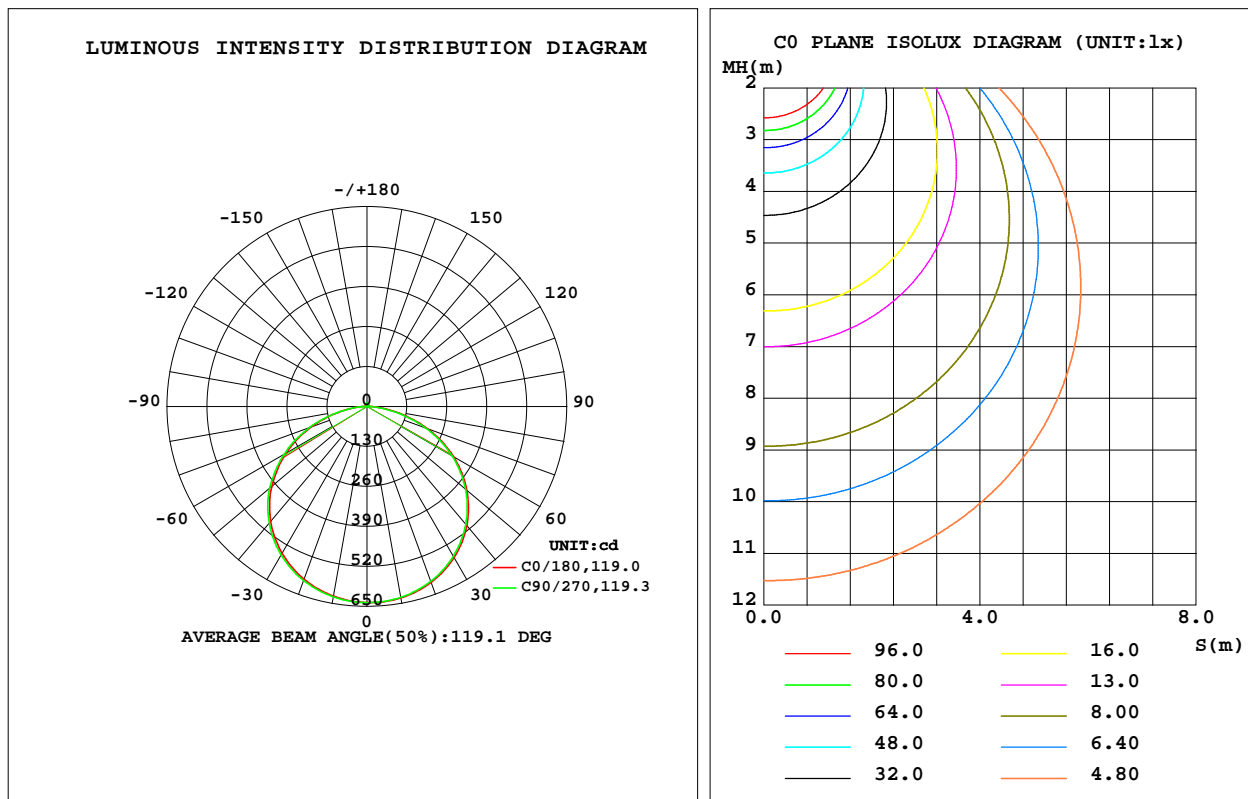


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.00V I:0.5380A P:12.91W PF:1.000 Freq:0Hz Lamp Flux:1993.15x1 lm		
NAME: D81602408NO	TYPE:	WEIGHT:
SPEC.:D81602408NO-8NWDA012WC0100	DIM.: 1000*8*1.6mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 154.38 lm/W			
MODEL	D81602408NO	I _{max} (cd)	638.3	S/MH(C0/180)	1.32
NOMINAL POWER(W)	13	LOR(%)	100.0	S/MH(C90/270)	1.30
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	1993.1	h UP,DN(C0-180)	0.9,49.7
NOMINAL FLUX(lm)	1993.15	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.8,48.6
LAMPS INSIDE	1	h up(%)	1.7	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	98.3	CIBSE SHR MAX	1.50



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-12-03

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.950m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

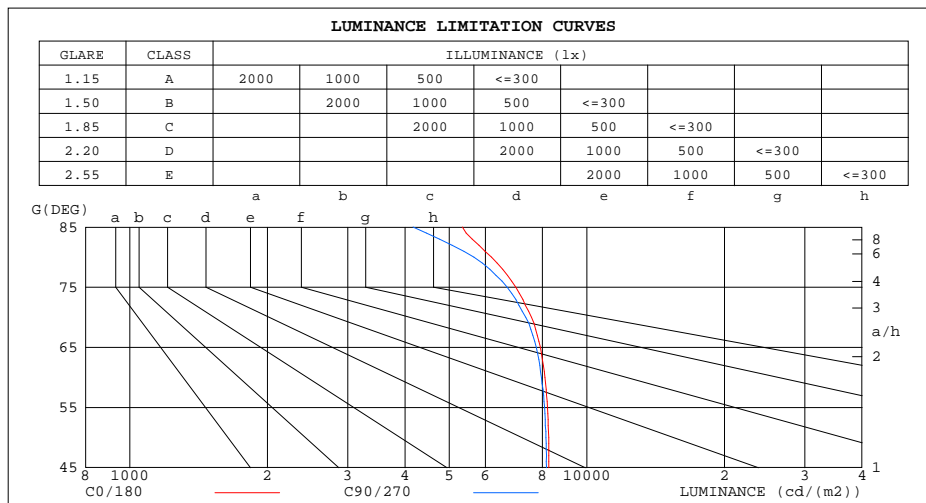
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	632.0	633.2	630.2	628.9	626.2	626.7	628.6	631.1	0- 10	60.51	60.51	3.04,3.04
20	608.7	610.0	605.3	602.1	597.9	598.0	602.2	606.5	10- 20	174.9	235.4	11.8,11.8
30	566.9	568.8	562.1	557.6	551.6	551.5	557.8	563.2	20- 30	269.4	504.8	25.3,25.3
40	505.5	508.0	500.0	494.6	487.5	487.3	495.1	501.3	30- 40	332.2	837.0	42,42
50	424.2	427.7	418.6	412.1	404.5	404.2	414.6	419.5	40- 50	353.8	1191	59.7,59.7
60	323.8	325.4	318.3	310.9	303.8	304.4	311.5	319.6	50- 60	327.6	1519	76.2,76.2
70	207.0	209.3	201.2	196.3	190.7	188.5	197.1	203.6	60- 70	255.5	1774	89,89
80	85.96	87.96	78.64	78.51	75.99	73.18	79.10	83.37	70- 80	146.4	1920	96.4,96.4
90	9.462	8.651	2.762	7.130	6.764	5.028	2.116	6.528	80- 90	39.17	1960	98.3,98.3
100	2.705	2.653	2.391	2.715	2.027	1.883	1.679	1.745	90-100	3.006	1963	98.5,98.5
110	3.908	3.786	3.503	3.987	3.839	3.437	3.578	3.214	100-110	3.061	1966	98.6,98.6
120	5.575	5.367	5.207	5.602	5.447	4.779	4.976	4.909	110-120	4.427	1970	98.8,98.8
130	7.013	6.519	6.364	6.813	6.827	6.058	6.066	6.104	120-130	5.265	1975	99.1,99.1
140	8.040	7.296	7.232	7.730	7.877	7.346	6.867	6.832	130-140	5.384	1981	99.4,99.4
150	8.669	7.708	7.893	8.612	8.437	8.474	7.497	7.226	140-150	4.853	1986	99.6,99.6
160	9.417	8.171	9.183	9.572	9.057	9.470	8.951	7.854	150-160	3.920	1990	99.8,99.8
170	9.753	9.600	10.52	10.39	9.036	10.22	10.36	9.564	160-170	2.668	1992	100,100
180	9.492	11.33	11.54	11.63	9.492	11.31	11.54	11.63	170-180	0.9773	1993	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JYH
 Test Date:2020-12-03

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:10.950m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.00V I:0.5380A P:12.91W PF:1.000 Freq:0Hz Lamp Flux:1993.15x1 lm		
NAME: D81602408NO	TYPE:	WEIGHT:
SPEC.:D81602408NO-8NWDA012WC0100	DIM.: 1000*8*1.6mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	C0/180	C90/270
85	5339	4165
80	6188	5661
75	6994	6696
70	7565	7352
65	7913	7750
60	8096	7957
55	8201	8079
50	8250	8141
45	8257	8162

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-12-03

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.950m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:24.00V I:0.5380A P:12.91W PF:1.000 Freq:0Hz Lamp Flux:1993.15x1 lm		
NAME: D81602408NO	TYPE:	WEIGHT:
SPEC.:D81602408NO-8NWDA012WC0100	DIM.: 1000*8*1.6mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

rcc	80%			70%			50%			30%			10%			0														
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0														
rfc	20%			20%			20%			20%			20%			0														
RCR	RCR:Room Cavity Ratio															Wall Exitance Coefficients(WEC)														
0.0																														
1.0	.316	.179	.057	.308	.176	.056	.294	.168	.054	.281	.162	.052	.269	.156	.050															
2.0	.297	.163	.050	.290	.160	.049	.277	.154	.048	.266	.149	.047	.255	.144	.045															
3.0	.274	.146	.044	.268	.144	.043	.257	.139	.042	.246	.135	.041	.237	.131	.041															
4.0	.253	.131	.039	.247	.129	.038	.237	.126	.038	.228	.122	.037	.219	.119	.036															
5.0	.233	.119	.034	.228	.117	.034	.220	.114	.034	.211	.111	.033	.203	.109	.033															
6.0	.216	.108	.031	.212	.107	.031	.204	.104	.030	.196	.102	.030	.189	.100	.030															
7.0	.201	.099	.028	.197	.098	.028	.190	.096	.028	.183	.094	.027	.177	.092	.027															
8.0	.187	.092	.026	.184	.091	.026	.178	.089	.025	.172	.087	.025	.166	.085	.025															
9.0	.175	.085	.024	.172	.084	.024	.167	.082	.023	.161	.081	.023	.156	.079	.023															
10.0	.165	.079	.022	.162	.078	.022	.157	.077	.022	.152	.075	.021	.147	.074	.021															

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Ceiling Cavity Exitance Coefficients(CCEC)												
0.0	.203	.203	.203	.174	.174	.174	.119	.119	.119	.068	.068	.068	.022	.022	.022	
1.0	.194	.169	.147	.166	.145	.126	.113	.100	.087	.065	.058	.051	.021	.019	.016	
2.0	.186	.145	.110	.159	.125	.095	.109	.086	.067	.063	.050	.039	.020	.016	.013	
3.0	.178	.127	.087	.153	.110	.075	.105	.076	.053	.061	.045	.031	.019	.014	.010	
4.0	.171	.114	.071	.147	.099	.062	.101	.069	.043	.058	.040	.026	.019	.013	.008	
5.0	.163	.104	.060	.140	.090	.052	.097	.063	.037	.056	.037	.022	.018	.012	.007	
6.0	.156	.096	.052	.134	.083	.045	.093	.058	.032	.054	.034	.019	.017	.011	.006	
7.0	.149	.089	.046	.129	.077	.040	.089	.054	.029	.052	.032	.017	.017	.010	.006	
8.0	.143	.083	.042	.123	.072	.036	.085	.051	.026	.050	.030	.015	.016	.010	.005	
9.0	.137	.078	.038	.118	.068	.033	.082	.048	.024	.048	.028	.014	.015	.009	.005	
10.0	.131	.074	.036	.113	.064	.031	.078	.045	.022	.046	.027	.013	.015	.009	.004	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JYH
 Test Date:2020-12-03

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:10.950m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.00V I:0.5380A P:12.91W PF:1.000 Freq:0Hz Lamp Flux:1993.15x1 lm											
NAME: D81602408NO					TYPE:			WEIGHT:			
SPEC.:D81602408NO-8NWDA012WC0100					DIM.: 1000*8*1.6mm			SERIAL No.:			
MFR.: COLORS					SUR.:1000*8			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	17.9	19.4	18.2	19.7	19.9	17.8	19.4	18.1	19.6	19.8	
	3H	19.5	20.9	19.9	21.2	21.5	19.4	20.8	19.8	21.1	21.4
	4H	20.2	21.5	20.5	21.8	22.1	20.0	21.4	20.4	21.7	22.0
	6H	20.6	21.9	21.0	22.2	22.5	20.4	21.7	20.8	22.0	22.3
	8H	20.7	21.9	21.1	22.3	22.6	20.5	21.8	20.9	22.1	22.4
	12H	20.8	22.0	21.2	22.3	22.6	20.6	21.7	21.0	22.1	22.4
4H	2H	18.6	19.9	18.9	20.2	20.5	18.5	19.8	18.8	20.1	20.4
	3H	20.4	21.5	20.7	21.9	22.2	20.3	21.4	20.7	21.8	22.1
	4H	21.1	22.2	21.5	22.5	22.9	21.0	22.1	21.4	22.4	22.8
	6H	21.7	22.6	22.1	23.0	23.4	21.5	22.5	21.9	22.9	23.3
	8H	21.9	22.7	22.3	23.1	23.6	21.7	22.6	22.1	23.0	23.4
	12H	22.0	22.8	22.4	23.2	23.6	21.7	22.6	22.2	23.0	23.4
8H	4H	21.4	22.3	21.8	22.7	23.1	21.3	22.2	21.7	22.6	23.0
	6H	22.1	22.8	22.6	23.3	23.7	22.0	22.7	22.4	23.1	23.6
	8H	22.4	23.0	22.8	23.5	24.0	22.2	22.8	22.7	23.3	23.8
	12H	22.6	23.1	23.1	23.6	24.1	22.3	22.9	22.8	23.4	23.9
12H	4H	21.4	22.2	21.8	22.6	23.1	21.3	22.1	21.8	22.5	23.0
	6H	22.1	22.8	22.6	23.3	23.7	22.0	22.7	22.5	23.1	23.6
	8H	22.5	23.0	23.0	23.5	24.0	22.3	22.8	22.8	23.3	23.8
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.2				+ 0.1 / - 0.2						
1.5H	+ 0.2 / - 0.3				+ 0.2 / - 0.3						
2.0H	+ 0.2 / - 0.3				+ 0.2 / - 0.4						

CIE Pub.117, 1993 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.4)

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-12-03

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.950m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.00V I:0.5380A P:12.91W PF:1.000 Freq:0Hz Lamp Flux:1993.15x1 lm		
NAME: D81602408NO	TYPE:	WEIGHT:
SPEC.:D81602408NO-8NWDA012WC0100	DIM.: 1000*8*1.6mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

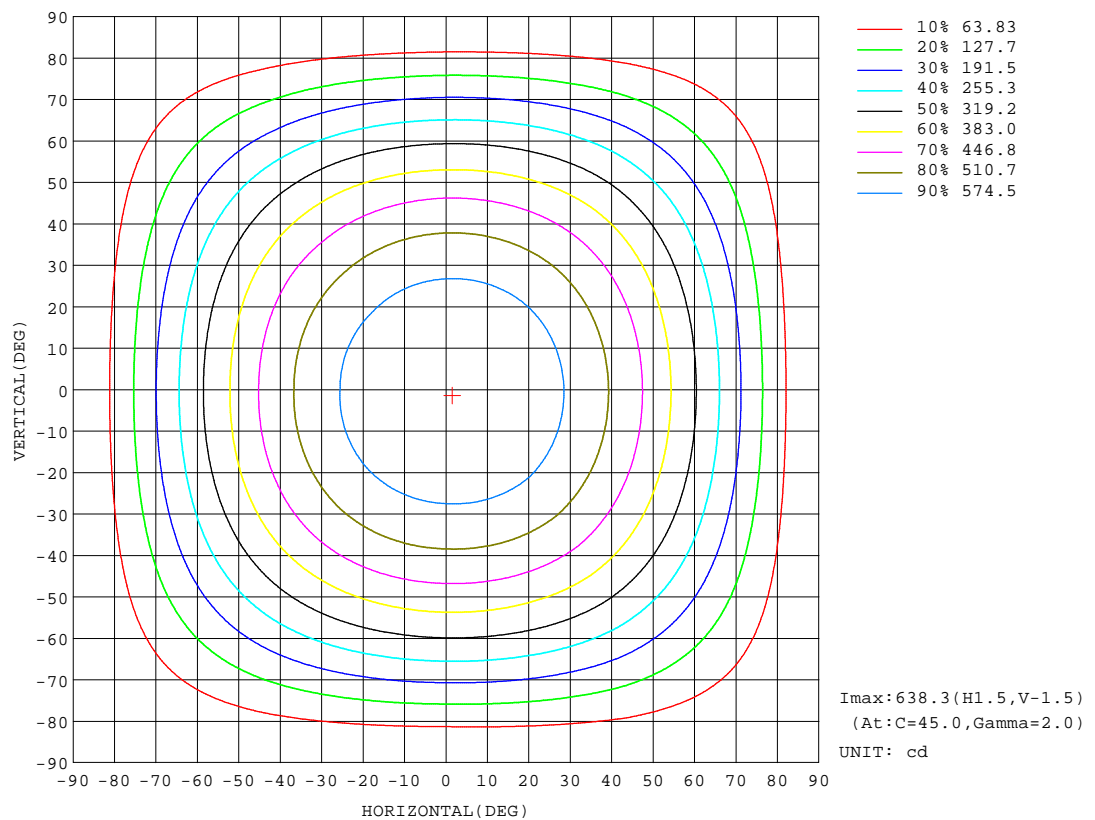
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	43	37	30
0.80	66	54	47	65	54	46	63	53	46	39
1.00	74	63	56	73	62	55	71	64	55	47
1.25	82	71	64	80	70	63	77	68	62	55
1.50	87	77	69	85	76	69	82	74	68	60
2.00	94	85	78	92	84	77	88	81	76	68
2.50	98	90	84	96	88	83	92	85	81	72
3.00	101	94	89	99	93	87	95	89	85	76
4.00	105	100	95	103	98	93	98	94	90	81
5.00	108	103	99	105	101	97	100	97	94	84
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JYH
 Test Date:2020-12-03

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:10.950m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:24.00V I:0.5380A P:12.91W PF:1.000 Freq:0Hz Lamp Flux:1993.15x1 lm		
NAME: D81602408NO	TYPE:	WEIGHT:
SPEC.:D81602408NO-8NWDA012WC0100	DIM.: 1000*8*1.6mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:



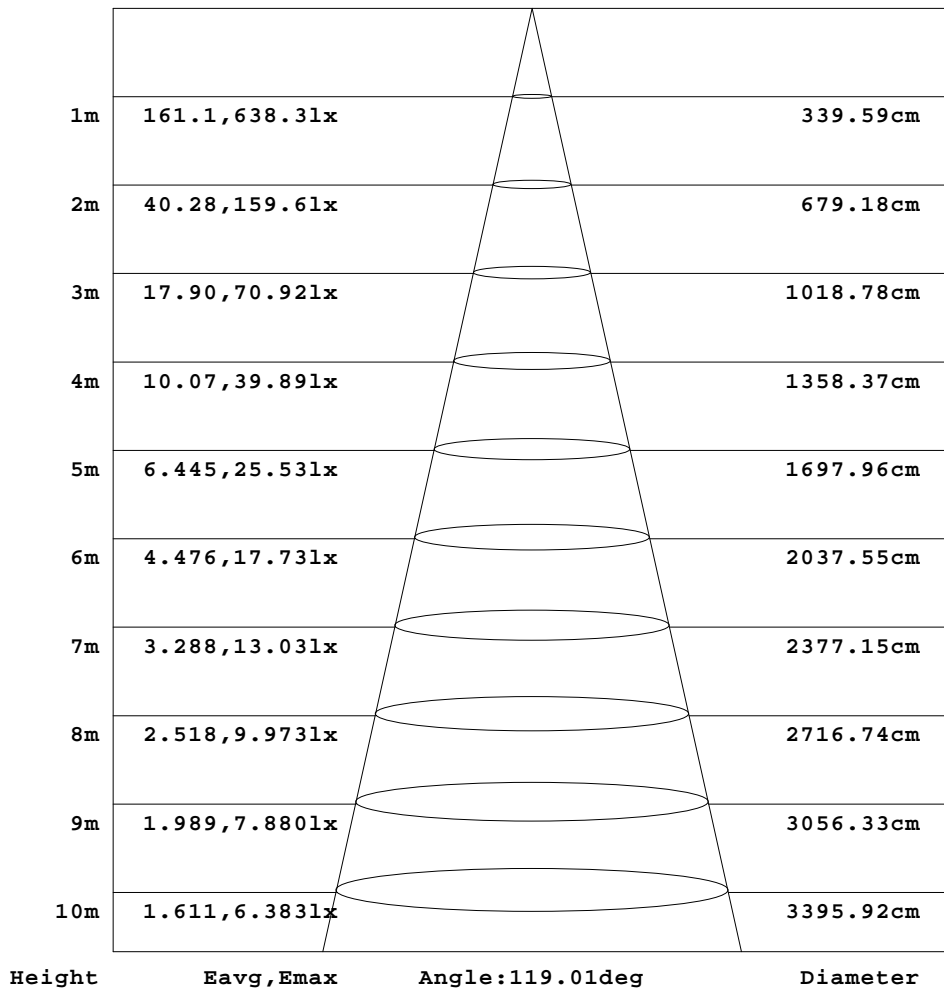
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2020-12-03

Range: 0 - 180DEG
Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.950m [K=1.0000]
Remarks:

AAI Figure

Test:U:24.00V I:0.5380A P:12.91W PF:1.000 Freq:0Hz Lamp Flux:1993.15x1 lm		
NAME: D81602408NO	TYPE:	WEIGHT:
SPEC.:D81602408NO-8NWDA012WC0100	DIM.: 1000*8*1.6mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

Flux out:1519 lm



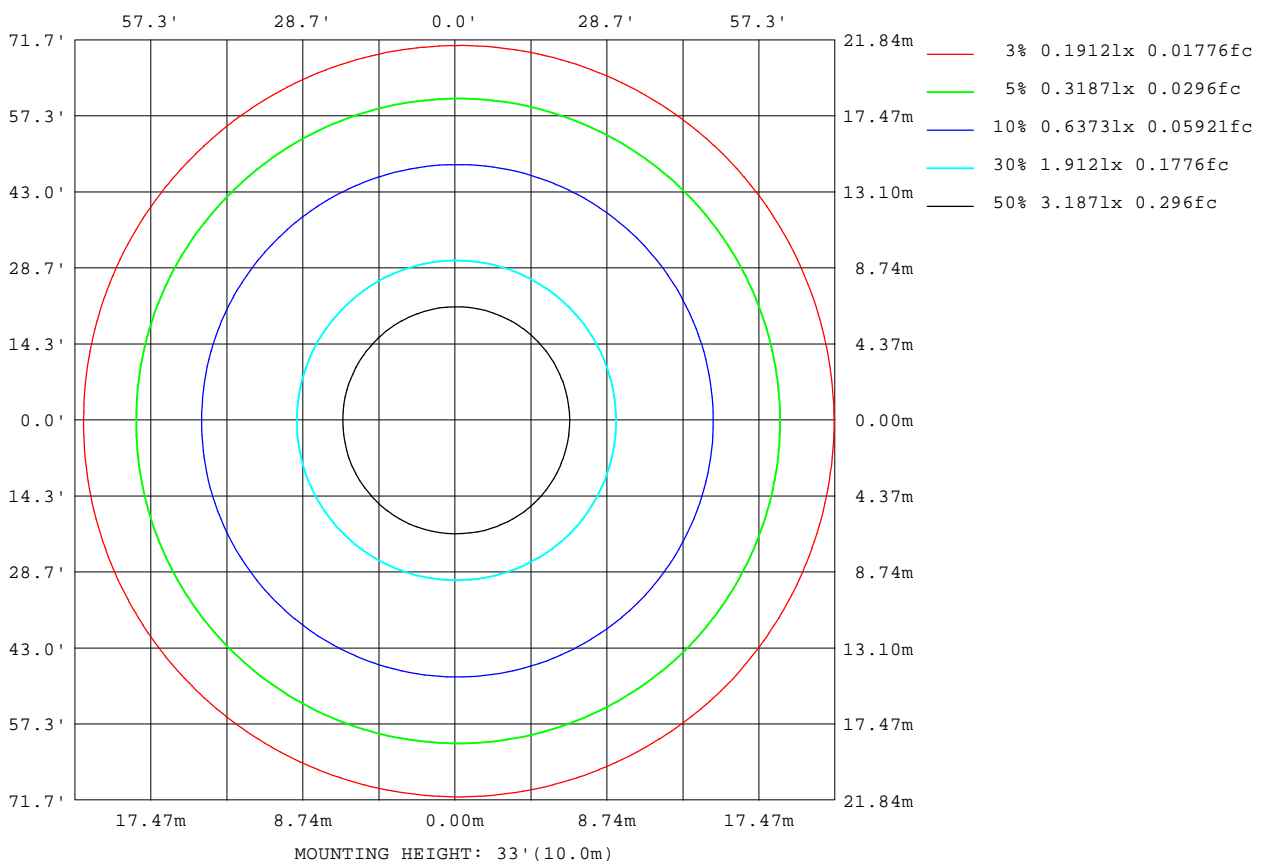
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-12-03

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.950m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

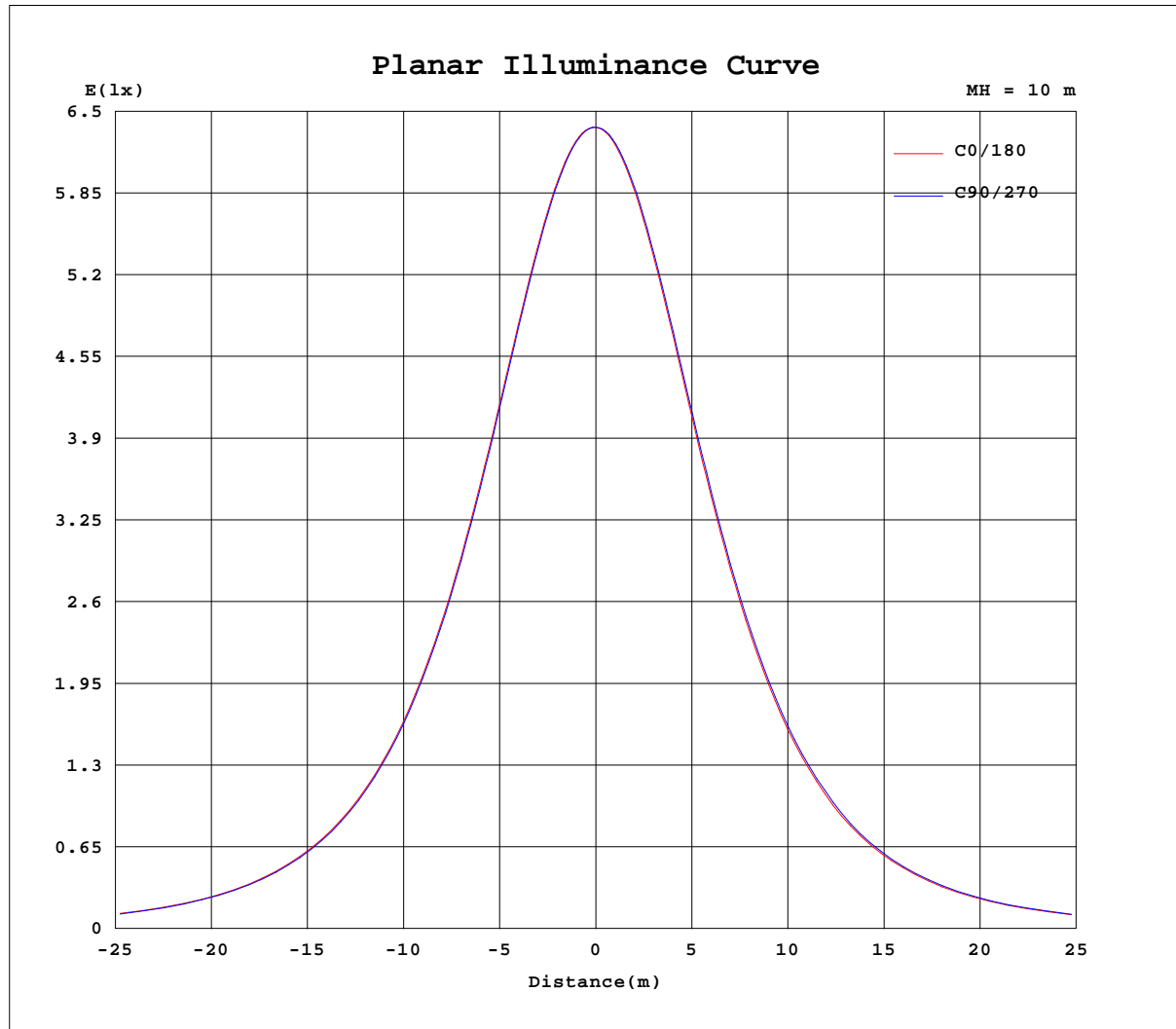
Test:U:24.00V I:0.5380A P:12.91W PF:1.000 Freq:0Hz Lamp Flux:1993.15x1 lm		
NAME: D81602408NO	TYPE:	WEIGHT:
SPEC.:D81602408NO-8NWDA012WC0100	DIM.: 1000*8*1.6mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JYH
 Test Date:2020-12-03

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:10.950m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2020-12-03

Range: 0 - 180DEG
Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.950m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.5380A P:12.91W PF:1.000 Freq:0Hz Lamp Flux:1993.15x1 lm		
NAME: D81602408NO	TYPE:	WEIGHT:
SPEC.:D81602408NO-8NWDA012WC0100	DIM.: 1000*8*1.6mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	637	638	638	638	637	638	638	638										
5	637	638	636	636	634	635	635	637										
10	632	633	630	629	626	627	629	631										
15	623	624	620	618	614	615	618	621										
20	609	610	605	602	598	598	602	607										
25	590	592	586	582	577	577	582	587										
30	567	569	562	558	552	551	558	563										
35	539	541	533	528	522	522	529	535										
40	505	508	500	495	488	487	495	501										
45	467	470	462	456	449	448	456	463										
50	424	428	419	412	405	404	415	420										
55	376	377	371	363	355	356	363	372										
60	324	325	318	311	304	304	312	320										
65	268	269	262	255	249	249	256	264										
70	207	209	201	196	191	188	197	204										
75	145	148	139	136	132	129	137	142										
80	86.0	88.0	78.6	78.5	76.0	73.2	79.1	83.4										
85	37.2	37.6	29.0	31.5	30.7	27.6	30.8	34.1										
90	9.46	8.65	2.76	7.13	6.76	5.03	2.12	6.53										
95	2.99	3.00	2.47	3.02	1.87	1.86	0.90	1.56										
100	2.71	2.65	2.39	2.72	2.03	1.88	1.68	1.74										
105	3.13	3.11	2.72	3.24	2.92	2.70	2.74	2.52										
110	3.91	3.79	3.50	3.99	3.84	3.44	3.58	3.21										
115	4.75	4.62	4.40	4.83	4.65	4.13	4.34	4.12										
120	5.58	5.37	5.21	5.60	5.45	4.78	4.98	4.91										
125	6.33	6.01	5.85	6.25	6.17	5.41	5.56	5.59										
130	7.01	6.52	6.36	6.81	6.83	6.06	6.07	6.10										
135	7.59	6.96	6.80	7.30	7.40	6.70	6.51	6.55										
140	8.04	7.30	7.23	7.73	7.88	7.35	6.87	6.83										
145	8.41	7.53	7.59	8.16	8.24	7.91	7.14	7.04										
150	8.67	7.71	7.89	8.61	8.44	8.47	7.50	7.23										
155	9.04	7.88	8.47	9.10	8.78	9.02	8.13	7.45										
160	9.42	8.17	9.18	9.57	9.06	9.47	8.95	7.85										
165	9.80	8.73	9.89	9.96	9.32	9.79	9.66	8.57										
170	9.75	9.60	10.5	10.4	9.04	10.2	10.4	9.56										
175	9.32	10.5	11.1	11.0	8.76	10.7	11.0	10.7										
180	9.49	11.3	11.5	11.6	9.49	11.3	11.5	11.6										

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-12-03

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.950m [K=1.0000]
Remarks: