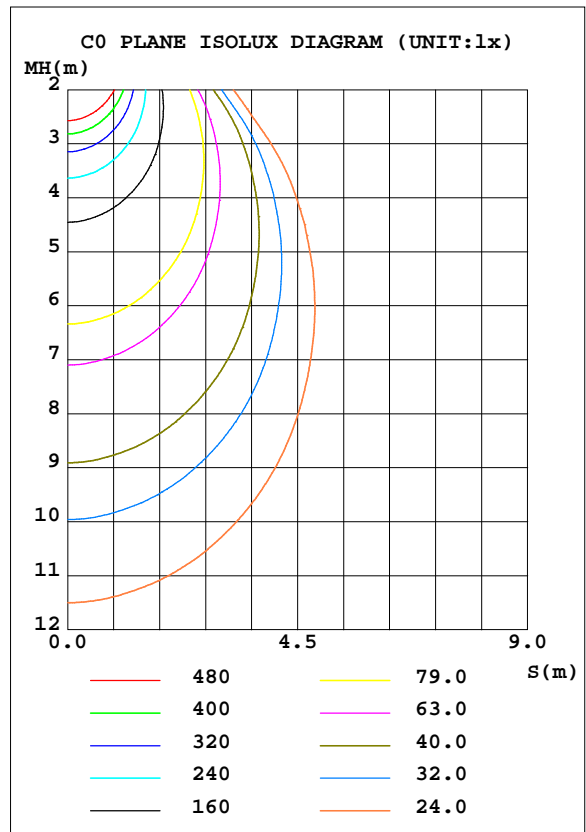
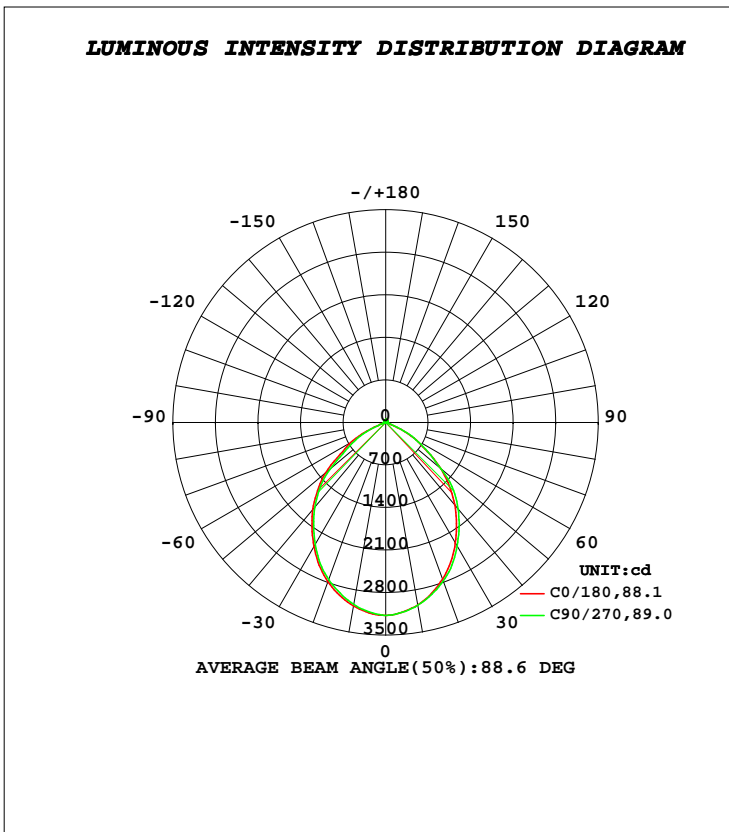


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:221.80V I:0.1950A P:41.700W PF:0.9630 Freq:50.00Hz		
Lamp Flux:6087.54x1 lm		
Name: NS83-φ450MM-40W	Type: LED	
MFR.: Lumega Group	DIM.: φ450*20mm	
	SUR.: 260*190mm	

DATA OF LAMP		PHOTOMETRIC DATA Eff: 145.98 lm/W			
MODEL		I _{max} (cd)	3174	S/MH(C0/180)	1.10
NOMINAL POWER(W)	40	LOR(%)	100.0	S/MH(C90/270)	1.12
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	6087.5	η UP, DN(C0-180)	1.2, 48.3
NOMINAL FLUX(lm)	6087.54	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.4, 49.1
LAMPS INSIDE	1	η up(%)	2.6	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	221.6	η down(%)	97.4	CIBSE SHR MAX	1.25



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2022-05-28

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.443
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

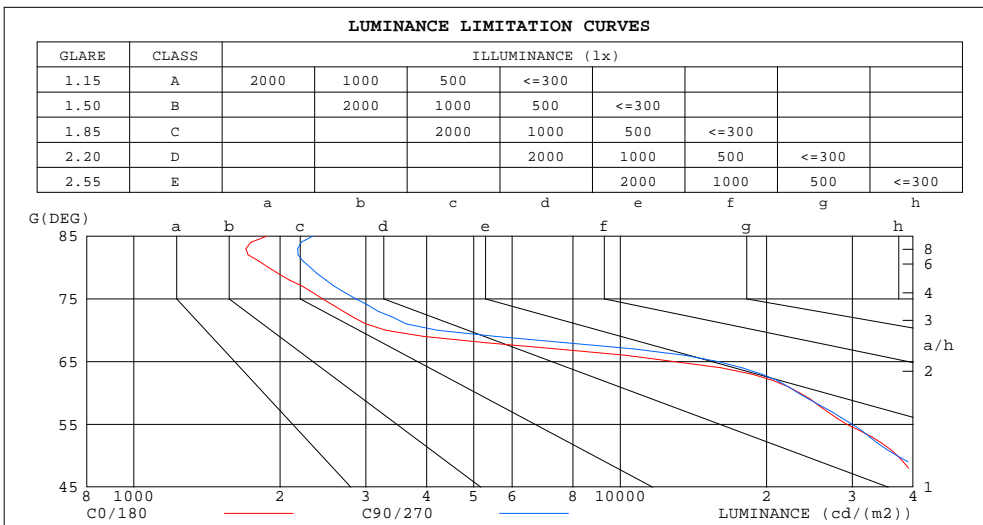
γ	C0	C90	C180	C270				γ	Φ zone	Φ total	%lum, lamp
10	3048	3056	3066	3039				0- 10	296.8	296.8	4.88,4.88
20	2741	2775	2787	2752				10- 20	823.0	1120	18.4,18.4
30	2294	2351	2360	2320				20- 30	1179	2299	37.8,37.8
40	1769	1857	1868	1814				30- 40	1301	3600	59.1,59.1
50	1194	1193	1296	1193				40- 50	1186	4786	78.6,78.6
60	585.2	580.6	669.0	563.8				50- 60	781.0	5567	91.5,91.5
70	56.44	72.10	76.75	67.03				60- 70	310.1	5877	96.5,96.5
80	16.43	20.05	23.00	22.43				70- 80	40.60	5918	97.2,97.2
90	6.836	7.049	11.52	11.11				80- 90	13.70	5932	97.4,97.4
100	10.28	9.743	14.09	14.54				90-100	11.16	5943	97.6,97.6
110	16.03	15.20	19.54	19.99				100-110	15.64	5958	97.9,97.9
120	22.41	21.57	25.57	25.94				110-120	20.59	5979	98.2,98.2
130	28.39	27.57	31.05	31.39				120-130	24.00	6003	98.6,98.6
140	33.51	32.84	35.66	35.91				130-140	24.78	6028	99,99
150	38.72	37.92	40.05	40.08				140-150	23.07	6051	99.4,99.4
160	43.88	42.93	44.52	44.38				150-160	19.18	6070	99.7,99.7
170	47.98	46.93	48.03	47.64				160-170	12.97	6083	99.9,99.9
180	49.31	48.60	49.34	48.68				170-180	4.611	6088	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-05-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.443
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:221.80V I:0.1950A P:41.700W PF:0.9630 Freq:50.00Hz		
Lamp Flux:6087.54x1 lm		
Name: NS83-φ450MM-40W	Type: LED	
MFR.: Lumega Group	DIM.: φ450*20mm	
	SUR.: 260*190mm	



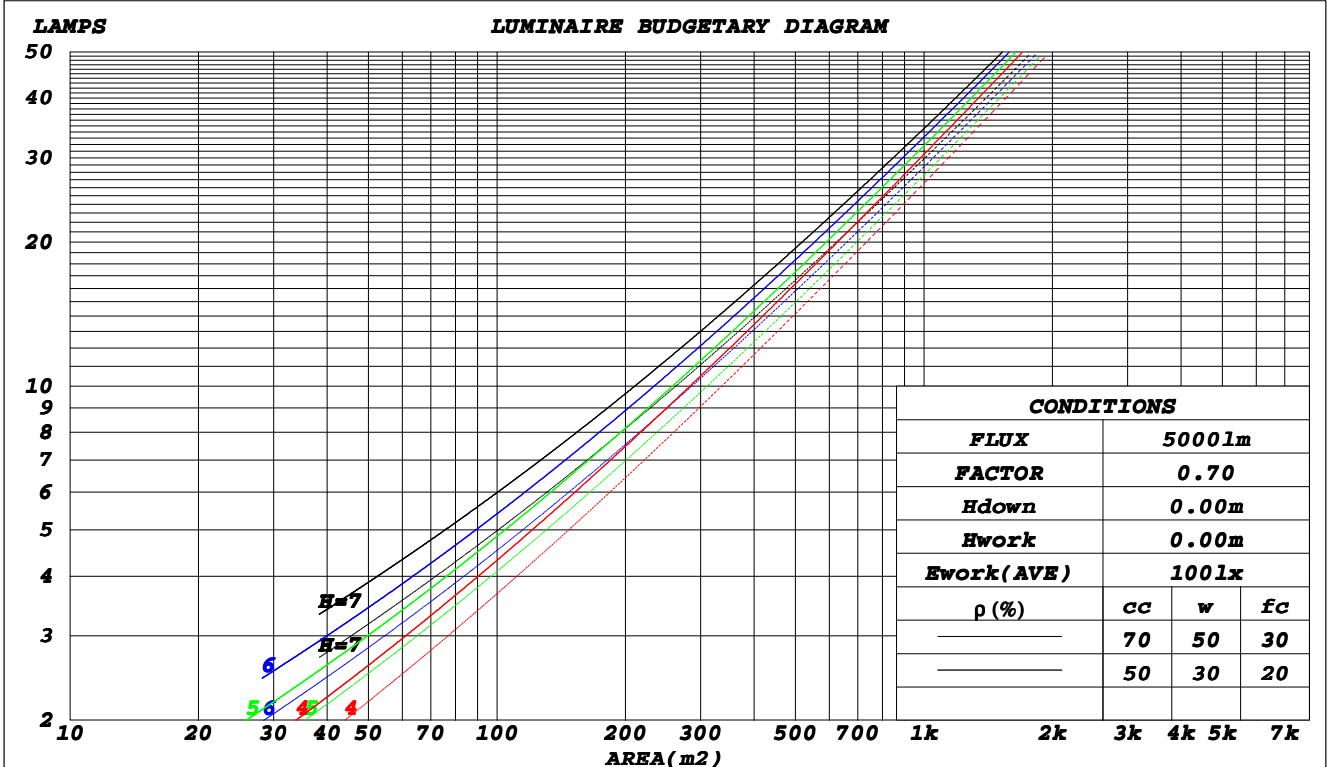
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2022-05-28

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.443
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:221.80V I:0.1950A P:41.700W PF:0.9630 Freq:50.00Hz		
Lamp Flux:6087.54x1 lm		
Name: NS83-φ450MM-40W	Type: LED	
MFR.: Lumega Group	DIM.: φ450*20mm	
	SUR.: 260*190mm	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.18	1.18	1.18	1.15	1.15	1.15	1.10	1.10	1.10	1.04	1.04	1.04	.00	.00	.00	.97
1.0	1.07	1.04	1.01	1.05	1.02	.99	1.00	.98	.96	.96	.94	.92	.92	.90	.89	.87
2.0	.96	.91	.86	.94	.89	.85	.90	.86	.83	.87	.84	.81	.84	.81	.78	.76
3.0	.87	.80	.74	.85	.79	.74	.82	.76	.72	.79	.74	.71	.76	.72	.69	.67
4.0	.78	.71	.65	.77	.70	.64	.74	.68	.63	.71	.66	.62	.69	.65	.61	.59
5.0	.71	.63	.57	.69	.62	.57	.67	.61	.56	.65	.60	.55	.63	.58	.54	.53
6.0	.64	.57	.51	.63	.56	.51	.61	.55	.50	.60	.54	.49	.58	.53	.49	.47
7.0	.59	.51	.46	.58	.51	.45	.56	.50	.45	.55	.49	.44	.53	.48	.44	.42
8.0	.54	.46	.41	.53	.46	.41	.52	.45	.41	.51	.45	.40	.49	.44	.40	.38
9.0	.50	.42	.37	.49	.42	.37	.48	.42	.37	.47	.41	.37	.46	.40	.36	.35
10.0	.46	.39	.34	.46	.39	.34	.45	.38	.34	.44	.38	.34	.43	.37	.33	.32



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2022-05-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.443
 Humidity: 65.0%
 Test Distance: 8.000m [K=0.7063]
 Remarks:

WEC AND CCEC

Test:U:221.80V I:0.1950A P:41.700W PF:0.9630 Freq:50.00Hz		
Lamp Flux:6087.54x1 lm		
Name: NS83-φ450MM-40W	Type: LED	
MFR.: Lumega Group	DIM.: φ450*20mm	
	SUR.: 260*190mm	

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	.235	.134	.042	.228	.130	.041	.213	.122	.039	.200	.115	.037	.188	.109	.035	
2.0	.230	.126	.039	.224	.123	.038	.211	.117	.036	.200	.112	.035	.189	.107	.034	
3.0	.220	.117	.035	.214	.115	.035	.203	.110	.033	.193	.106	.032	.184	.102	.031	
4.0	.209	.108	.032	.204	.107	.031	.194	.103	.031	.185	.099	.030	.176	.096	.029	
5.0	.197	.100	.029	.193	.099	.029	.184	.096	.028	.176	.093	.028	.168	.090	.027	
6.0	.186	.093	.027	.182	.092	.026	.174	.089	.026	.167	.087	.026	.160	.084	.025	
7.0	.176	.087	.025	.172	.086	.024	.165	.083	.024	.159	.081	.024	.152	.079	.023	
8.0	.166	.081	.023	.163	.080	.023	.157	.078	.022	.151	.076	.022	.145	.074	.022	
9.0	.157	.076	.021	.154	.075	.021	.149	.073	.021	.143	.072	.021	.138	.070	.020	
10.0	.149	.072	.020	.147	.071	.020	.141	.069	.019	.136	.068	.019	.132	.066	.019	

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	.210	.210	.210	.179	.179	.179	.123	.123	.123	.070	.070	.070	.023	.023	.023	
1.0	.195	.176	.160	.167	.151	.138	.114	.104	.095	.066	.060	.055	.021	.019	.018	
2.0	.184	.152	.125	.157	.131	.108	.108	.091	.076	.062	.053	.044	.020	.017	.014	
3.0	.175	.134	.101	.150	.116	.088	.103	.080	.062	.059	.047	.036	.019	.015	.012	
4.0	.167	.120	.084	.143	.104	.073	.098	.072	.052	.057	.042	.031	.018	.014	.010	
5.0	.160	.109	.072	.137	.095	.063	.094	.066	.044	.055	.039	.026	.018	.013	.009	
6.0	.153	.101	.063	.132	.087	.055	.091	.061	.039	.053	.036	.023	.017	.012	.008	
7.0	.147	.094	.057	.126	.081	.049	.087	.057	.035	.051	.034	.021	.016	.011	.007	
8.0	.141	.088	.051	.122	.076	.045	.084	.054	.032	.049	.032	.019	.016	.010	.006	
9.0	.136	.083	.047	.117	.072	.041	.081	.051	.029	.047	.030	.018	.015	.010	.006	
10.0	.131	.079	.044	.113	.068	.039	.078	.048	.027	.046	.028	.016	.015	.009	.005	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-05-28

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.443
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:221.80V I:0.1950A P:41.700W PF:0.9630 Freq:50.00Hz		
Lamp Flux:6087.54x1 lm		
Name: NS83-φ450MM-40W	Type: LED	
MFR.: Lumega Group	DIM.: φ450*20mm	
	SUR.: 260*190mm	

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	23.9	25.2	24.2	25.5	25.7	24.0	25.3	24.3	25.5	25.8
3H	23.9	25.1	24.2	25.3	25.6	24.1	25.2	24.4	25.5	25.8
4H	23.8	24.9	24.1	25.2	25.5	24.0	25.1	24.3	25.4	25.6
6H	23.7	24.7	24.1	25.0	25.4	23.9	24.9	24.2	25.2	25.5
8H	23.7	24.6	24.0	25.0	25.3	23.8	24.8	24.2	25.1	25.5
12H	23.6	24.6	24.0	24.9	25.2	23.8	24.7	24.2	25.1	25.4
4H 2H	24.0	25.1	24.4	25.4	25.7	24.1	25.2	24.5	25.5	25.8
3H	24.0	24.9	24.4	25.3	25.6	24.1	25.1	24.5	25.4	25.8
4H	23.9	24.8	24.3	25.1	25.5	24.1	24.9	24.5	25.3	25.6
6H	23.8	24.6	24.3	25.0	25.4	24.0	24.7	24.4	25.1	25.5
8H	23.8	24.5	24.2	24.9	25.3	23.9	24.6	24.4	25.0	25.5
12H	23.7	24.4	24.2	24.8	25.2	23.9	24.5	24.4	24.9	25.4
8H 4H	23.8	24.5	24.2	24.9	25.3	23.9	24.6	24.4	25.0	25.5
6H	23.7	24.3	24.2	24.7	25.2	23.9	24.4	24.3	24.9	25.3
8H	23.7	24.1	24.2	24.6	25.1	23.8	24.3	24.3	24.8	25.3
12H	23.6	24.0	24.1	24.5	25.1	23.8	24.2	24.3	24.7	25.2
12H 4H	23.7	24.4	24.2	24.8	25.2	23.9	24.5	24.3	24.9	25.4
6H	23.7	24.1	24.1	24.6	25.1	23.8	24.3	24.3	24.8	25.3
8H	23.6	24.0	24.1	24.5	25.0	23.8	24.2	24.3	24.7	25.2
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 1.0 / - 1.4					+ 1.0 / - 1.3				
1.5H	+ 0.5 / - 0.6					+ 0.6 / - 0.6				
2.0H	+ 1.6 / - 2.2					+ 1.8 / - 2.1				

CIE Pub.117, 6088 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 6.3)
 Area: 0.05 m2

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-05-28

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.443
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:221.80V I:0.1950A P:41.700W PF:0.9630 Freq:50.00Hz Lamp Flux:6087.54x1 lm		
Name: NS83-φ450MM-40W	Type: LED	
MFR.: Lumega Group	DIM.: φ450*20mm	
	SUR.: 260*190mm	

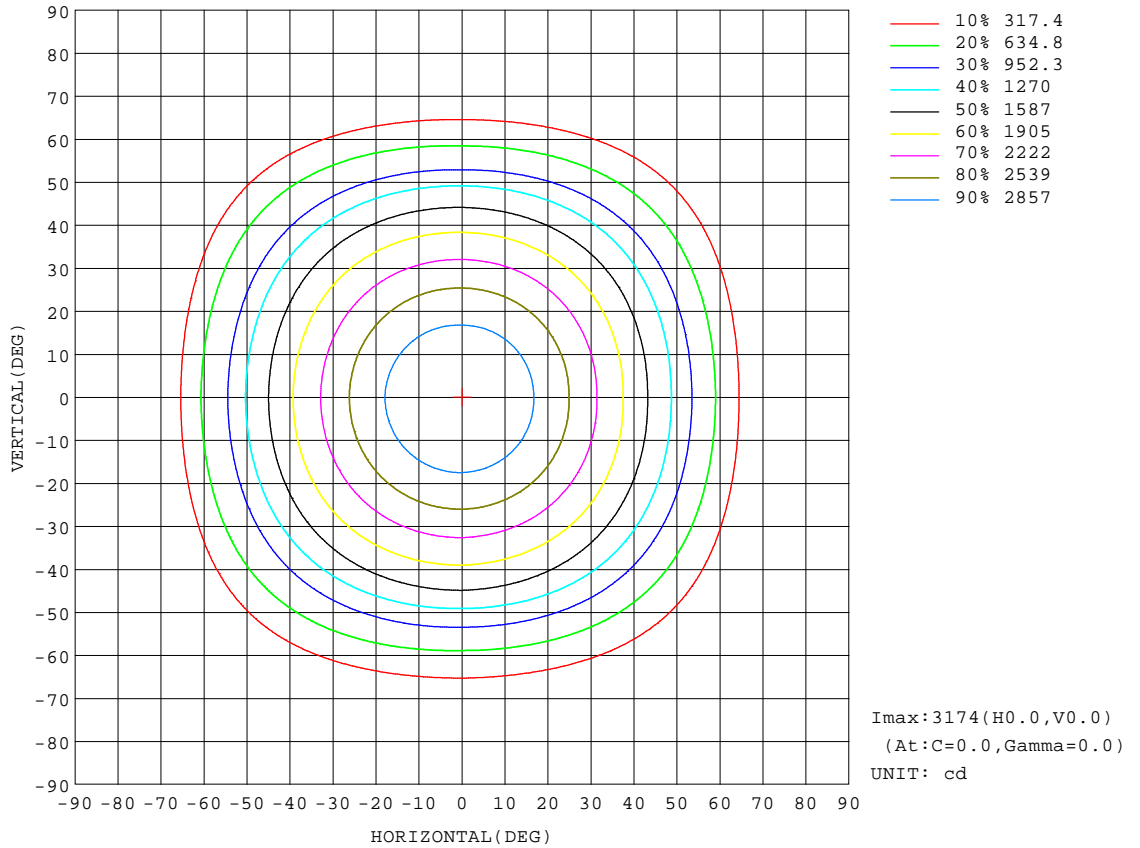
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	65	55	49	65	55	49	63	54	49	43
0.80	76	66	60	75	65	60	73	65	59	53
1.00	84	75	69	83	74	69	81	75	68	62
1.25	91	82	77	89	81	76	86	80	75	69
1.50	95	87	82	93	86	81	90	84	80	73
2.00	101	94	89	99	93	88	95	90	86	79
2.50	103	98	93	101	96	92	98	93	90	82
3.00	106	101	97	104	99	95	100	96	93	85
4.00	109	105	101	107	103	100	102	99	97	88
5.00	111	107	104	108	105	102	104	101	99	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-05-28

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.443
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

ISOCANDELA DIAGRAM

Test:U:221.80V I:0.1950A P:41.700W PF:0.9630 Freq:50.00Hz		
Lamp Flux:6087.54x1 lm		
Name: NS83-φ450MM-40W	Type: LED	
MFR.: Lumega Group	DIM.: φ450*20mm	
	SUR.: 260*190mm	



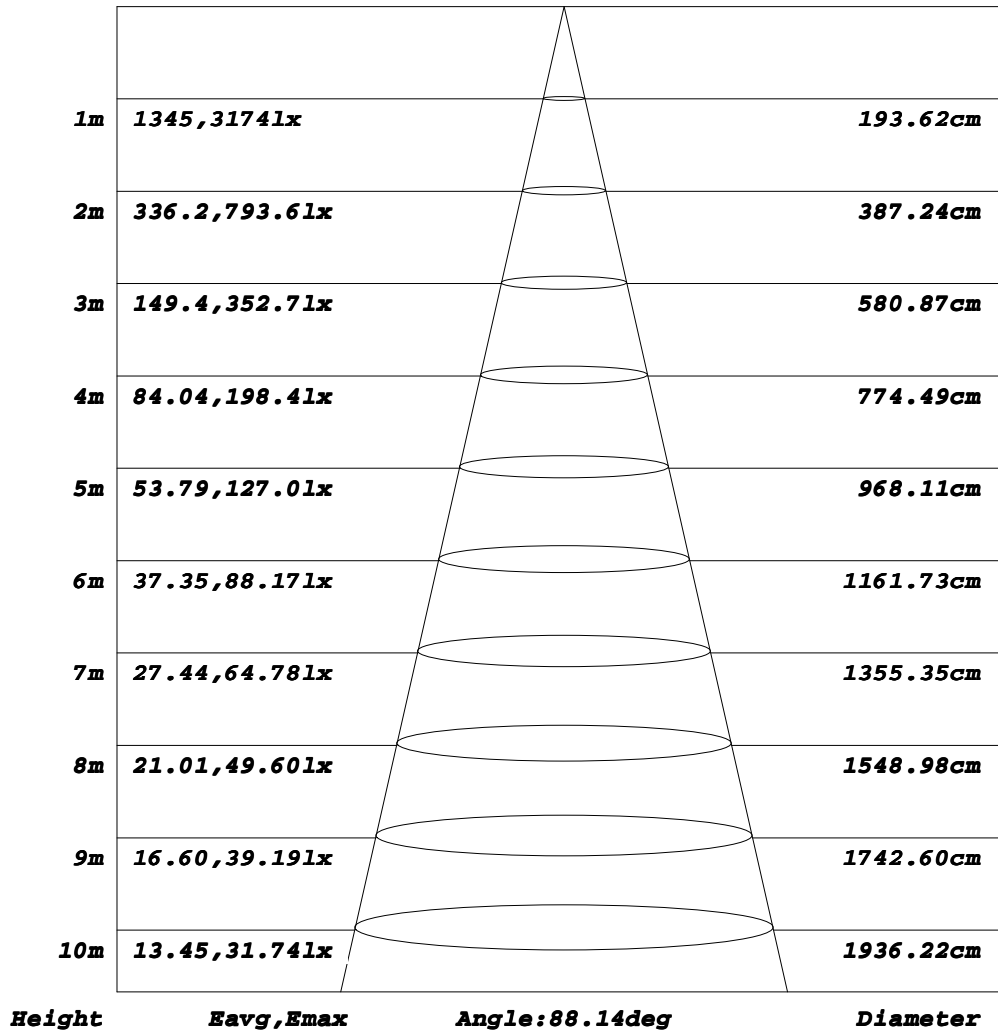
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2022-05-28

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.443
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

AAI Figure

Test:U:221.80V I:0.1950A P:41.700W PF:0.9630 Freq:50.00Hz		
Lamp Flux:6087.54x1 lm		
Name: NS83-φ450MM-40W	Type: LED	
MFR.: Lumega Group	DIM.: φ450*20mm	
	SUR.: 260*190mm	

Flux out:4224 lm



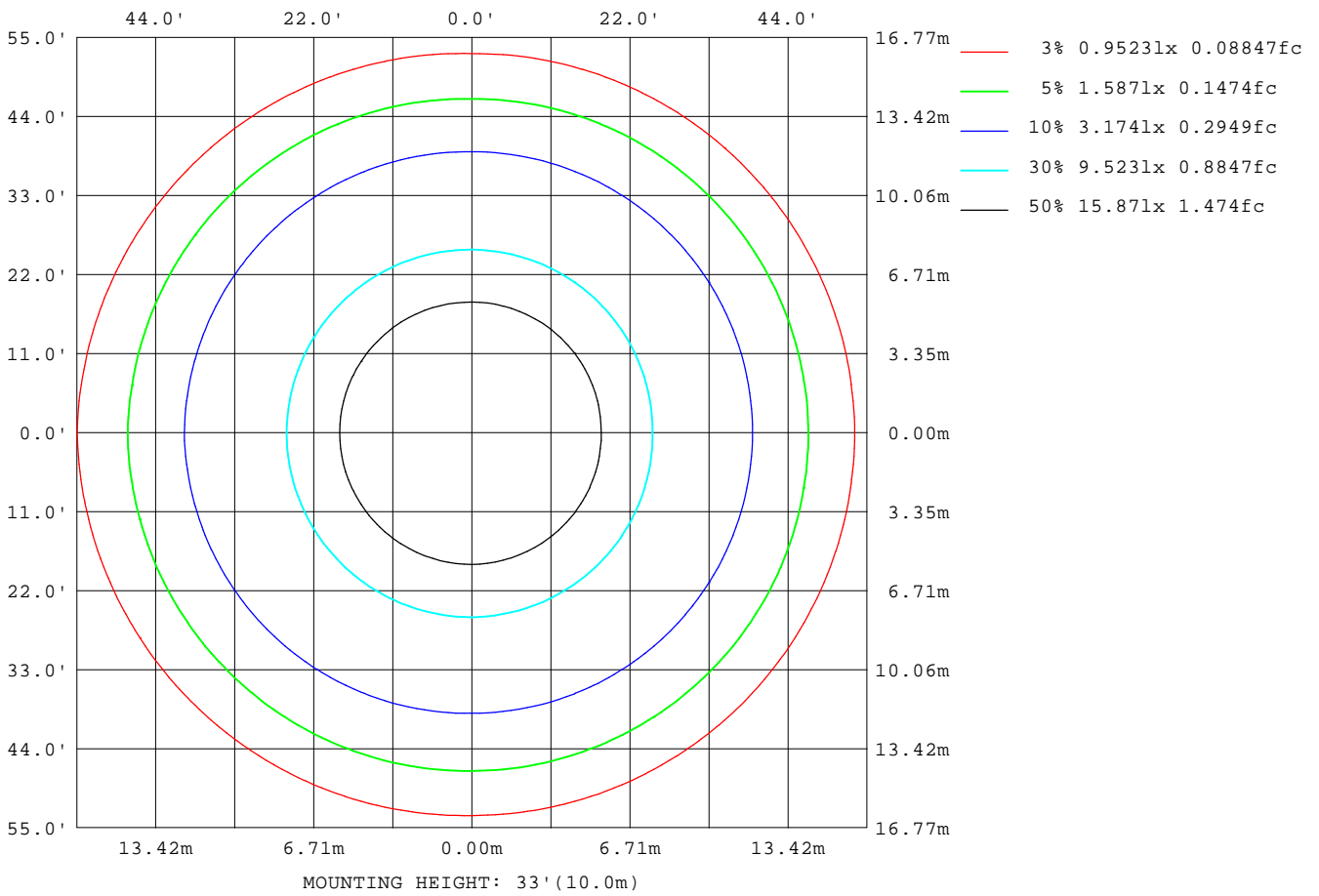
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2022-05-28

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.443
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

ISOLUX DIAGRAM

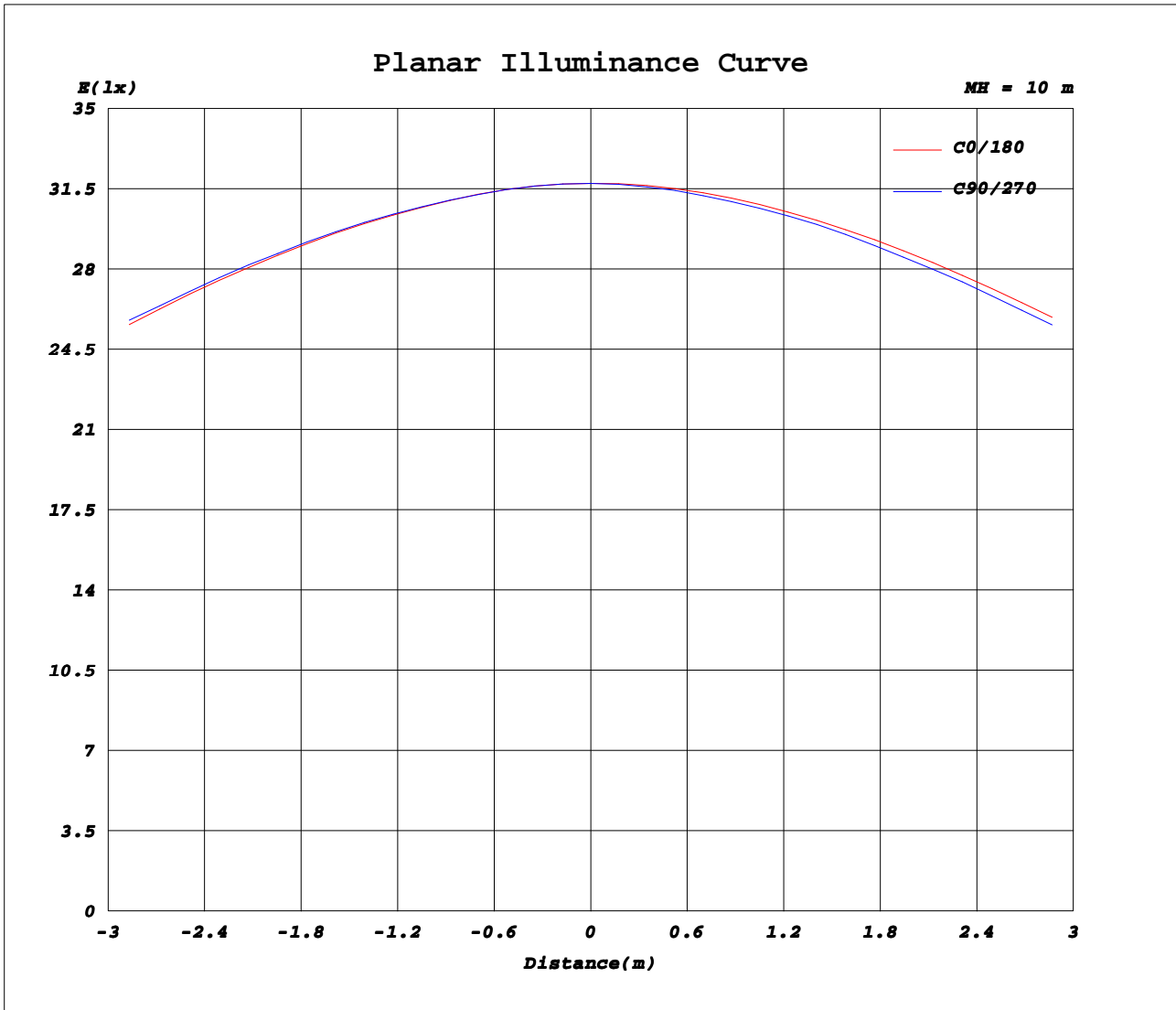
Test:U:221.80V I:0.1950A P:41.700W PF:0.9630 Freq:50.00Hz		
Lamp Flux:6087.54x1 lm		
Name: NS83-φ450MM-40W	Type: LED	
MFR.: Lumega Group	DIM.: φ450*20mm	
	SUR.: 260*190mm	



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2022-05-28

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.443
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2022-05-28

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.443
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:221.80V I:0.1950A P:41.700W PF:0.9630 Freq:50.00Hz		
Lamp Flux:6087.54x1 lm		
Name: NS83-φ450MM-40W	Type: LED	
MFR.: Lumega Group	DIM.: φ450*20mm	
	SUR.: 260*190mm	

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	90	180	270															
0	3174	3174	3174	3174															
5	3136	3136	3145	3130															
10	3048	3056	3066	3039															
15	2914	2929	2945	2908															
20	2741	2775	2787	2752															
25	2535	2586	2592	2556															
30	2294	2351	2360	2320															
35	2034	2109	2117	2073															
40	1769	1857	1868	1814															
45	1484	1582	1586	1536															
50	1194	1193	1296	1193															
55	839	860	916	811															
60	585	581	669	564															
65	273	336	347	285															
70	56.4	72.1	76.7	67.0															
75	31.7	37.0	39.5	37.9															
80	16.4	20.0	23.0	22.4															
85	8.18	10.2	13.6	13.6															
90	6.84	7.05	11.5	11.1															
95	8.12	7.73	12.1	12.4															
100	10.3	9.74	14.1	14.5															
105	13.0	12.3	16.6	17.1															
110	16.0	15.2	19.5	20.0															
115	19.2	18.4	22.6	22.9															
120	22.4	21.6	25.6	25.9															
125	25.5	24.7	28.4	28.8															
130	28.4	27.6	31.0	31.4															
135	31.0	30.3	33.4	33.7															
140	33.5	32.8	35.7	35.9															
145	36.1	35.4	37.8	38.0															
150	38.7	37.9	40.1	40.1															
155	41.4	40.5	42.3	42.2															
160	43.9	42.9	44.5	44.4															
165	46.2	45.2	46.5	46.3															
170	48.0	46.9	48.0	47.6															
175	49.0	48.1	48.9	48.4															
180	49.3	48.6	49.3	48.7															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-05-28

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.443
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks: