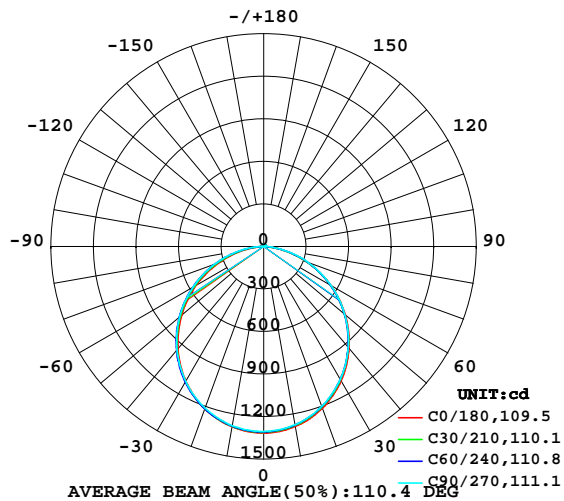


LUMINAIRE PHOTOMETRIC TEST REPORT

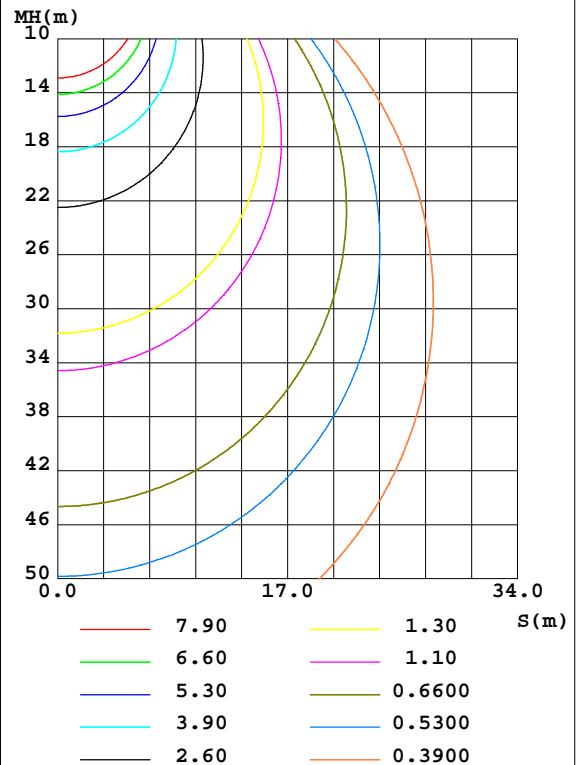
Test:U:219.9V I:0.1354A P:29.44W PF:0.9885 Lamp Flux:3678x1 lm		
NAME: 8"다운라이트-30W-(1)	TYPE:LED	WEIGHT:
SPEC.:30W	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 124.91 lm/W			
MODEL	GD8-30	Imax(cd)	1316	S/MH(C0/180)	1.24
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	3678.0	η UP,DN(C0-180)	0.8,48.6
NOMINAL FLUX(lm)	3678	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.6,50.0
LAMPS INSIDE	1	η up(%)	1.4	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220	η down(%)	98.6	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:OHS
 Test Date:17 October 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
 Humidity:65.0%
 Test Distance:8.100m [K=1.0000]
 Remarks: Z-DL-40e-(1)

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	1289	1280	1276	1274	1291	1288	1283	1275	0- 10	123.4	123.4	3.36,3.36
20	1214	1204	1200	1199	1218	1218	1213	1203	10- 20	352.4	475.8	12.9,12.9
30	1093	1084	1082	1082	1098	1105	1099	1086	20- 30	531.2	1007	27.4,27.4
40	936.5	928.4	928.9	925.7	941.5	952.9	952.3	933.9	30- 40	635.9	1643	44.7,44.7
50	752.2	744.9	747.6	743.4	756.1	772.3	775.3	754.5	40- 50	654.2	2297	62.5,62.5
60	547.4	542.4	547.1	541.5	550.3	571.4	576.4	554.0	50- 60	585.7	2883	78.4,78.4
70	330.5	330.5	338.0	330.5	333.6	359.1	368.2	342.8	60- 70	442.6	3325	90.4,90.4
80	115.0	121.7	135.8	125.1	119.6	147.2	163.4	132.6	70- 80	248.7	3574	97.2,97.2
90	4.533	4.718	4.687	4.598	3.315	3.440	4.020	3.455	80- 90	52.25	3626	98.6,98.6
100	5.809	5.937	5.952	5.797	4.407	4.340	4.398	4.405	90-100	4.973	3631	98.7,98.7
110	7.221	7.345	7.360	7.197	5.722	5.624	5.661	5.665	100-110	6.113	3637	98.9,98.9
120	8.668	8.738	8.797	8.613	7.136	6.990	7.053	7.007	110-120	7.104	3645	99.1,99.1
130	10.04	10.11	10.16	9.986	8.543	8.384	8.432	8.406	120-130	7.648	3652	99.3,99.3
140	11.46	11.48	11.53	11.36	10.03	9.842	9.906	9.838	130-140	7.684	3660	99.5,99.5
150	12.63	12.66	12.68	12.57	11.53	11.32	11.35	11.29	140-150	7.103	3667	99.7,99.7
160	13.71	13.73	13.68	13.62	12.96	12.75	12.72	12.70	150-160	5.815	3673	99.9,99.9
170	14.47	14.45	14.40	14.37	14.11	13.94	13.87	13.83	160-170	3.877	3677	100,100
180	14.70	14.70	14.58	14.60	14.73	14.68	14.59	14.58	170-180	1.371	3678	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 1973.3 lm

%lum = 53.7%

%lamp = 53.7%

Conical surface Flux(120deg): 2882.8 lm

%lum = 78.4%

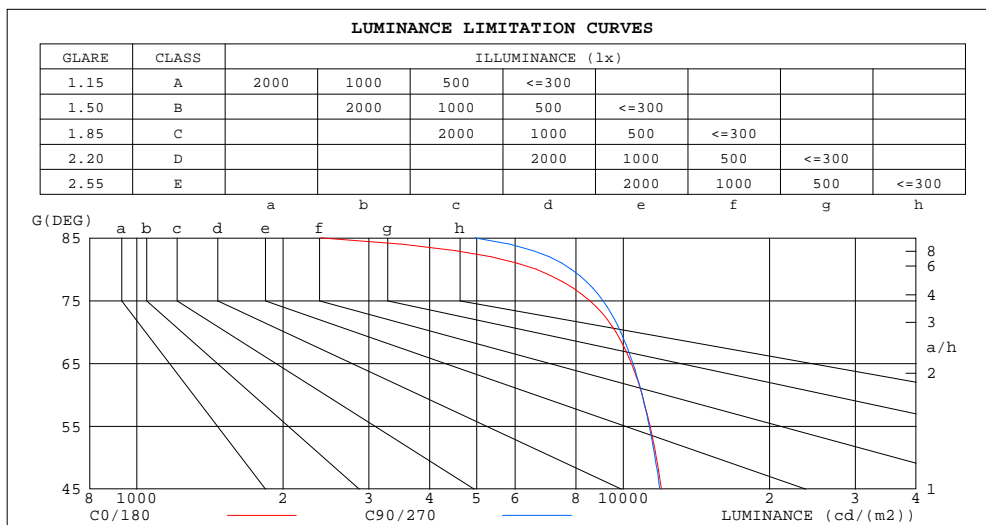
%lamp = 78.4%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:OHS
 Test Date:17 October 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
 Humidity:65.0%
 Test Distance:8.100m [K=1.0000]
 Remarks: Z-DL-40e-(1)

LUMINANCE LIMITATION CURVES

Test:U:219.9V I:0.1354A P:29.44W PF:0.9885 Lamp Flux:3678x1 lm		
NAME: 8"다운라이트-30W-(1)	TYPE:LED	WEIGHT:
SPEC.:30W	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	2386	4957
80	6624	7819
75	8537	9088
70	9663	9882
65	10400	10469
60	10947	10942
55	11362	11316
50	11703	11630
45	11986	11895

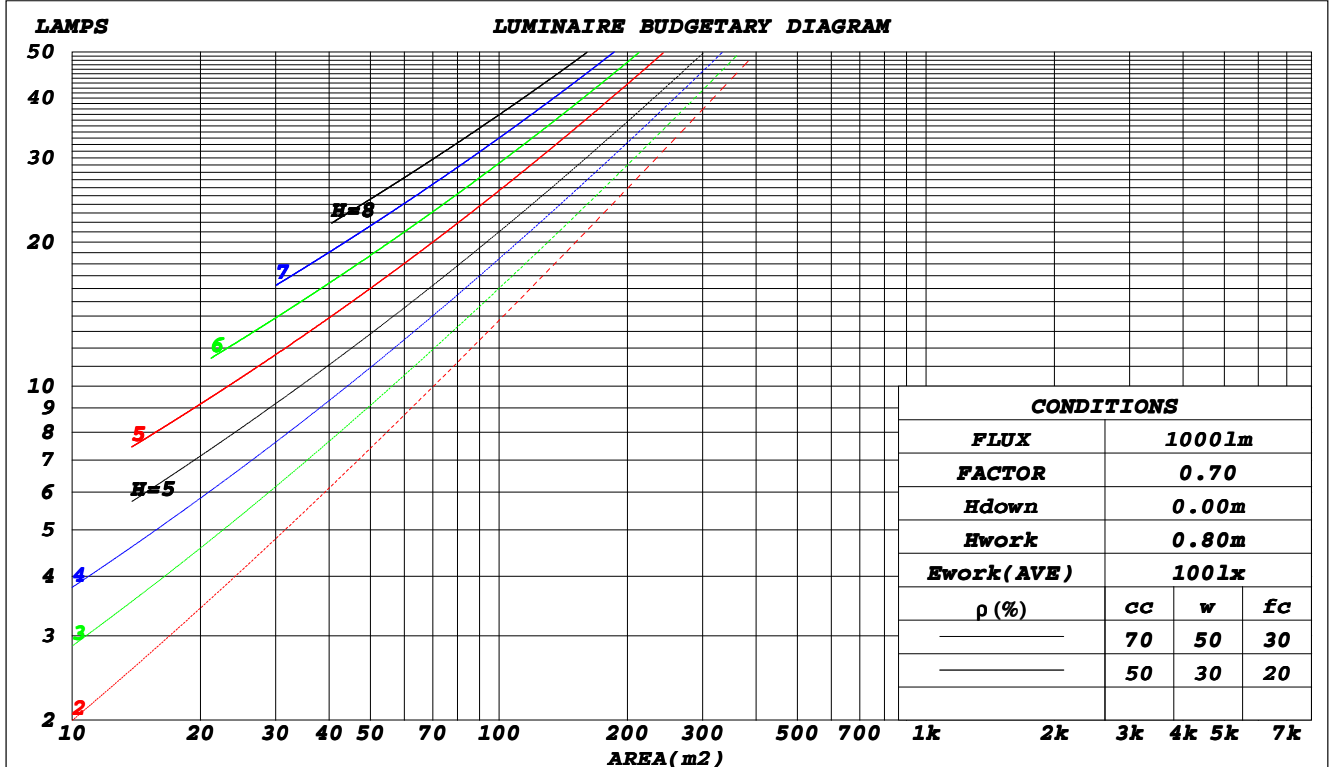
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: OHS
Test Date: 17 October 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: Z-DL-40e-(1)

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:219.9V I:0.1354A P:29.44W PF:0.9885 Lamp Flux:3678x1 lm		
NAME: 8"다운라이트-30W-(1)	TYPE:LED	WEIGHT:
SPEC.:30W	DIM.:	SERIAL No.:
MFR.: ICEPIPE	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	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	.99
1.0	1.04	.90	.96	1.01	.98	.94	.97	.94	.91	.93	.90	.88	.89	.87	.85	.83
2.0	.91	.84	.78	.89	.82	.77	.85	.80	.75	.81	.77	.73	.78	.74	.71	.69
3.0	.80	.71	.65	.78	.70	.64	.75	.68	.63	.72	.66	.62	.69	.64	.60	.58
4.0	.70	.62	.55	.69	.61	.55	.66	.59	.54	.64	.58	.53	.62	.56	.52	.50
5.0	.63	.54	.47	.62	.53	.47	.59	.52	.46	.57	.51	.46	.55	.50	.45	.43
6.0	.57	.48	.41	.56	.47	.41	.54	.46	.41	.52	.45	.40	.50	.44	.40	.38
7.0	.51	.43	.36	.50	.42	.36	.49	.41	.36	.47	.41	.36	.46	.40	.35	.33
8.0	.47	.38	.33	.46	.38	.32	.45	.37	.32	.43	.37	.32	.42	.36	.32	.30
9.0	.43	.35	.29	.42	.35	.29	.41	.34	.29	.40	.33	.29	.39	.33	.28	.27
10.0	.40	.32	.27	.39	.32	.26	.38	.31	.26	.37	.31	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:OHS
 Test Date:17 October 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
 Humidity:65.0%
 Test Distance:8.100m [K=1.0000]
 Remarks: Z-DL-40e-(1)

WEC AND CCEC

Test:U:219.9V I:0.1354A P:29.44W PF:0.9885 Lamp Flux:3678x1 lm		
NAME: 8"다운라이트-30W-(1)	TYPE:LED	WEIGHT:
SPEC.:30W	DIM.:	SERIAL No.:
MFR.: ICEPIPE	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	.303	.172	.055	.296	.169	.054	.282	.162	.052	.269	.155	.050	.257	.149	.048		
2.0	.287	.157	.048	.281	.155	.048	.268	.149	.046	.257	.144	.045	.246	.139	.044		
3.0	.267	.142	.043	.261	.140	.042	.250	.135	.041	.240	.131	.040	.230	.128	.039		
4.0	.247	.128	.038	.241	.126	.037	.232	.123	.037	.223	.120	.036	.214	.116	.035		
5.0	.228	.116	.034	.224	.115	.033	.215	.112	.033	.207	.109	.032	.199	.106	.032		
6.0	.212	.106	.030	.208	.105	.030	.200	.103	.030	.193	.100	.029	.186	.098	.029		
7.0	.197	.098	.028	.194	.097	.028	.187	.094	.027	.180	.092	.027	.174	.090	.027		
8.0	.184	.090	.025	.181	.089	.025	.175	.087	.025	.169	.086	.025	.163	.084	.024		
9.0	.173	.084	.023	.170	.083	.023	.164	.081	.023	.159	.080	.023	.154	.078	.023		
10.0	.163	.078	.022	.160	.077	.022	.155	.076	.021	.150	.074	.021	.145	.073	.021		

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	.201	.201	.201	.172	.172	.172	.117	.117	.117	.067	.067	.067	.022	.022	.022	
1.0	.191	.167	.146	.163	.143	.125	.112	.099	.087	.064	.057	.050	.021	.018	.016	
2.0	.183	.143	.109	.156	.123	.095	.107	.085	.066	.062	.049	.039	.020	.016	.013	
3.0	.175	.125	.086	.150	.108	.074	.103	.075	.052	.059	.044	.031	.019	.014	.010	
4.0	.167	.112	.070	.143	.097	.061	.099	.067	.043	.057	.039	.025	.018	.013	.008	
5.0	.160	.102	.058	.137	.088	.051	.095	.061	.036	.055	.036	.021	.018	.012	.007	
6.0	.153	.093	.050	.131	.081	.044	.091	.056	.031	.053	.033	.018	.017	.011	.006	
7.0	.146	.086	.044	.126	.075	.039	.087	.052	.027	.050	.031	.016	.016	.010	.005	
8.0	.140	.080	.040	.120	.070	.035	.083	.049	.025	.048	.029	.015	.016	.009	.005	
9.0	.134	.076	.036	.115	.066	.032	.080	.046	.023	.046	.027	.013	.015	.009	.004	
10.0	.128	.071	.034	.110	.062	.029	.076	.044	.021	.045	.026	.012	.014	.008	.004	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: OHS
Test Date: 17 October 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: Z-DL-40e-(1)

UGR(Unified Glare Rating) Table

Test:U:219.9V I:0.1354A P:29.44W PF:0.9885 Lamp Flux:3678x1 lm															
NAME: 8"다운라이트-30W-(1)					TYPE:LED			WEIGHT:							
SPEC.:30W					DIM.:			SERIAL No.:							
MFR.: ICEPIPE					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						21.2	22.7	21.5	22.9	23.1	21.2	22.7	21.4	22.9	23.1
3H						22.6	24.0	22.9	24.2	24.5	22.6	24.0	23.0	24.3	24.5
4H						23.1	24.4	23.5	24.7	25.0	23.2	24.5	23.6	24.8	25.1
6H						23.4	24.7	23.8	25.0	25.3	23.6	24.9	24.0	25.1	25.5
8H						23.5	24.7	23.8	25.0	25.3	23.7	24.9	24.1	25.2	25.5
12H						23.5	24.6	23.8	24.9	25.3	23.7	24.9	24.1	25.2	25.5
4H 2H						21.7	23.1	22.1	23.3	23.6	21.7	23.0	22.1	23.3	23.6
3H						23.4	24.5	23.7	24.8	25.2	23.4	24.5	23.8	24.9	25.2
4H						24.0	25.0	24.4	25.4	25.7	24.1	25.1	24.5	25.5	25.9
6H						24.4	25.3	24.8	25.7	26.1	24.6	25.5	25.0	25.9	26.3
8H						24.5	25.3	24.9	25.7	26.1	24.8	25.6	25.2	26.0	26.4
12H						24.5	25.3	24.9	25.7	26.1	24.8	25.6	25.3	26.0	26.4
8H 4H						24.2	25.1	24.7	25.5	25.9	24.3	25.2	24.8	25.6	26.0
6H						24.7	25.5	25.2	25.9	26.3	24.9	25.7	25.4	26.1	26.5
8H						24.9	25.5	25.3	25.9	26.4	25.1	25.8	25.6	26.2	26.7
12H						24.9	25.4	25.4	25.9	26.4	25.3	25.8	25.7	26.3	26.8
12H 4H						24.2	25.0	24.7	25.4	25.9	24.3	25.1	24.8	25.5	25.9
6H						24.8	25.4	25.3	25.9	26.3	25.0	25.6	25.4	26.0	26.5
8H						24.9	25.5	25.4	25.9	26.4	25.2	25.7	25.7	26.2	26.7
Variations with the observer position at spacings:															
S = 1.0H						+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H						+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H						+ 0.2 / - 0.2					+ 0.2 / - 0.2				

CIE Pub.117 Corrected 3678 lm Total Lamp Luminous Flux.(8log(F/F0) = 4.5)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:OHS
Test Date:17 October 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: Z-DL-40e-(1)

UTILIZATION FACTORS TABLE

Test:U:219.9V I:0.1354A P:29.44W PF:0.9885 Lamp Flux:3678x1 lm		
NAME: 8"다운라이트-30W-(1)	TYPE:LED	WEIGHT:
SPEC.:30W	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

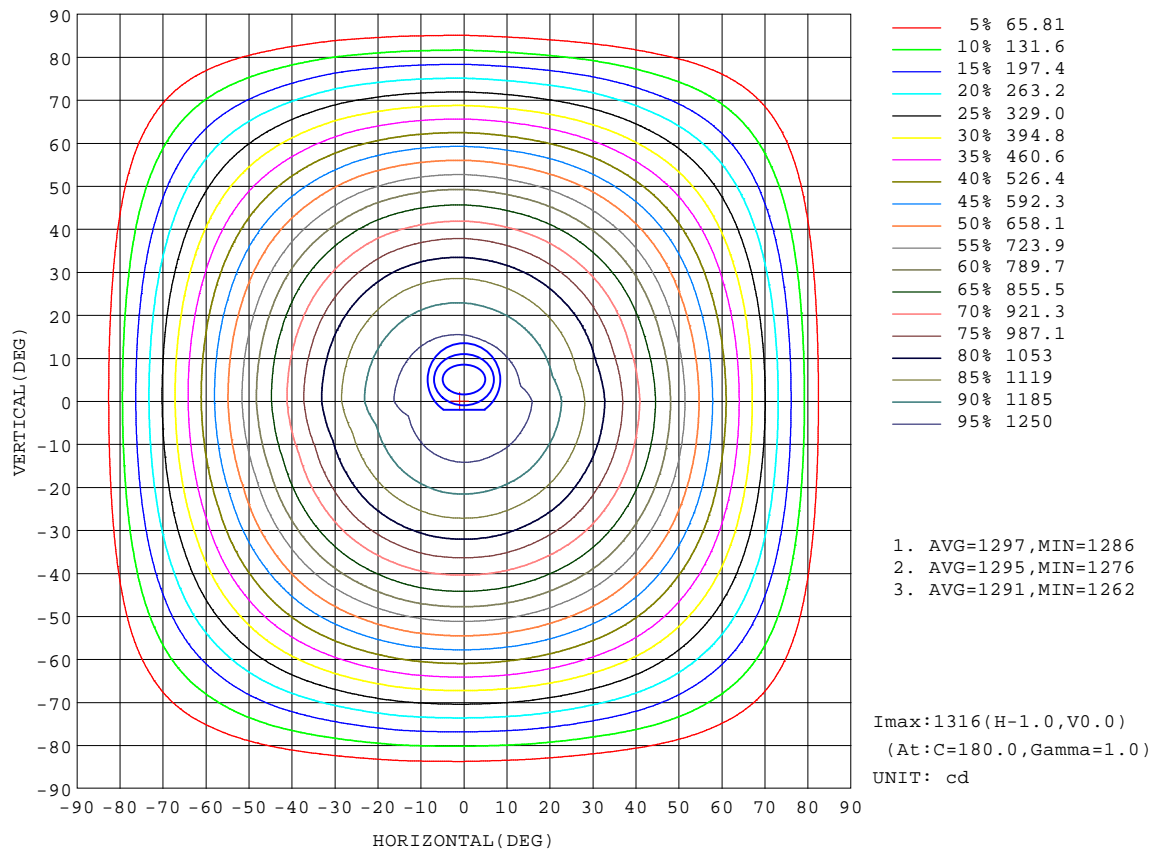
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	46	39	57	46	39	55	45	39	32
0.80	68	56	49	66	56	48	65	55	48	41
1.00	76	65	58	75	64	57	72	66	57	50
1.25	83	73	65	82	72	65	79	70	64	57
1.50	88	78	71	86	77	71	83	75	70	62
2.00	95	86	80	93	85	79	89	83	78	69
2.50	99	91	85	97	90	84	93	87	82	74
3.00	102	95	90	100	94	89	96	91	86	78
4.00	106	100	96	104	99	94	99	95	92	82
5.00	109	104	100	106	102	98	101	98	95	85
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: OHS
Test Date: 17 October 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: Z-DL-40e-(1)

ISOCANDELA DIAGRAM

Test:U:219.9V I:0.1354A P:29.44W PF:0.9885 Lamp Flux:3678x1 lm		
NAME: 8"다운라이트-30W-(1)	TYPE:LED	WEIGHT:
SPEC.:30W	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

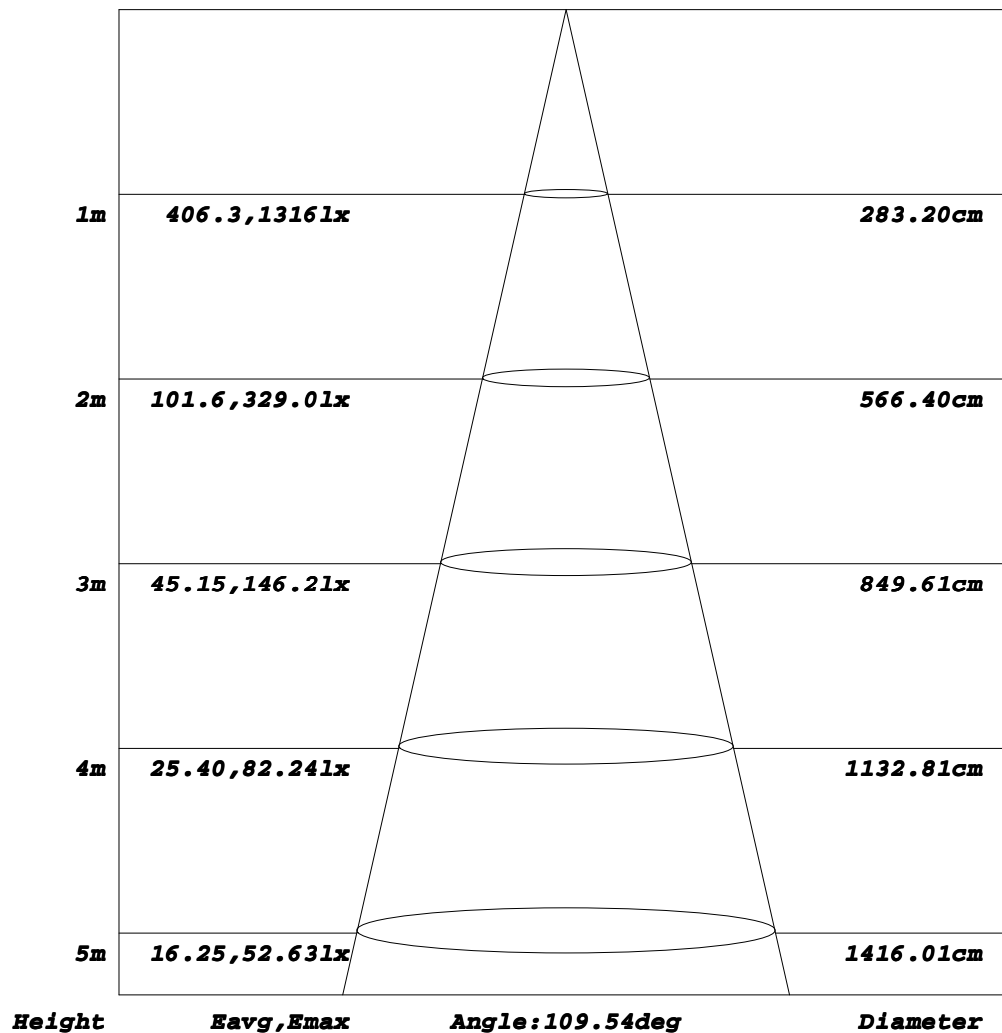


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:OHS
Test Date:17 October 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: Z-DL-40e-(1)

AAI Figure

Test:U:219.9V I:0.1354A P:29.44W PF:0.9885 Lamp Flux:3678x1 lm		
NAME: 8"다운라이트-30W-(1)	TYPE:LED	WEIGHT:
SPEC.:30W	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Flux out:2604 lm


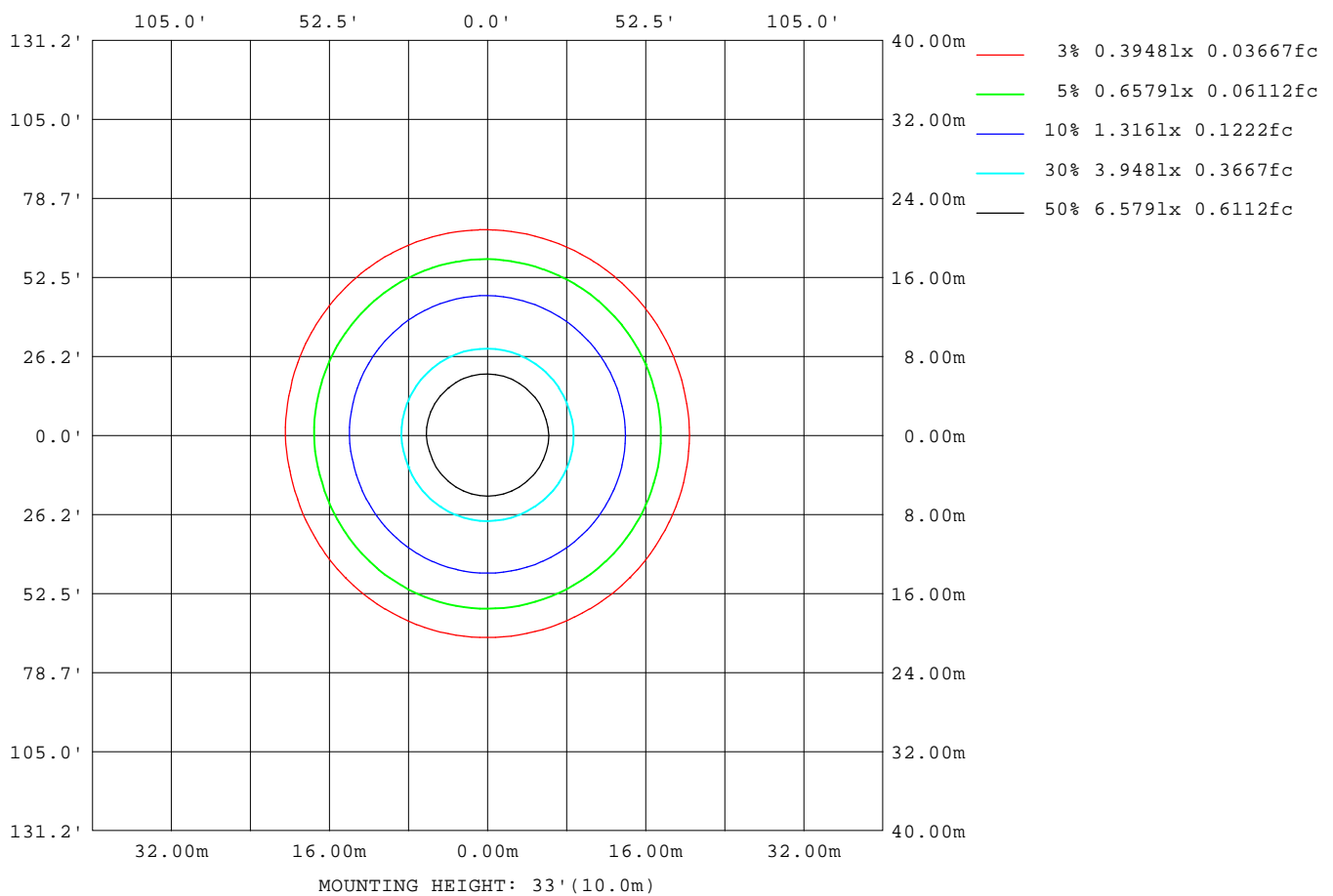
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: OHS
Test Date: 17 October 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: Z-DL-40e-(1)

ISOLUX DIAGRAM

Test:U:219.9V I:0.1354A P:29.44W PF:0.9885 Lamp Flux:3678x1 lm		
NAME: 8"다운라이트-30W-(1)	TYPE:LED	WEIGHT:
SPEC.:30W	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: OHS
Test Date: 17 October 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: Z-DL-40e-(1)

LED Avg.L Report

Test:U:219.9V I:0.1354A P:29.44W PF:0.9885 Lamp Flux:3678x1 lm		
NAME: 8"다운라이트-30W-(1)	TYPE:LED	WEIGHT:
SPEC.:30W	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

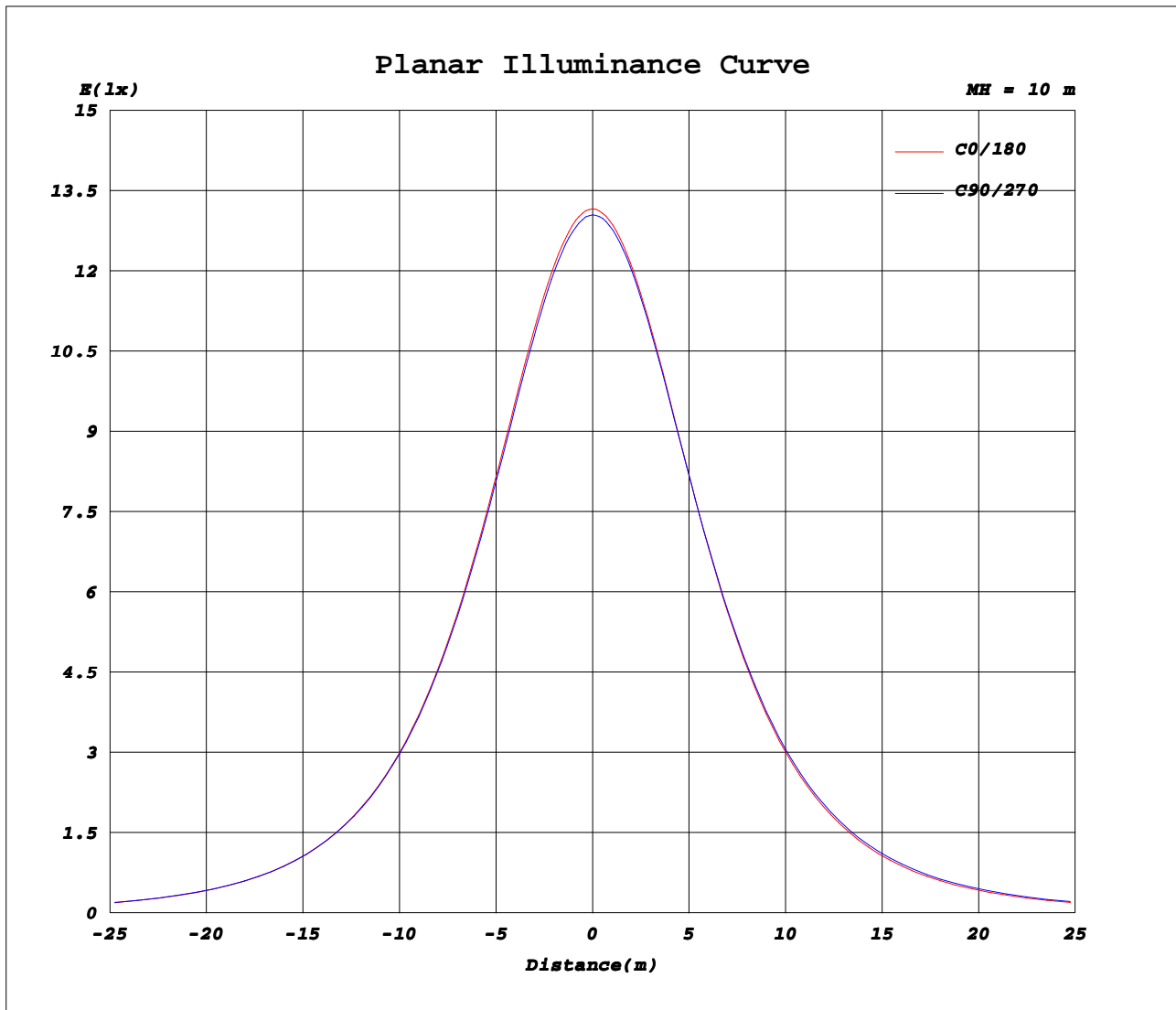
AvgL	cd/m2
L_0~180(65)av	10435
L_0~180(75)av	8628
L_0~180(85)av	2425
L_90~270(65)av	10826
L_90~270(75)av	9658
L_90~270(85)av	6320
L_45(65)av	10571
L_45(75)av	9082
L_45(85)av	4072

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:OHS
Test Date:17 October 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: Z-DL-40e-(1)

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: OHS
Test Date: 17 October 2022

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: Z-DL-40e-(1)

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:219.9V I:0.1354A P:29.44W PF:0.9885 Lamp Flux:3678x1 lm																		
NAME: 8"다운라이트-30W-(1)										TYPE:LED					WEIGHT:			
SPEC.:30W										DIM.:					SERIAL No.:			
MFR.: ICEPIPE										SUR.:					Shielding Angle:			

Table--1

UNIT: cd

γ (DEG) \ C (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	1316	1313	1311	1309	1308	1306	1305	1304	1302	1299	1298	1296	1316	1313	1311	1309	1308	1306	1305
5	1309	1305	1303	1301	1299	1298	1296	1296	1294	1294	1291	1289	1310	1307	1306	1305	1303	1301	1300
10	1289	1286	1281	1280	1278	1277	1276	1277	1275	1274	1271	1270	1291	1290	1288	1288	1286	1285	1283
15	1258	1254	1250	1248	1245	1245	1244	1244	1243	1241	1240	1240	1260	1259	1259	1259	1258	1256	1253
20	1214	1210	1206	1204	1201	1201	1200	1202	1200	1199	1196	1196	1218	1217	1218	1218	1218	1215	1213
25	1158	1154	1150	1149	1147	1146	1145	1147	1146	1144	1143	1141	1163	1163	1166	1166	1167	1164	1161
30	1093	1090	1085	1084	1082	1081	1082	1084	1082	1082	1078	1077	1098	1099	1103	1105	1106	1103	1099
35	1019	1015	1011	1010	1008	1009	1009	1011	1009	1007	1004	1003	1024	1026	1030	1033	1036	1033	1030
40	937	933	929	928	926	928	929	930	928	926	921	921	941	944	949	953	957	955	952
45	848	844	840	840	838	840	841	843	840	837	833	833	851	855	861	866	870	869	867
50	752	749	744	745	744	746	748	749	746	743	738	738	756	760	768	772	779	777	775
55	652	649	645	645	644	647	649	650	647	644	639	639	655	660	668	674	680	680	678
60	547	544	541	542	542	545	547	549	544	542	536	536	550	555	565	571	578	579	576
65	440	437	434	437	437	441	442	444	440	436	430	429	442	448	458	465	474	474	473
70	330	329	327	330	331	336	338	340	335	330	324	323	334	340	351	359	368	370	368
75	221	221	220	225	227	233	235	237	231	226	218	217	226	231	244	252	263	266	265
80	115	115	116	122	126	133	136	137	131	125	117	115	120	125	138	147	159	163	163
85	20.8	20.8	21.6	26.3	31.0	38.7	43.2	43.9	38.2	31.8	24.4	20.7	21.5	25.3	36.0	46.6	59.0	65.3	67.0
90	4.53	4.58	4.63	4.72	4.87	4.80	4.69	4.72	4.78	4.60	4.53	4.51	3.31	3.31	3.36	3.44	3.69	4.04	4.02
95	5.43	5.18	5.24	5.28	5.32	5.32	5.29	5.23	5.19	5.15	5.13	5.12	3.83	3.81	3.80	3.79	3.76	3.81	3.83
100	5.81	5.84	5.89	5.94	5.98	5.98	5.95	5.88	5.84	5.80	5.78	5.75	4.41	4.36	4.34	4.34	4.34	4.36	4.40
105	6.50	6.54	6.58	6.63	6.67	6.67	6.65	6.57	6.53	6.48	6.47	6.44	5.04	5.00	4.97	4.96	4.96	4.97	5.01
110	7.22	7.25	7.30	7.34	7.38	7.38	7.36	7.29	7.23	7.20	7.17	7.15	5.72	5.67	5.63	5.62	5.61	5.63	5.66
115	7.97	7.98	8.02	8.05	8.10	8.09	8.10	8.01	7.96	7.92	7.89	7.87	6.43	6.36	6.31	6.30	6.29	6.32	6.36
120	8.67	8.67	8.71	8.74	8.79	8.80	8.80	8.72	8.66	8.61	8.59	8.57	7.14	7.05	7.02	6.99	6.98	7.01	7.05
125	9.34	9.34	9.38	9.43	9.45	9.45	9.47	9.38	9.32	9.29	9.26	9.23	7.82	7.74	7.70	7.67	7.66	7.68	7.74
130	10.0	10.0	10.1	10.1	10.1	10.1	10.2	10.1	10.0	9.99	9.93	9.93	8.54	8.44	8.39	8.38	8.36	8.38	8.43
135	10.7	10.7	10.8	10.8	10.8	10.9	10.9	10.8	10.7	10.7	10.6	10.6	9.27	9.16	9.11	9.11	9.08	9.10	9.15
140	11.5	11.5	11.4	11.5	11.5	11.5	11.5	11.5	11.4	11.4	11.3	11.3	10.0	9.92	9.87	9.84	9.85	9.86	9.91
145	12.1	12.1	12.0	12.1	12.1	12.1	12.1	12.1	12.0	12.0	12.0	12.0	10.8	10.7	10.6	10.6	10.6	10.6	10.6
150	12.6	12.6	12.6	12.7	12.7	12.7	12.7	12.6	12.6	12.6	12.5	12.5	11.5	11.4	11.4	11.3	11.3	11.3	11.3
155	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.1	13.1	13.1	13.1	12.3	12.2	12.1	12.0	12.0	12.0	12.0
160	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.6	13.6	13.6	13.6	13.6	13.0	12.9	12.8	12.7	12.7	12.7	12.7
165	14.2	14.2	14.1	14.1	14.2	14.2	14.1	14.1	14.0	14.1	14.1	14.1	13.6	13.5	13.5	13.4	13.4	13.3	13.4
170	14.5	14.5	14.4	14.4	14.4	14.5	14.4	14.4	14.4	14.4	14.4	14.4	14.1	14.1	14.0	13.9	13.9	13.9	13.9
175	14.6	14.6	14.6	14.7	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.5	14.5	14.5	14.5	14.4	14.4	14.3	14.3
180	14.7	14.7	14.7	14.7	14.6	14.6	14.6	14.6	14.6	14.6	14.5	14.5	14.7	14.7	14.7	14.7	14.6	14.6	14.6

C Range: 0 - 360DEG

C Interval: 15.0DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:OHS

Test Date:17 October 2022

 γ Range: 0 - 180DEG γ Interval: 1.0DEG

Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351

Humidity:65.0%

Test Distance:8.100m [K=1.0000]

Remarks: Z-DL-40e-(1)

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:219.9V I:0.1354A P:29.44W PF:0.9885 Lamp Flux:3678x1 lm		
NAME: 8"다운라이트-30W-(1)	TYPE:LED	WEIGHT:
SPEC.:30W	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Table--2

UNIT: cd

<div> <div>C(DEG)</div> <div>γ (DEG)</div> </div>	285	300	315	330	345														
0	1304	1302	1299	1298	1296														
5	1297	1296	1294	1292	1290														
10	1280	1278	1275	1273	1271														
15	1249	1247	1245	1243	1241														
20	1207	1205	1203	1200	1199														
25	1156	1153	1149	1148	1144														
30	1094	1090	1086	1083	1080														
35	1023	1019	1014	1011	1007														
40	944	940	934	931	926														
45	859	853	847	844	840														
50	767	761	755	751	746														
55	669	663	656	652	648														
60	568	561	554	550	545														
65	464	458	449	444	439														
70	359	352	343	337	331														
75	255	247	237	231	224														
80	153	144	133	126	119														
85	57.6	47.9	37.4	31.0	24.8														
90	3.78	3.67	3.46	3.41	3.34														
95	3.86	3.85	3.98	4.50	4.41														
100	4.42	4.42	4.40	4.38	4.39														
105	5.03	5.03	5.02	4.99	4.98														
110	5.69	5.67	5.67	5.64	5.64														
115	6.37	6.35	6.34	6.32	6.32														
120	7.05	7.04	7.01	6.99	6.99														
125	7.73	7.70	7.69	7.68	7.66														
130	8.43	8.39	8.41	8.36	8.36														
135	9.15	9.12	9.12	9.08	9.08														
140	9.90	9.87	9.84	9.82	9.83														
145	10.6	10.6	10.6	10.5	10.6														
150	11.3	11.3	11.3	11.2	11.2														
155	12.0	12.0	12.0	12.0	12.0														
160	12.7	12.7	12.7	12.7	12.7														
165	13.4	13.4	13.3	13.3	13.3														
170	13.9	13.9	13.8	13.8	13.8														
175	14.3	14.3	14.3	14.3	14.2														
180	14.6	14.6	14.6	14.6	14.5														

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:OHS
Test Date:17 October 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: Z-DL-40e-(1)

Photometric Data Table [cd]

G/C	0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0	135.0
0.0	1316	1313	1311	1309	1308	1306	1305	1304	1302	1299
3.0	1313	1310	1307	1305	1304	1302	1301	1301	1299	1298
6.0	1306	1302	1299	1298	1296	1295	1293	1292	1291	1290
9.0	1294	1291	1287	1285	1284	1282	1281	1282	1280	1278
12.0	1278	1275	1271	1269	1266	1265	1265	1265	1264	1263
15.0	1258	1254	1250	1248	1245	1245	1244	1244	1243	1241
18.0	1233	1229	1225	1223	1221	1220	1219	1220	1219	1217
21.0	1204	1199	1195	1193	1191	1191	1190	1192	1190	1188
24.0	1170	1166	1162	1160	1158	1158	1158	1159	1157	1156
27.0	1133	1130	1126	1124	1121	1121	1121	1123	1121	1120
30.0	1093	1090	1085	1084	1082	1081	1082	1084	1082	1082
33.0	1049	1046	1042	1041	1039	1040	1039	1041	1039	1037
36.0	1003	999.6	995.1	994.5	992.9	993.6	993.8	995.1	993.1	991.6
39.0	953.6	950.0	945.8	945.8	943.9	944.9	945.6	947.3	944.9	942.7
42.0	902.0	898.0	893.9	893.9	891.9	892.6	894.7	896.1	893.6	891.3
45.0	847.5	843.7	840.0	839.7	837.9	839.8	841.1	842.9	839.9	837.1
48.0	791.0	788.3	783.4	783.5	781.7	784.3	785.9	787.4	783.8	781.6
51.0	732.4	729.1	724.9	725.1	724.2	727.0	727.8	729.1	726.2	723.7
54.0	672.0	669.1	664.9	665.7	664.4	667.3	669.2	670.3	667.4	664.1
57.0	609.9	607.2	603.4	604.3	603.7	607.0	609.0	609.7	606.5	603.3
60.0	547.4	544.3	541.0	542.4	541.8	545.1	547.1	548.5	544.4	541.5
63.0	482.7	480.3	477.5	479.0	482.3	484.2	485.9	485.9	481.5	478.4
66.0	417.8	415.6	413.1	415.6	416.2	419.6	421.5	423.3	418.7	414.8
69.0	352.1	350.5	348.7	351.6	352.9	357.2	358.9	360.2	355.6	351.3
72.0	286.8	285.7	284.2	288.4	289.9	295.2	296.9	298.2	292.7	288.6
75.0	221.0	220.7	219.9	225.3	227.3	233.2	235.2	236.8	230.7	226.1
78.0	156.5	156.6	156.5	162.5	165.9	172.5	175.0	176.3	169.8	164.8
81.0	94.67	94.27	95.62	101.4	105.8	113.3	117.0	117.6	111.5	105.5
84.0	36.89	36.97	38.02	43.21	48.24	56.51	61.31	61.58	55.41	49.07
87.0	6.036	5.966	5.920	6.137	6.752	9.116	11.49	12.50	9.306	7.009
90.0	4.533	4.583	4.634	4.718	4.871	4.802	4.687	4.723	4.783	4.598
93.0	4.985	4.992	4.991	5.045	5.088	5.080	5.042	4.997	4.958	4.923
96.0	5.345	5.313	5.363	5.412	5.446	5.452	5.422	5.364	5.307	5.272
99.0	5.679	5.703	5.759	5.798	5.851	5.843	5.818	5.751	5.707	5.662
102.0	6.070	6.108	6.170	6.210	6.258	6.243	6.227	6.154	6.115	6.071
105.0	6.497	6.536	6.584	6.630	6.669	6.646	6.646	6.574	6.528	6.484
108.0	6.929	6.963	7.003	7.062	7.096	7.093	7.074	7.000	6.943	6.912
111.0	7.370	7.401	7.445	7.494	7.527	7.526	7.514	7.441	7.379	7.344
114.0	7.816	7.833	7.875	7.912	7.955	7.957	7.951	7.870	7.817	7.781
117.0	8.257	8.261	8.300	8.336	8.379	8.382	8.373	8.297	8.250	8.195
120.0	8.668	8.675	8.714	8.738	8.789	8.799	8.797	8.720	8.657	8.613
123.0	9.077	9.083	9.112	9.144	9.187	9.180	9.193	9.116	9.061	9.012
126.0	9.471	9.482	9.518	9.567	9.586	9.596	9.602	9.528	9.461	9.435
129.0	9.894	9.905	9.931	9.984	9.995	10.01	10.02	9.938	9.875	9.855
132.0	10.32	10.31	10.34	10.40	10.41	10.42	10.44	10.35	10.29	10.26
135.0	10.74	10.75	10.76	10.82	10.84	10.86	10.85	10.78	10.72	10.69
138.0	11.18	11.18	11.19	11.22	11.26	11.27	11.27	11.20	11.15	11.09
141.0	11.59	11.59	11.57	11.60	11.66	11.68	11.66	11.61	11.54	11.49
144.0	11.96	11.96	11.93	11.97	12.01	12.04	12.03	11.97	11.89	11.86
147.0	12.31	12.30	12.27	12.32	12.35	12.38	12.37	12.32	12.25	12.23
150.0	12.63	12.64	12.63	12.66	12.70	12.70	12.68	12.64	12.58	12.57
153.0	12.97	12.96	12.96	12.98	13.01	13.00	12.99	12.94	12.91	12.89
156.0	13.29	13.29	13.29	13.31	13.32	13.31	13.29	13.25	13.22	13.21
159.0	13.60	13.61	13.59	13.62	13.61	13.60	13.59	13.55	13.51	13.53
162.0	13.90	13.91	13.88	13.91	13.90	13.89	13.85	13.84	13.80	13.82
165.0	14.17	14.16	14.14	14.14	14.15	14.15	14.12	14.09	14.04	14.06
168.0	14.38	14.38	14.33	14.34	14.33	14.37	14.32	14.29	14.25	14.26
171.0	14.51	14.50	14.46	14.49	14.50	14.50	14.43	14.42	14.41	14.43
174.0	14.61	14.60	14.59	14.63	14.63	14.60	14.54	14.54	14.53	14.56
177.0	14.70	14.69	14.67	14.71	14.69	14.65	14.61	14.61	14.60	14.62
180.0	14.70	14.70	14.66	14.70	14.64	14.61	14.58	14.59	14.58	14.60
G/C	150.0	165.0	180.0	195.0	210.0	225.0	240.0	255.0	270.0	285.0
0.0	1298	1296	1316	1313	1311	1309	1308	1306	1305	1304
3.0	1296	1293	1313	1312	1309	1308	1307	1305	1304	1302
6.0	1288	1286	1307	1305	1303	1302	1301	1299	1297	1295
9.0	1276	1275	1296	1294	1293	1292	1291	1289	1287	1284
12.0	1260	1259	1281	1279	1278	1278	1276	1274	1272	1269
15.0	1240	1240	1260	1259	1259	1258	1258	1256	1253	1249
18.0	1216	1214	1236	1235	1235	1235	1235	1233	1230	1226
21.0	1187	1185	1207	1207	1209	1208	1209	1206	1203	1198
24.0	1154	1154	1174	1175	1176	1177	1177	1175	1172	1168
27.0	1118	1117	1138	1139	1141	1142	1143	1141	1138	1132
30.0	1078	1077	1098	1099	1103	1105	1106	1103	1099	1094

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: OHS
Test Date: 17 October 2022
γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: Z-DL-40e-(1)

Photometric Data Table [cd]

33.0	1034	1034	1054	1056	1060	1063	1065	1063	1059	1053
36.0	987.8	987.6	1008	1010	1015	1017	1020	1018	1015	1008
39.0	938.6	938.3	958.5	960.5	966.5	970.0	973.2	971.5	968.3	960.7
42.0	887.2	887.0	906.4	909.1	914.8	919.3	923.5	921.2	918.6	911.6
45.0	833.0	833.2	851.3	854.9	861.2	865.8	870.4	869.4	866.7	858.5
48.0	777.3	777.0	794.8	799.0	805.9	810.8	815.9	815.4	812.4	804.1
51.0	719.1	718.9	736.2	739.9	748.2	752.7	759.2	758.0	756.0	747.4
54.0	659.3	659.2	676.0	680.5	688.7	693.9	700.5	699.8	697.5	689.0
57.0	598.3	598.2	613.8	618.4	627.3	633.1	640.5	640.3	638.0	629.0
60.0	535.7	535.8	550.3	555.0	564.7	571.4	578.2	578.5	576.4	567.7
63.0	472.8	472.0	485.7	491.2	501.1	508.2	515.9	517.1	514.8	505.9
66.0	408.7	408.2	420.8	426.5	436.9	444.0	452.6	453.6	451.9	442.9
69.0	345.3	344.2	355.5	361.4	372.4	380.3	389.2	390.9	389.2	379.7
72.0	281.6	280.9	290.2	296.4	307.6	316.0	326.0	327.7	326.5	317.2
75.0	218.3	217.3	225.6	231.3	243.6	252.1	263.1	265.7	264.7	255.0
78.0	156.8	155.1	161.6	167.4	179.6	188.8	200.5	203.5	203.5	193.5
81.0	98.14	94.52	98.86	104.7	116.7	127.0	139.0	142.8	143.6	133.3
84.0	41.48	37.50	39.08	43.98	55.58	66.26	78.57	84.62	85.74	76.04
87.0	6.172	5.956	5.047	5.393	6.588	12.57	22.81	28.91	30.91	23.17
90.0	4.532	4.513	3.315	3.305	3.356	3.440	3.694	4.040	4.020	3.776
93.0	4.887	4.877	3.630	3.625	3.603	3.606	3.580	3.610	3.622	3.657
96.0	5.247	5.238	3.932	3.921	3.905	3.890	3.877	3.917	3.933	3.973
99.0	5.647	5.619	4.286	4.251	4.216	4.215	4.213	4.251	4.282	4.302
102.0	6.050	6.019	4.658	4.610	4.583	4.586	4.578	4.605	4.644	4.661
105.0	6.469	6.444	5.044	4.996	4.969	4.958	4.961	4.972	5.012	5.032
108.0	6.882	6.862	5.438	5.389	5.360	5.343	5.342	5.363	5.398	5.419
111.0	7.310	7.298	5.857	5.805	5.760	5.753	5.741	5.772	5.802	5.827
114.0	7.742	7.729	6.294	6.223	6.178	6.166	6.156	6.181	6.220	6.227
117.0	8.178	8.148	6.722	6.640	6.601	6.584	6.568	6.589	6.648	6.640
120.0	8.592	8.566	7.136	7.050	7.016	6.990	6.982	7.013	7.053	7.050
123.0	8.992	8.967	7.553	7.464	7.419	7.394	7.383	7.422	7.470	7.450
126.0	9.406	9.367	7.963	7.877	7.833	7.807	7.801	7.820	7.878	7.862
129.0	9.805	9.784	8.400	8.300	8.247	8.244	8.211	8.243	8.283	8.285
132.0	10.21	10.19	8.823	8.727	8.679	8.671	8.646	8.666	8.725	8.708
135.0	10.64	10.60	9.265	9.159	9.107	9.109	9.083	9.103	9.150	9.145
138.0	11.06	11.04	9.724	9.614	9.565	9.540	9.540	9.546	9.603	9.597
141.0	11.45	11.46	10.19	10.09	10.02	9.992	9.995	10.02	10.05	10.07
144.0	11.83	11.84	10.65	10.55	10.47	10.44	10.44	10.47	10.50	10.50
147.0	12.19	12.19	11.10	10.99	10.91	10.89	10.87	10.90	10.93	10.93
150.0	12.54	12.54	11.53	11.43	11.36	11.32	11.30	11.31	11.35	11.34
153.0	12.89	12.88	11.97	11.86	11.80	11.75	11.72	11.72	11.75	11.74
156.0	13.22	13.21	12.40	12.30	12.26	12.19	12.15	12.15	12.17	12.16
159.0	13.53	13.52	12.82	12.74	12.68	12.61	12.57	12.56	12.58	12.57
162.0	13.80	13.80	13.23	13.15	13.09	13.02	12.97	12.97	12.98	12.98
165.0	14.05	14.06	13.60	13.53	13.48	13.41	13.36	13.35	13.36	13.37
168.0	14.26	14.26	13.92	13.87	13.82	13.74	13.68	13.68	13.68	13.72
171.0	14.41	14.39	14.19	14.13	14.11	14.04	13.98	13.94	13.96	13.97
174.0	14.53	14.50	14.43	14.38	14.39	14.33	14.27	14.22	14.22	14.23
177.0	14.58	14.55	14.64	14.58	14.59	14.55	14.50	14.45	14.45	14.43
180.0	14.54	14.50	14.73	14.67	14.69	14.68	14.65	14.59	14.59	14.58
G/C	300.0	315.0	330.0	345.0						
0.0	1302	1299	1298	1296						
3.0	1299	1298	1295	1293						
6.0	1293	1291	1289	1287						
9.0	1282	1280	1278	1276						
12.0	1267	1264	1263	1260						
15.0	1247	1245	1243	1241						
18.0	1223	1221	1219	1216						
21.0	1195	1193	1191	1188						
24.0	1164	1161	1159	1155						
27.0	1129	1125	1122	1120						
30.0	1090	1086	1083	1080						
33.0	1049	1044	1041	1037						
36.0	1004	998.4	995.8	992.1						
39.0	956.3	950.8	947.9	943.1						
42.0	906.2	899.7	897.0	892.5						
45.0	853.3	847.0	844.0	839.6						
48.0	798.7	791.8	788.5	783.5						
51.0	741.8	734.9	731.7	726.8						
54.0	683.4	675.9	672.2	667.7						
57.0	622.7	615.8	611.8	606.5						
60.0	561.5	554.0	549.8	544.5						
63.0	499.5	491.3	486.7	481.6						
66.0	436.3	427.9	423.1	417.8						

C Range: 0 - 360DEG

C Interval: 15.0DEG

Test Speed: HIGH

Temperature: 25.3DEG

Operators: OHS

Test Date: 17 October 2022

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351

Humidity: 65.0%

Test Distance: 8.100m [K=1.0000]

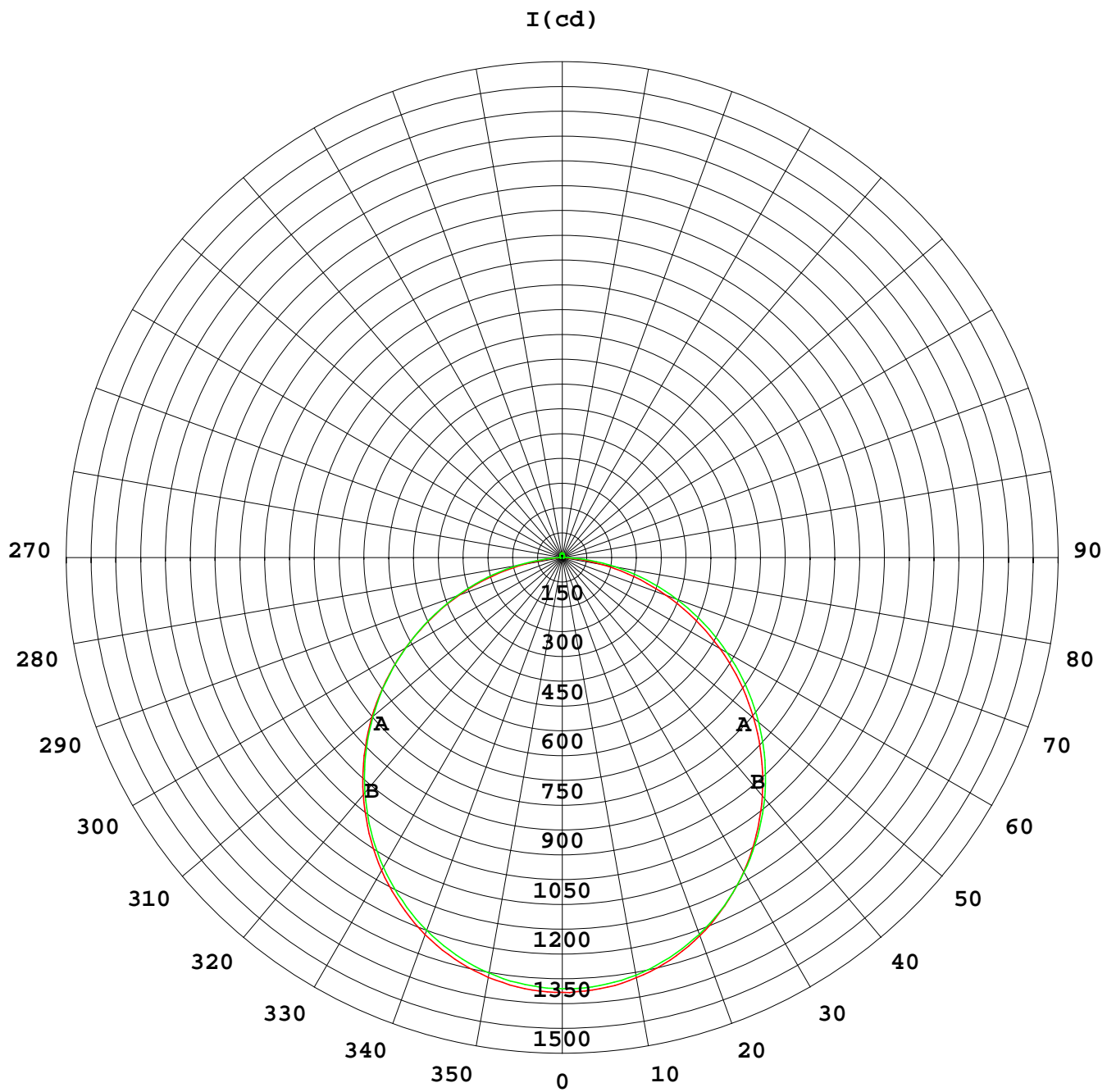
Remarks: Z-DL-40e-(1)

Photometric Data Table [cd]

69.0	373.3	364.2	358.8	353.0
72.0	309.8	300.1	294.8	288.5
75.0	247.3	236.6	230.7	223.6
78.0	185.2	173.6	167.6	160.1
81.0	124.4	113.2	106.0	99.10
84.0	65.99	55.28	48.54	41.75
87.0	15.86	9.345	6.286	5.349
90.0	3.671	3.455	3.411	3.342
93.0	3.658	3.707	3.722	3.713
96.0	3.961	3.992	4.363	4.267
99.0	4.296	4.285	4.291	4.279
102.0	4.658	4.650	4.621	4.605
105.0	5.030	5.023	4.993	4.977
108.0	5.411	5.409	5.378	5.359
111.0	5.802	5.799	5.770	5.772
114.0	6.211	6.212	6.179	6.181
117.0	6.628	6.613	6.586	6.589
120.0	7.043	7.007	6.992	6.994
123.0	7.438	7.408	7.401	7.392
126.0	7.837	7.831	7.814	7.797
129.0	8.256	8.252	8.223	8.221
132.0	8.684	8.691	8.647	8.639
135.0	9.121	9.117	9.084	9.077
138.0	9.567	9.546	9.520	9.521
141.0	10.03	9.983	9.957	9.982
144.0	10.46	10.42	10.39	10.41
147.0	10.91	10.86	10.81	10.83
150.0	11.33	11.29	11.24	11.24
153.0	11.76	11.71	11.67	11.66
156.0	12.16	12.13	12.11	12.10
159.0	12.57	12.56	12.53	12.52
162.0	12.97	12.97	12.94	12.94
165.0	13.35	13.33	13.30	13.31
168.0	13.69	13.64	13.62	13.62
171.0	13.97	13.93	13.90	13.89
174.0	14.26	14.22	14.17	14.13
177.0	14.47	14.43	14.40	14.36
180.0	14.60	14.58	14.55	14.49

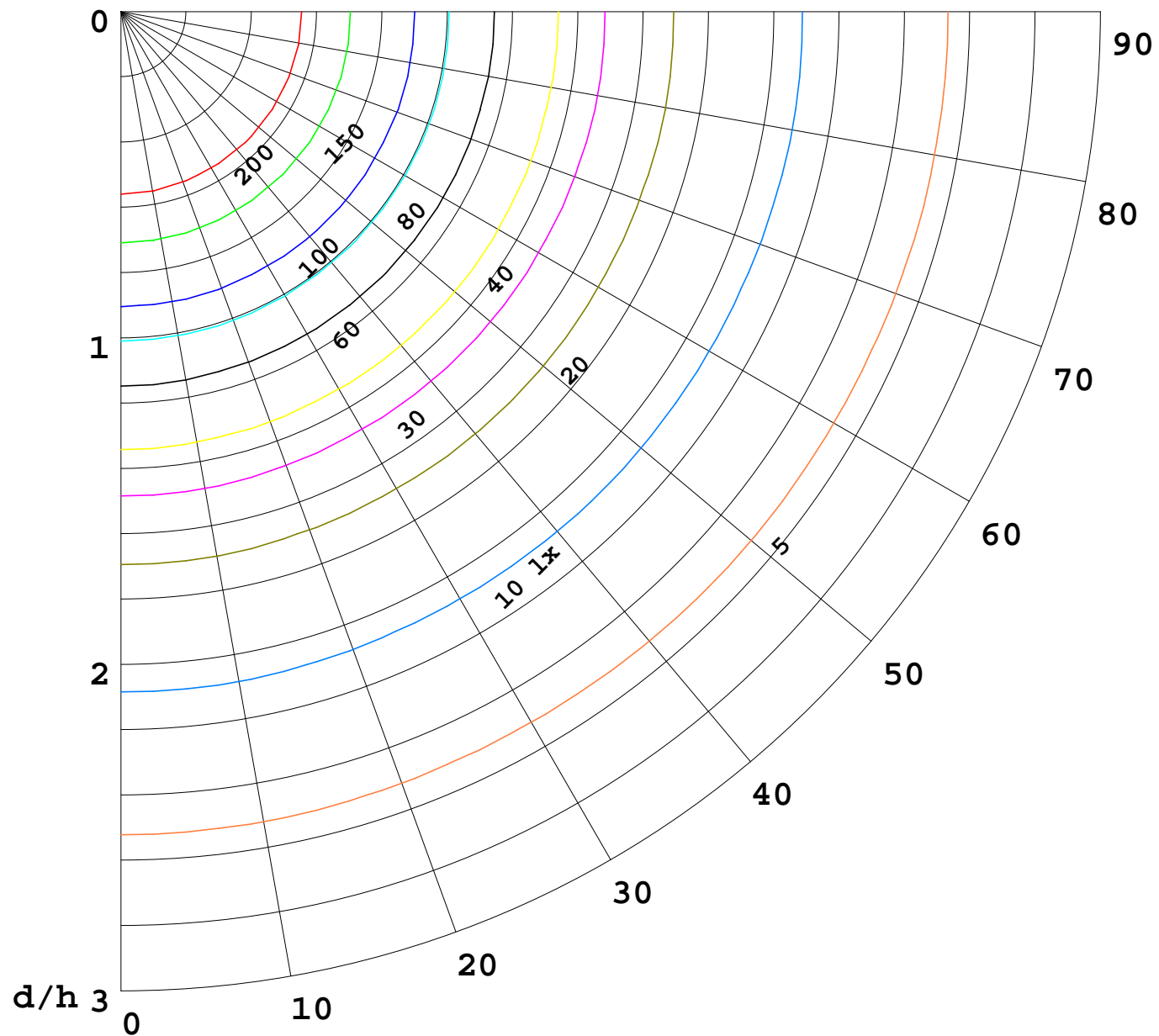
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: OHS
Test Date: 17 October 2022

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: Z-DL-40e-(1)



1000 lm

$K = 1$



F = 1000 lm
 K = 0.7
 H_{cc} = 0.8 m
 H_{fc} = 0.0 m
 E_{ave} = 100 lx

	P_{cc}	P_w	P_{fc}
—————	70	50	30
—————	50	30	20

