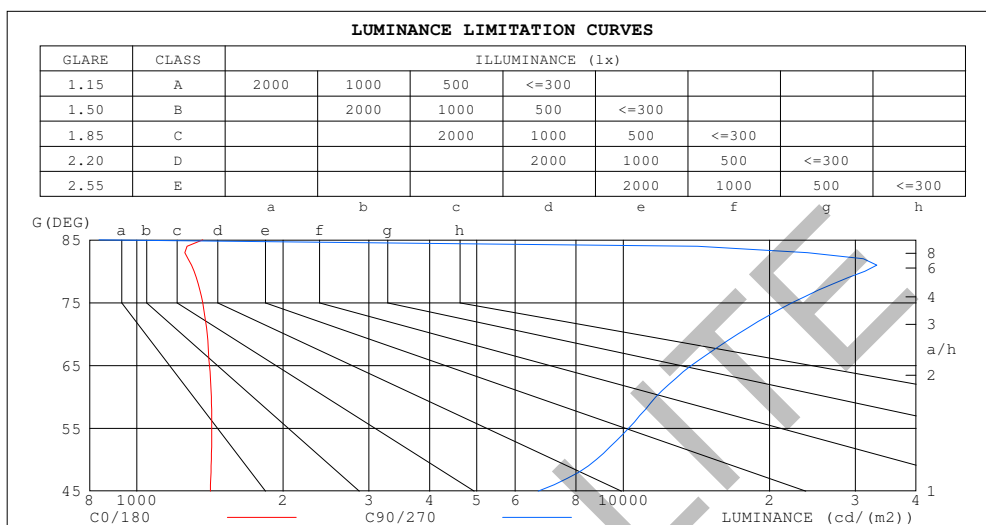
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	132.9	135.6	135.2	135.7	133.2	126.3	122.6	126.1	0- 10	12.69	12.69	1.41, 0.61
20	128.1	128.4	127.6	128.5	128.7	111.8	98.76	111.5	10- 20	35.60	48.29	5.35, 2.33
30	119.7	121.1	147.9	122.6	120.1	88.76	75.38	88.43	20- 30	52.77	101.1	11.2, 4.87
40	107.5	142.9	320.7	151.0	107.8	67.60	56.75	67.61	30- 40	72.62	173.7	19.2, 8.38
50	91.18	258.8	568.0	287.7	91.33	49.27	41.79	49.63	40- 50	119.7	293.4	32.5, 14.2
60	70.90	424.3	585.7	449.2	70.58	33.73	29.20	34.25	50- 60	173.7	467.2	51.7, 22.5
70	47.61	389.8	589.9	414.6	46.40	20.93	18.77	21.51	60- 70	196.2	663.3	73.5, 32
80	22.71	283.2	547.1	302.8	20.76	10.50	9.914	11.00	70- 80	186.8	850.2	94.2, 41
90	0.0108	0.0049	0	0	0	0	0.0052	0.0004	80- 90	52.71	902.9	100, 43.5
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
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: 12 September 2022

γ Range: 0 - 90DEG
 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:0.0540A P:12.216W PF:0.9810 Freq:49.98Hz Lamp Flux:2073.6x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4932
MFR.: K-LITE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1367	836
80	1312	31431
75	1366	22275
70	1397	17204
65	1412	13829
60	1423	11685
55	1427	10272
50	1423	8816
45	1417	6691

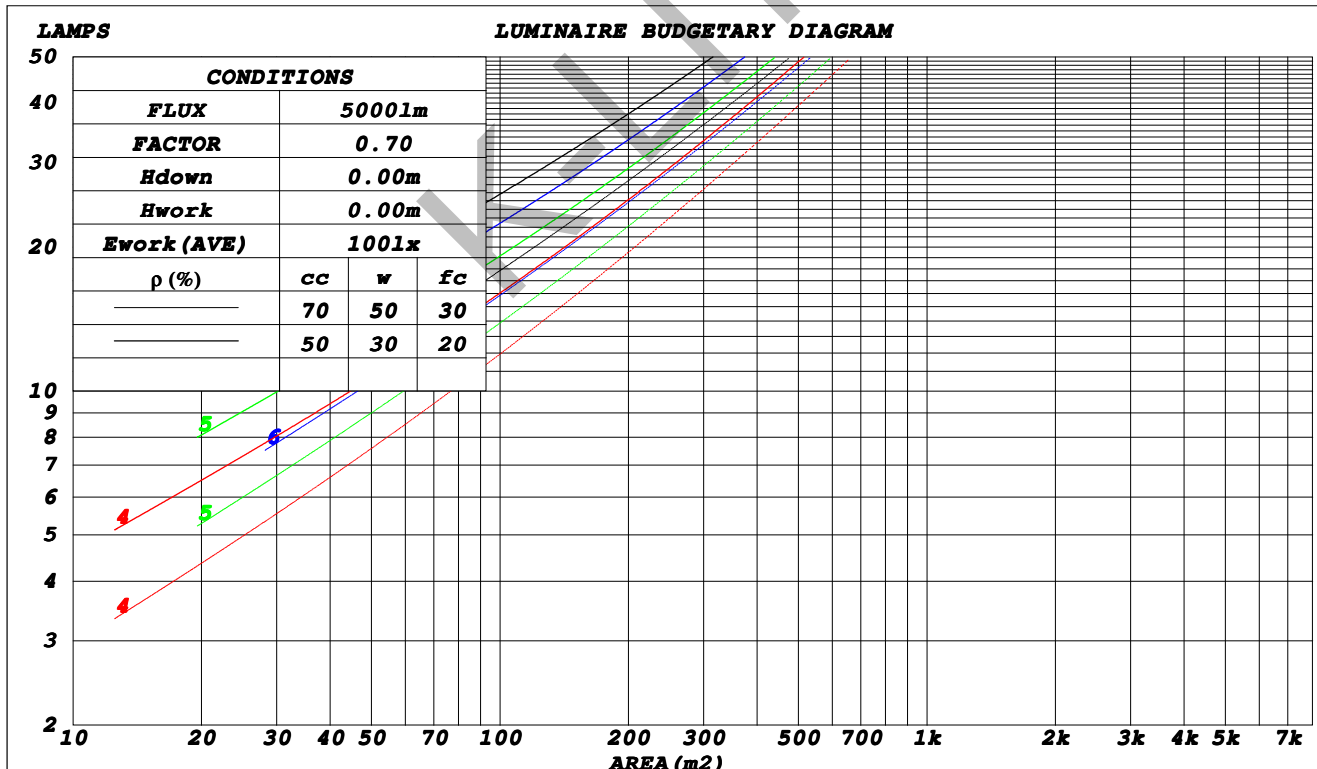
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: K-LITE
Test Date: 12 September 2022

γ Range: 0 - 90DEG
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:0.0540A P:12.216W PF:0.9810 Freq:49.98Hz Lamp Flux:2073.6x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4932
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	.52	.52	.52	.51	.51	.51	.48	.48	.48	.46	.46	.46	.44	.44	.44	.44
1.0	.42	.39	.37	.41	.38	.36	.39	.37	.35	.37	.35	.34	.36	.34	.33	.32
2.0	.34	.30	.27	.33	.30	.26	.32	.29	.26	.30	.27	.25	.29	.27	.24	.23
3.0	.29	.24	.20	.28	.24	.20	.27	.23	.20	.25	.22	.19	.24	.21	.19	.18
4.0	.25	.20	.16	.24	.19	.16	.23	.19	.15	.22	.18	.15	.20	.17	.15	.14
5.0	.21	.16	.13	.21	.16	.13	.20	.16	.13	.19	.15	.12	.18	.15	.12	.11
6.0	.19	.14	.11	.18	.14	.11	.17	.13	.10	.17	.13	.10	.16	.13	.10	.09
7.0	.17	.12	.09	.16	.12	.09	.16	.12	.09	.15	.11	.09	.14	.11	.09	.08
8.0	.15	.11	.08	.15	.11	.08	.14	.10	.08	.13	.10	.08	.13	.10	.08	.07
9.0	.14	.10	.07	.13	.09	.07	.13	.09	.07	.12	.09	.07	.12	.09	.07	.06
10.0	.13	.09	.06	.12	.09	.06	.12	.08	.06	.11	.08	.06	.11	.08	.06	.05



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: K-LITE
 Test Date: 12 September 2022

γ Range: 0 - 90DEG
 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:0.0540A P:12.216W PF:0.9810 Freq:49.98Hz Lamp Flux:2073.6x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4932
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	.197	.112	.035	.194	.111	.035	.188	.108	.034	.182	.105	.034	.177	.103	.033		
2.0	.175	.096	.029	.172	.095	.029	.167	.093	.029	.162	.091	.028	.157	.089	.028		
3.0	.155	.082	.025	.152	.082	.025	.147	.080	.024	.143	.078	.024	.139	.077	.024		
4.0	.138	.072	.021	.135	.071	.021	.131	.069	.021	.127	.068	.021	.123	.067	.020		
5.0	.124	.063	.018	.122	.062	.018	.118	.061	.018	.114	.060	.018	.111	.059	.018		
6.0	.112	.056	.016	.110	.056	.016	.107	.055	.016	.103	.054	.016	.100	.053	.016		
7.0	.102	.050	.014	.100	.050	.014	.097	.049	.014	.094	.048	.014	.092	.048	.014		
8.0	.094	.046	.013	.092	.045	.013	.089	.045	.013	.087	.044	.013	.084	.043	.013		
9.0	.087	.042	.012	.085	.042	.012	.083	.041	.012	.080	.040	.012	.078	.040	.011		
10.0	.080	.039	.011	.079	.038	.011	.077	.038	.011	.075	.037	.011	.073	.037	.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	.083	.083	.083	.071	.071	.071	.048	.048	.048	.028	.028	.028	.009	.009	.009		
1.0	.083	.067	.054	.071	.058	.046	.048	.040	.032	.028	.023	.019	.009	.007	.006		
2.0	.081	.057	.037	.070	.049	.032	.048	.034	.022	.028	.020	.013	.009	.006	.004		
3.0	.079	.050	.027	.068	.043	.023	.046	.030	.016	.027	.018	.010	.009	.006	.003		
4.0	.076	.045	.021	.065	.039	.018	.045	.027	.013	.026	.016	.008	.008	.005	.003		
5.0	.072	.040	.017	.062	.035	.015	.043	.024	.010	.025	.014	.006	.008	.005	.002		
6.0	.068	.037	.014	.059	.032	.012	.041	.022	.009	.024	.013	.005	.008	.004	.002		
7.0	.065	.034	.012	.056	.029	.011	.039	.021	.008	.022	.012	.005	.007	.004	.002		
8.0	.061	.031	.011	.053	.027	.009	.037	.019	.007	.021	.011	.004	.007	.004	.001		
9.0	.058	.029	.010	.050	.025	.008	.035	.018	.006	.020	.011	.004	.007	.003	.001		
10.0	.055	.027	.009	.048	.024	.008	.033	.017	.005	.019	.010	.003	.006	.003	.001		

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:K-LITE
 Test Date:12 September 2022

γ Range: 0 - 90DEG
 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:0.0540A P:12.216W PF:0.9810 Freq:49.98Hz Lamp Flux:2073.6x1 lm										
NAME: ZEDO ROUND - SURFACE MOUNTING					TYPE:PATH FINDERS			WEIGHT:		
SPEC.:NW, NICHIA					DIM.: Ø180 x 38			SERIAL No.:4932		
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	12.8	14.6	13.0	14.9	15.1	22.5	24.4	22.8	24.6	24.9
3H	14.4	16.2	14.7	16.4	16.7	26.1	27.8	26.4	28.1	28.4
4H	15.0	16.7	15.4	17.0	17.3	28.0	29.7	28.3	30.0	30.3
6H	15.4	17.0	15.8	17.3	17.6	30.0	31.6	30.3	31.9	32.2
8H	15.6	17.1	15.9	17.4	17.8	30.7	32.3	31.1	32.6	32.9
12H	15.6	17.1	16.0	17.5	17.8	30.8	32.3	31.2	32.6	33.0
4H 2H	18.7	20.4	19.0	20.6	20.9	23.1	24.8	23.5	25.1	25.4
3H	20.6	22.1	21.0	22.4	22.8	27.0	28.5	27.3	28.8	29.1
4H	21.3	22.7	21.7	23.1	23.4	29.1	30.5	29.5	30.8	31.2
6H	21.7	22.9	22.1	23.3	23.7	31.3	32.5	31.7	32.9	33.3
8H	21.7	22.9	22.2	23.3	23.7	32.1	33.3	32.5	33.7	34.1
12H	21.7	22.8	22.2	23.2	23.7	32.1	33.3	32.6	33.6	34.1
8H 4H	24.0	25.2	24.4	25.6	26.0	29.4	30.6	29.8	31.0	31.4
6H	24.8	25.8	25.2	26.2	26.7	31.8	32.8	32.3	33.2	33.7
8H	25.0	25.9	25.4	26.3	26.8	32.7	33.7	33.2	34.1	34.6
12H	25.0	25.8	25.5	26.3	26.8	32.8	33.6	33.3	34.1	34.6
12H 4H	24.7	25.8	25.1	26.2	26.6	29.4	30.5	29.8	30.9	31.3
6H	25.7	26.6	26.2	27.1	27.5	31.9	32.8	32.3	33.2	33.7
8H	26.0	26.8	26.5	27.3	27.8	32.8	33.6	33.3	34.1	34.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.0 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.3 / - 0.3					+ 0.1 / - 0.2				
2.0H	+ 0.3 / - 0.4					+ 0.1 / - 0.1				

CIE Pub.117, 2074 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.5$)
 Area: 0.1 m²

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:K-LITE
 Test Date:12 September 2022

γ Range: 0 - 90DEG
 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:0.0540A P:12.216W PF:0.9810 Freq:49.98Hz Lamp Flux:2073.6x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4932
MFR.: K-LITE	SUR.:	Shielding Angle:

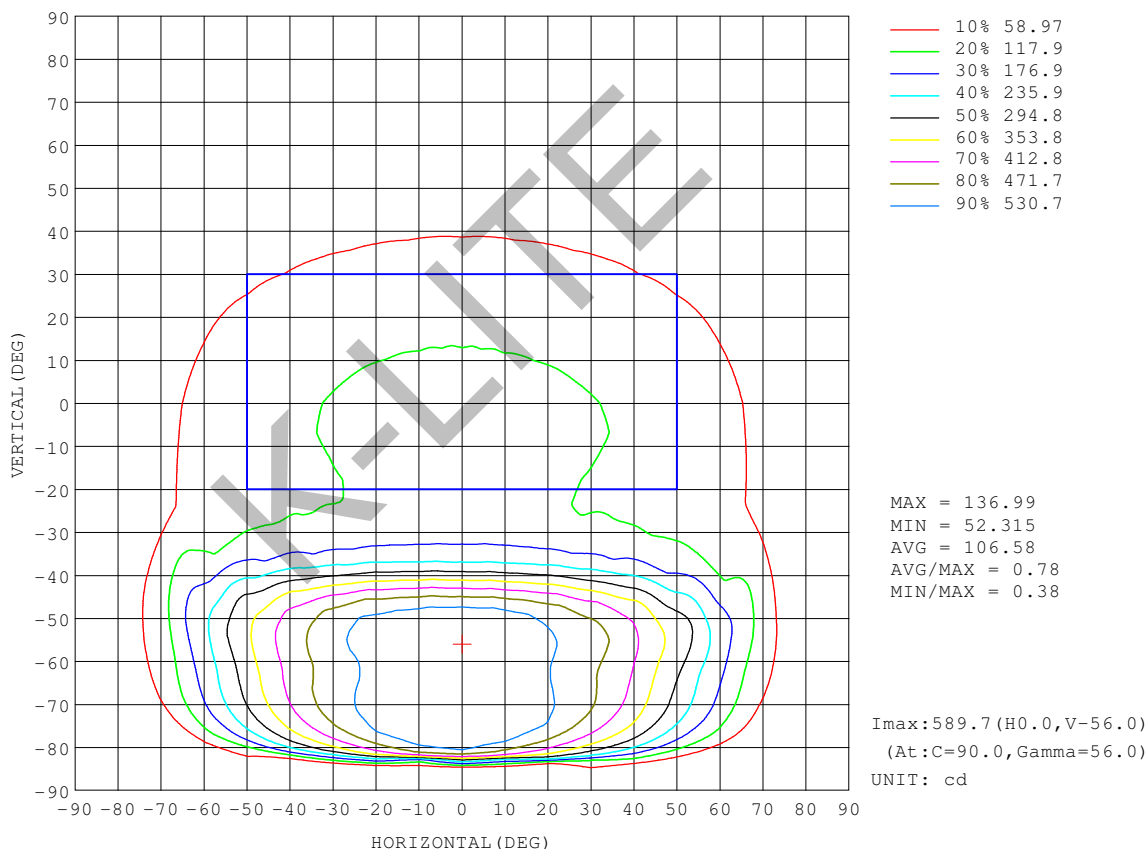
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	19	13	9	19	13	9	18	13	9	6
0.80	23	17	13	23	16	13	22	16	12	9
1.00	27	20	16	26	20	16	25	21	16	12
1.25	30	24	19	29	23	19	28	23	19	15
1.50	33	27	22	32	26	22	30	25	22	17
2.00	36	31	27	35	30	27	34	29	26	22
2.50	39	34	30	38	33	30	36	32	29	24
3.00	41	36	33	40	36	32	38	34	31	27
4.00	43	40	37	42	39	36	40	37	35	30
5.00	45	42	39	44	41	38	41	39	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:12 September 2022

γ Range: 0 - 90DEG
 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:0.0540A P:12.216W PF:0.9810 Freq:49.98Hz Lamp Flux:2073.6x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4932
MFR.: K-LITE	SUR.:	Shielding Angle:

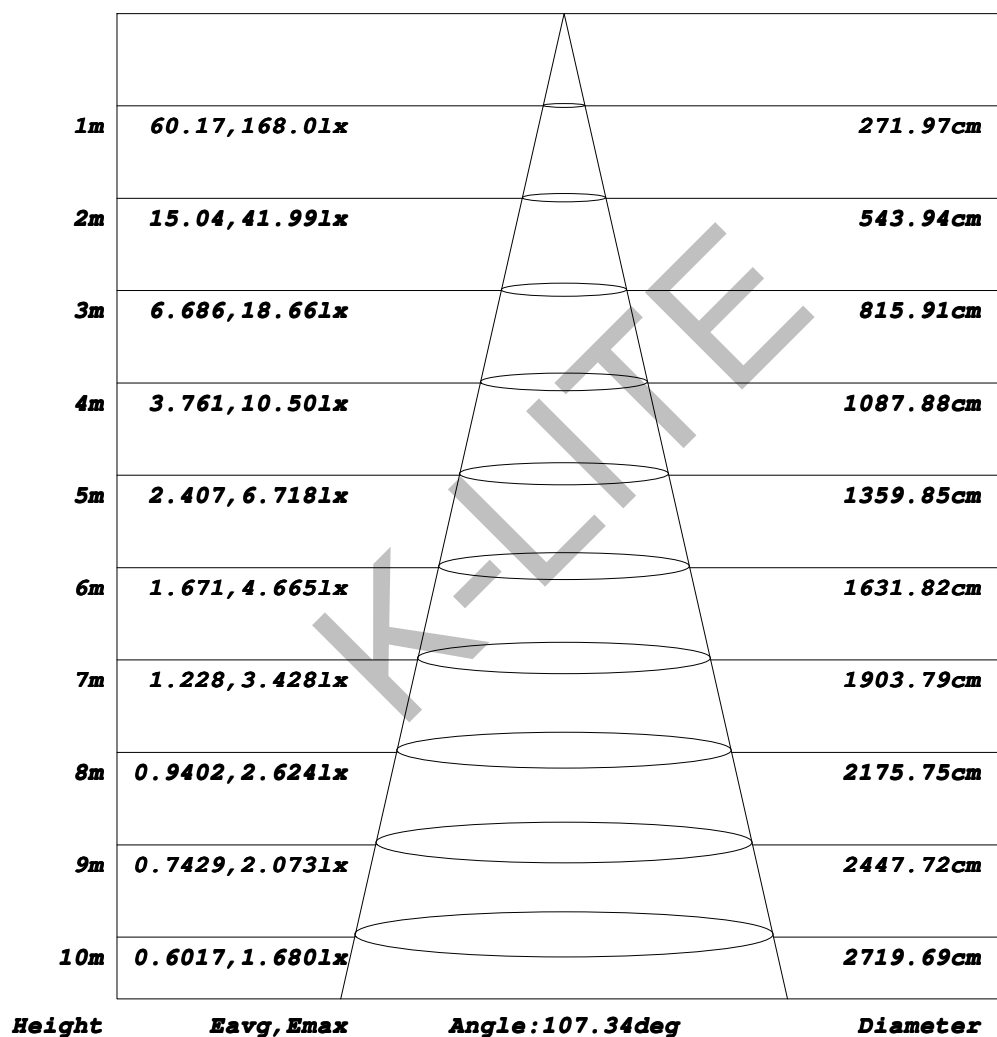


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:12 September 2022

γ Range: 0 - 90DEG
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:230.66V I:0.0540A P:12.216W PF:0.9810 Freq:49.98Hz Lamp Flux:2073.6x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4932
MFR.: K-LITE	SUR.:	Shielding Angle:

Flux out:358.1 lm


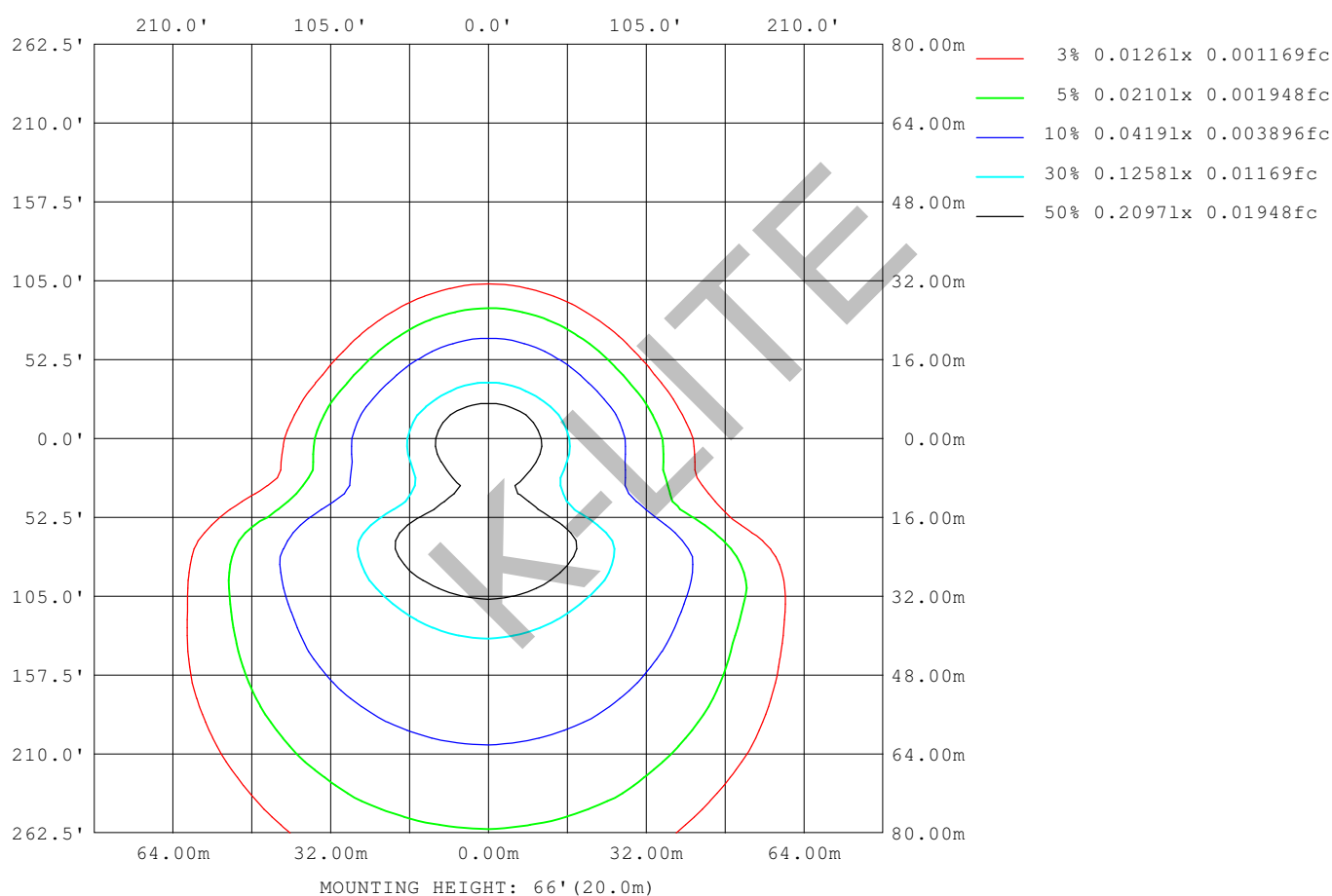
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:12 September 2022

γ Range: 0 - 90DEG
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:0.0540A P:12.216W PF:0.9810 Freq:49.98Hz Lamp Flux:2073.6x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4932
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: 12 September 2022

γ Range: 0 - 90DEG
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:0.0540A P:12.216W PF:0.9810 Freq:49.98Hz Lamp Flux:2073.6x1 lm		
NAME: ZEDO ROUND - SURFACE MOUNTING	TYPE:PATH FINDERS	WEIGHT:
SPEC.:NW, NICHIA	DIM.: Ø180 x 38	SERIAL No.:4932
MFR.: K-LITE	SUR.:	Shielding Angle:

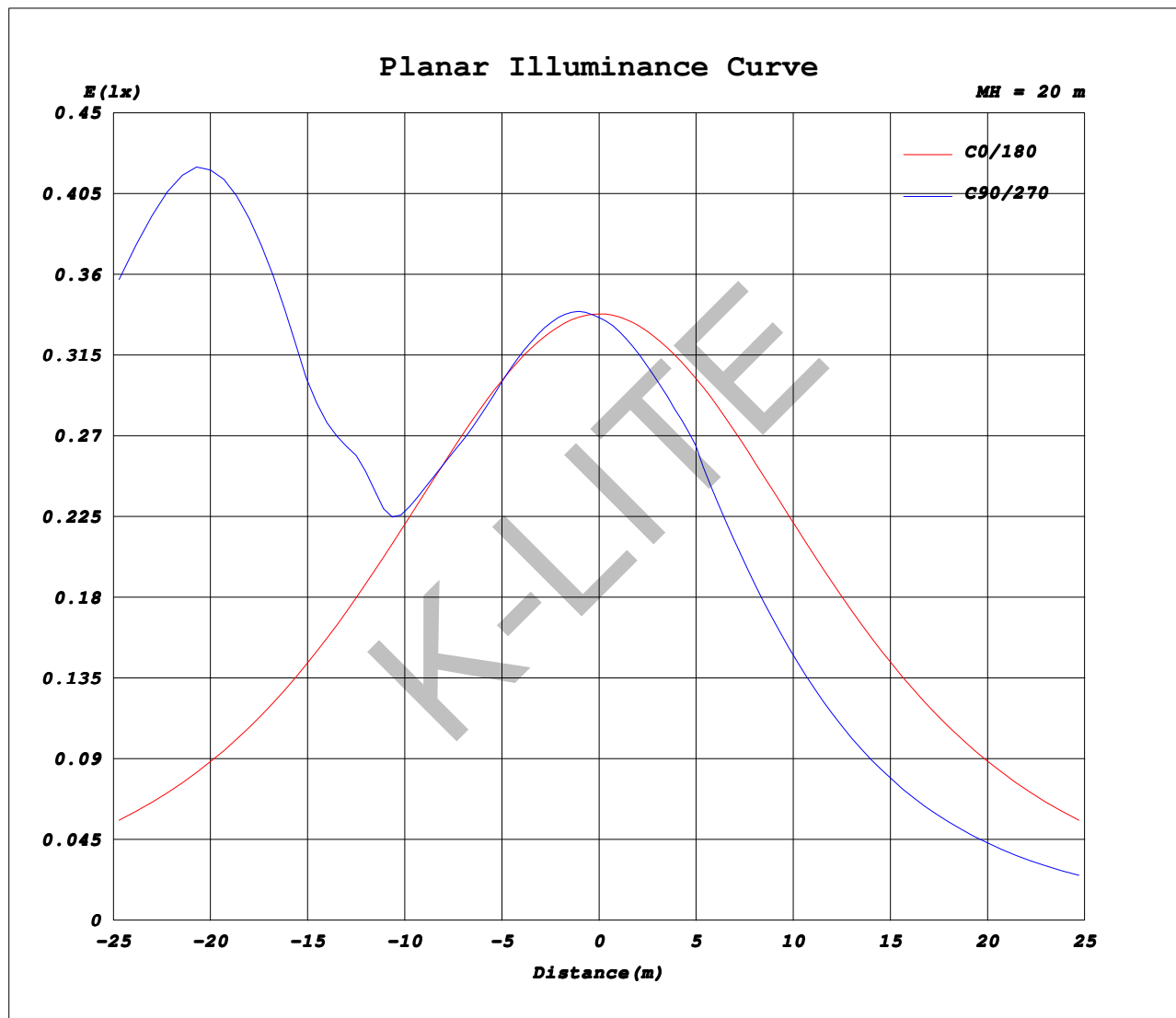
AvgL	cd/m2
L_0~180 (65) av	1399
L_0~180 (75) av	1330
L_0~180 (85) av	1285
L_90~270 (65) av	7212
L_90~270 (75) av	11439
L_90~270 (85) av	718
L_45 (65) av	5469
L_45 (75) av	7438
L_45 (85) av	3258

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:K-LITE
Test Date:12 September 2022

γ Range: 0 - 90DEG
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: 12 September 2022

γ Range: 0 - 90DEG
 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:

```

γ Range: 0 - 90DEG
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:

```

```

γ Range: 0 - 90DEG
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:

```