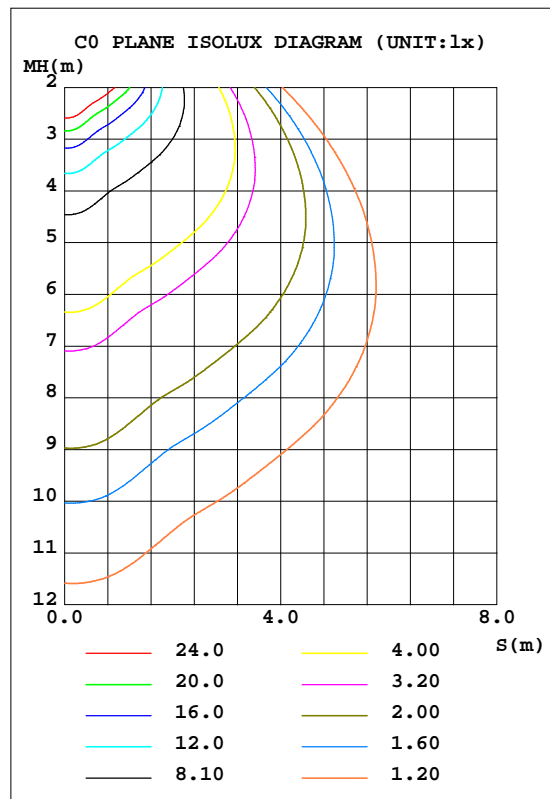
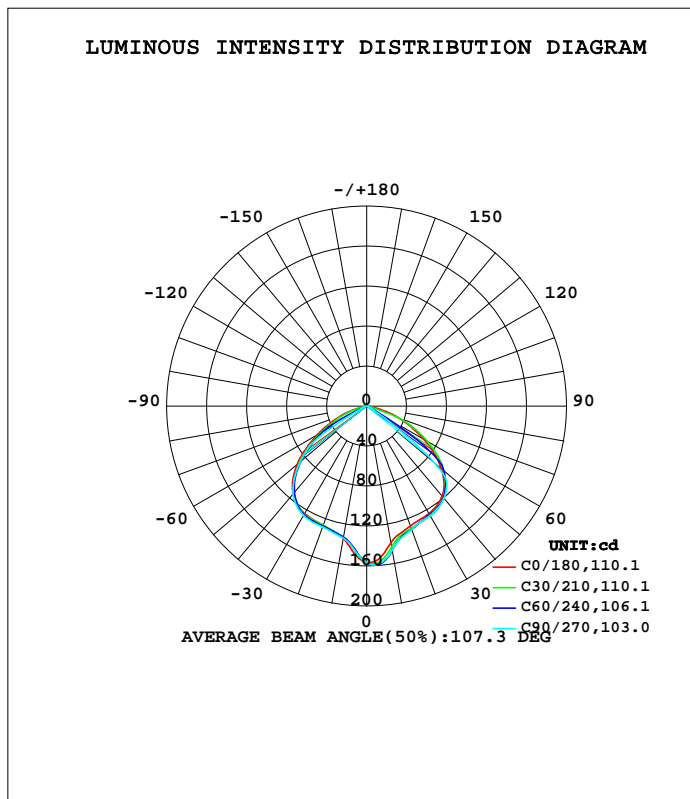


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:11.917V I:0.4831A P:4.2317W PF:0.7351 Freq:60.00Hz Lamp Flux:370.82lx1 lm		
NAME: 486747-MR16-4W-2700K-120°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax(cd)	159.8	S/MH(C0/180)	1.20
NOMINAL POWER(W)	--	LOR(%)	100.0	S/MH(C90/270)	1.22
RATED VOLTAGE(V)	--	TOTAL FLUX(lm)	370.82	η UP, DN(C0-180)	0.0,50.4
NOMINAL FLUX(lm)	370.821	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,49.6
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	--	η down(%)	100.0	CIBSE SHR MAX	1.50



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-06-01

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.411
 Humidity:65.0%
 Test Distance:9.000m [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	139.2	147.1	146.7	142.8	134.7	133.2	134.4	137.9	0- 10	14.01	14.01	3.78,3.78
20	127.7	131.8	131.5	134.2	127.0	127.6	129.0	131.2	10- 20	37.83	51.83	14,14
30	124.4	126.8	126.5	130.6	124.2	125.3	126.3	128.6	20- 30	59.45	111.3	30,30
40	117.5	120.1	120.4	121.1	114.8	112.1	114.5	117.5	30- 40	77.37	188.7	50.9,50.9
50	97.74	102.3	89.81	100.1	90.87	86.01	86.65	94.44	40- 50	83.12	271.8	73.3,73.3
60	65.62	68.82	7.307	63.86	56.81	50.37	25.66	59.84	50- 60	63.74	335.5	90.5,90.5
70	33.16	4.180	3.681	4.210	26.00	10.17	3.985	13.54	60- 70	27.99	363.5	98,98
80	3.395	0.3848	0.3055	0.2051	2.020	0.3768	0.3217	0.8018	70- 80	6.962	370.5	99.9,99.9
90	0.0275	0.0051	0	0	0.0789	0.0448	0	0.0419	80- 90	0.3599	370.8	100,100
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		

Conical surface Flux(90deg): 230.59 lm

%lum = 62.2%
%lamp = 62.2%

Conical surface Flux(120deg): 335.5 lm

%lum = 90.5%
%lamp = 90.5%

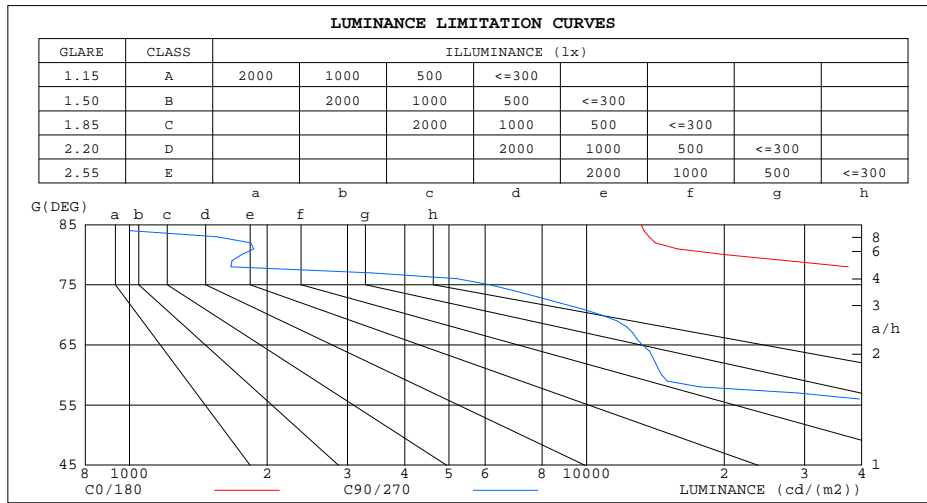
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-06-01

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.411
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:11.917V I:0.4831A P:4.2317W PF:0.7351 Freq:60.00Hz Lamp Flux:370.821x1 lm		
NAME: 486747-MR16-4W-2700K-120°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

~~KINDAPU TESTING - EVERFINE GO3000H TEST REPORT~~



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	13178	1
80	20106	1758
75	68925	6141
70	99723	10757
65	117904	13250
60	134965	14606
55	148253	49735
50	156376	139642
45	159377	160076

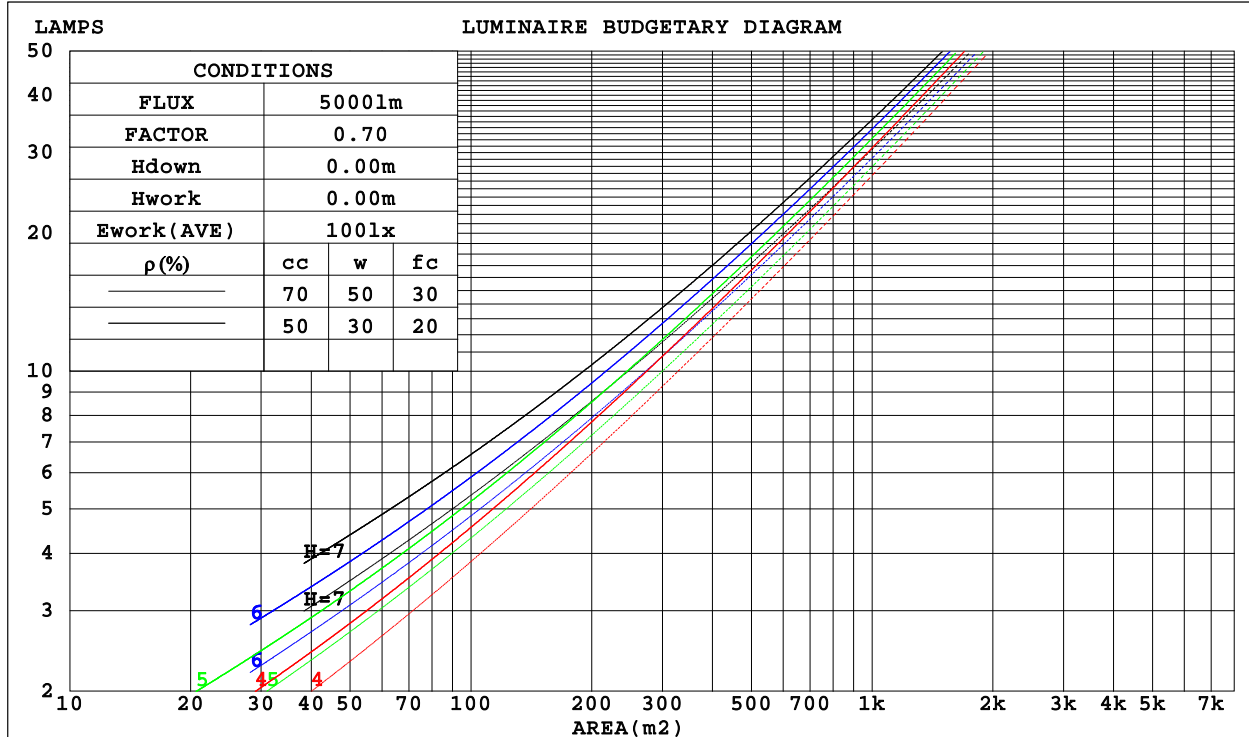
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-06-01

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.411
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:11.917V I:0.4831A P:4.2317W PF:0.7351 Freq:60.00Hz Lamp Flux:370.821x1 lm		
NAME: 486747-MR16-4W-2700K-120°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	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	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.07	1.03	.00	1.04	1.01	.98	1.00	.98	.95	.96	.94	.92	.93	.91	.90	.88
2.0	.95	.89	.84	.93	.87	.83	.89	.85	.81	.86	.82	.79	.83	.80	.77	.75
3.0	.84	.77	.71	.82	.76	.70	.80	.74	.69	.77	.72	.68	.74	.70	.67	.65
4.0	.75	.67	.61	.74	.66	.60	.71	.65	.59	.69	.63	.59	.67	.62	.58	.56
5.0	.67	.59	.53	.66	.58	.52	.64	.57	.52	.62	.56	.51	.60	.55	.51	.49
6.0	.61	.52	.46	.60	.52	.46	.58	.51	.45	.56	.50	.45	.55	.49	.45	.43
7.0	.55	.47	.41	.54	.46	.41	.53	.45	.40	.51	.45	.40	.50	.44	.40	.38
8.0	.50	.42	.36	.49	.42	.36	.48	.41	.36	.47	.40	.36	.46	.40	.36	.34
9.0	.46	.38	.33	.45	.38	.32	.44	.37	.32	.43	.37	.32	.42	.36	.32	.30
10.0	.42	.35	.29	.42	.34	.29	.41	.34	.29	.40	.34	.29	.39	.33	.29	.27



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-06-01

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.411
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:11.917V I:0.4831A P:4.2317W PF:0.7351 Freq:60.00Hz Lamp Flux:370.82lx1 lm		
NAME: 486747-MR16-4W-2700K-120°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.256	.145	.046	.249	.142	.045	.236	.135	.043	.224	.129	.041	.213	.123	.040	
2.0	.252	.138	.042	.246	.135	.042	.234	.130	.040	.224	.126	.039	.214	.121	.038	
3.0	.240	.128	.038	.235	.126	.038	.225	.122	.037	.216	.118	.036	.207	.115	.035	
4.0	.227	.118	.035	.222	.116	.034	.213	.113	.034	.205	.110	.033	.197	.107	.033	
5.0	.213	.109	.031	.209	.107	.031	.201	.105	.031	.194	.102	.030	.187	.100	.030	
6.0	.201	.101	.029	.197	.099	.029	.190	.097	.028	.183	.095	.028	.177	.093	.028	
7.0	.189	.093	.026	.185	.092	.026	.179	.090	.026	.173	.089	.026	.168	.087	.026	
8.0	.178	.087	.024	.175	.086	.024	.169	.084	.024	.164	.083	.024	.159	.081	.024	
9.0	.167	.081	.023	.165	.080	.023	.160	.079	.022	.155	.078	.022	.150	.076	.022	
10.0	.158	.076	.021	.156	.075	.021	.151	.074	.021	.147	.073	.021	.143	.072	.021	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.177	.157	.139	.151	.134	.119	.103	.092	.083	.059	.054	.048	.019	.017	.016	
2.0	.167	.132	.103	.143	.114	.089	.098	.079	.062	.056	.046	.036	.018	.015	.012	
3.0	.159	.114	.079	.136	.098	.068	.093	.068	.048	.054	.040	.028	.017	.013	.009	
4.0	.151	.100	.062	.130	.087	.054	.089	.061	.038	.052	.035	.022	.017	.012	.007	
5.0	.144	.090	.050	.124	.078	.043	.085	.054	.031	.049	.032	.018	.016	.010	.006	
6.0	.138	.081	.041	.118	.071	.036	.082	.049	.025	.047	.029	.015	.015	.009	.005	
7.0	.132	.075	.035	.113	.065	.030	.078	.045	.021	.045	.027	.013	.015	.009	.004	
8.0	.126	.069	.030	.108	.060	.026	.075	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.120	.064	.026	.103	.055	.023	.072	.039	.016	.042	.023	.010	.014	.008	.003	
10.0	.115	.060	.023	.099	.052	.020	.069	.036	.014	.040	.022	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-06-01

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.411
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:11.917V I:0.4831A P:4.2317W PF:0.7351 Freq:60.00Hz Lamp Flux:370.82lx1 lm										
NAME: 486747-MR16-4W-2700K-120°					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.:					SUR.:35mm			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	31.1	32.5	31.3	32.7	32.9	28.2	29.6	28.5	29.8	30.0
3H	32.1	33.4	32.4	33.6	33.9	28.0	29.3	28.3	29.6	29.8
4H	32.4	33.6	32.7	33.9	34.1	27.9	29.2	28.2	29.4	29.7
6H	32.4	33.5	32.7	33.8	34.1	27.8	29.0	28.2	29.3	29.5
8H	32.3	33.4	32.7	33.7	34.0	27.8	28.9	28.1	29.2	29.5
12H	32.3	33.3	32.6	33.6	33.9	27.7	28.8	28.1	29.1	29.4
4H 2H	31.2	32.5	31.5	32.7	32.9	28.8	30.0	29.1	30.2	30.5
3H	32.4	33.4	32.7	33.7	34.0	28.6	29.6	28.9	29.9	30.2
4H	32.7	33.6	33.0	33.9	34.3	28.5	29.5	28.9	29.8	30.1
6H	32.7	33.5	33.1	33.9	34.2	28.4	29.3	28.8	29.6	30.0
8H	32.7	33.4	33.1	33.8	34.2	28.4	29.1	28.8	29.5	29.9
12H	32.6	33.3	33.0	33.7	34.1	28.3	29.0	28.8	29.4	29.8
8H 4H	32.5	33.3	32.9	33.7	34.1	28.5	29.3	28.9	29.6	30.0
6H	32.6	33.2	33.0	33.6	34.0	28.4	29.1	28.9	29.5	29.9
8H	32.5	33.1	33.0	33.5	34.0	28.4	28.9	28.8	29.4	29.8
12H	32.5	33.0	33.0	33.4	33.9	28.4	28.8	28.8	29.3	29.7
12H 4H	32.5	33.2	32.9	33.6	34.0	28.5	29.2	28.9	29.6	30.0
6H	32.5	33.1	33.0	33.5	34.0	28.4	28.9	28.8	29.4	29.8
8H	32.5	33.0	33.0	33.4	33.9	28.4	28.8	28.8	29.3	29.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 1.7 / - 3.3				
1.5H	+ 0.6 / - 1.2					+ 0.9 / - 1.6				
2.0H	+ 0.5 / - 0.9					+ 2.6 / -11.7				

CIE Pub.117, 370.8 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -3.4)
Area: 0.001 m2

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-06-01

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.411
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:11.917V I:0.4831A P:4.2317W PF:0.7351 Freq:60.00Hz Lamp Flux:370.82lx1 lm		
NAME: 486747-MR16-4W-2700K-120°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

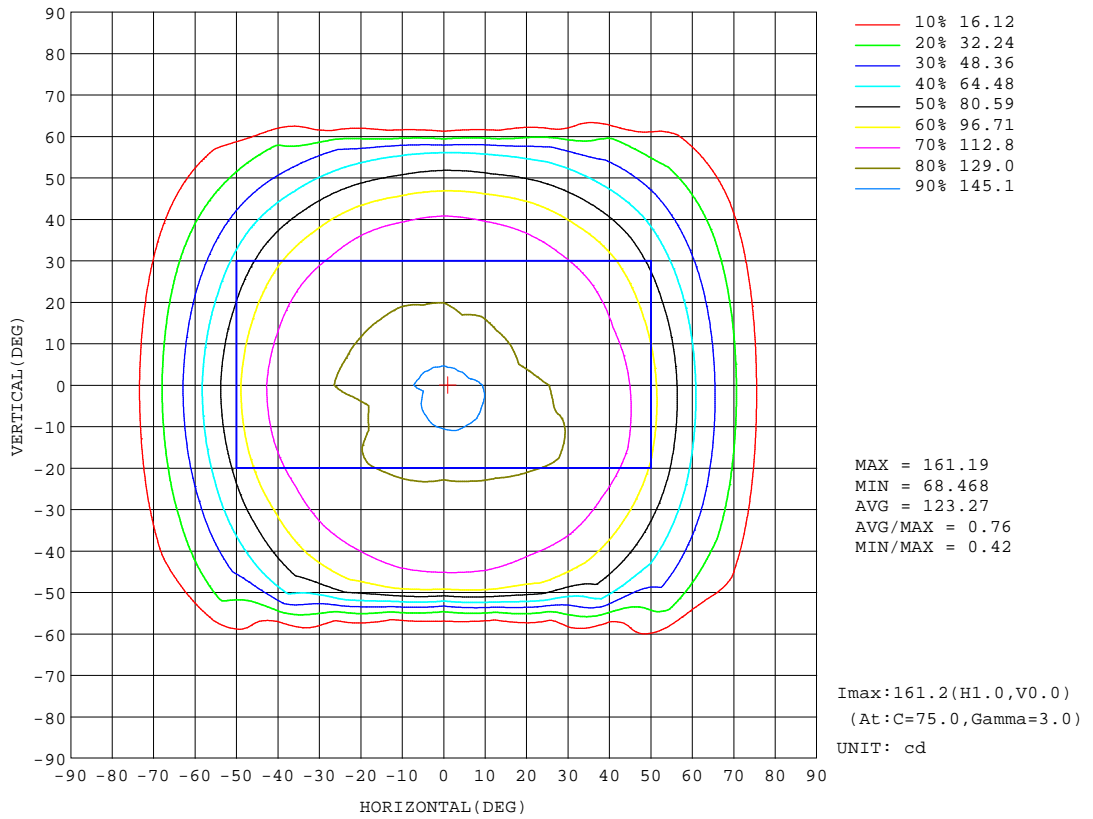
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	60	49	42	59	49	42	58	48	42	36
0.80	71	60	53	70	60	53	68	59	53	46
1.00	80	70	64	79	70	63	77	71	63	56
1.25	88	78	72	86	78	72	84	76	71	64
1.50	93	84	78	91	83	77	88	81	76	70
2.00	99	92	86	97	91	86	94	88	84	77
2.50	102	96	91	100	94	90	97	92	88	80
3.00	105	99	95	103	98	94	99	95	92	84
4.00	109	104	100	106	102	98	102	99	96	87
5.00	110	106	103	108	104	101	104	101	98	90
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:DAMIN
 Test Date:2022-06-01

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.411
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:11.917V I:0.4831A P:4.2317W PF:0.7351 Freq:60.00Hz Lamp Flux:370.82lx1 lm		
NAME: 486747-MR16-4W-2700K-120°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



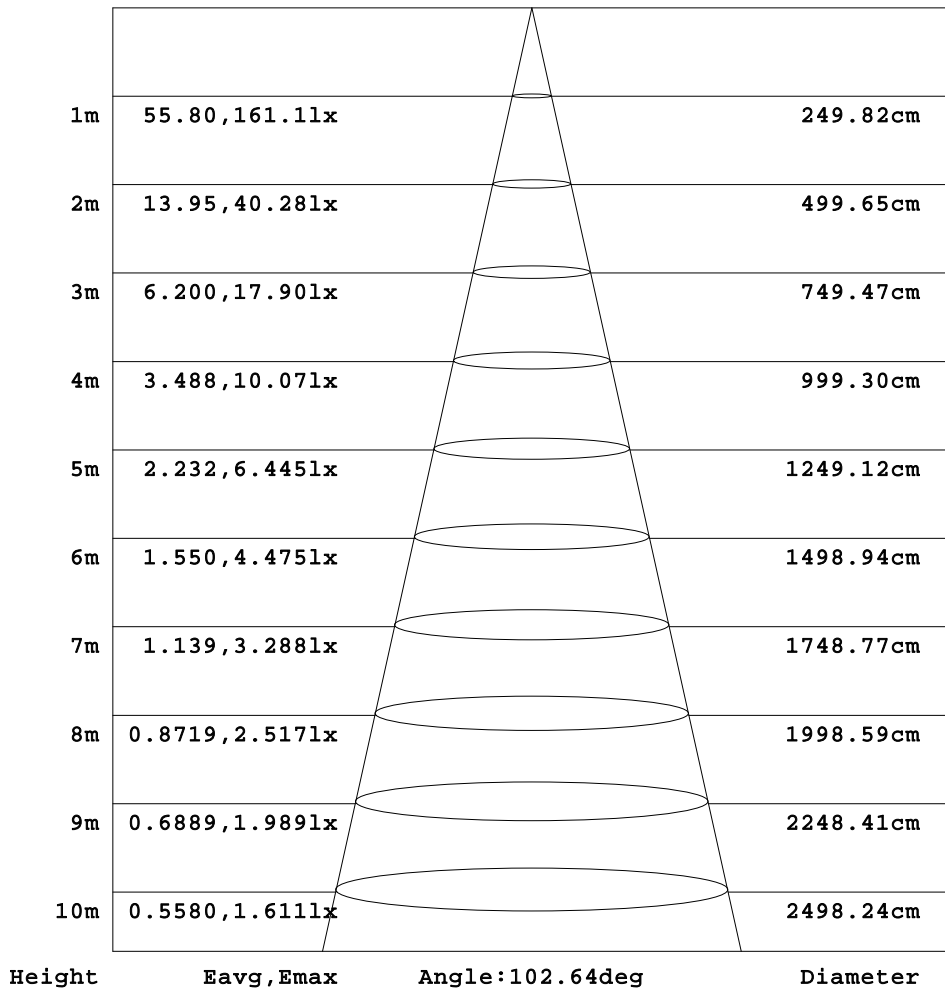
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-06-01

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.411
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

AAI Figure

Test:U:11.917V I:0.4831A P:4.2317W PF:0.7351 Freq:60.00Hz Lamp Flux:370.82lx1 lm		
NAME: 486747-MR16-4W-2700K-120°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

Flux out:287.2 lm



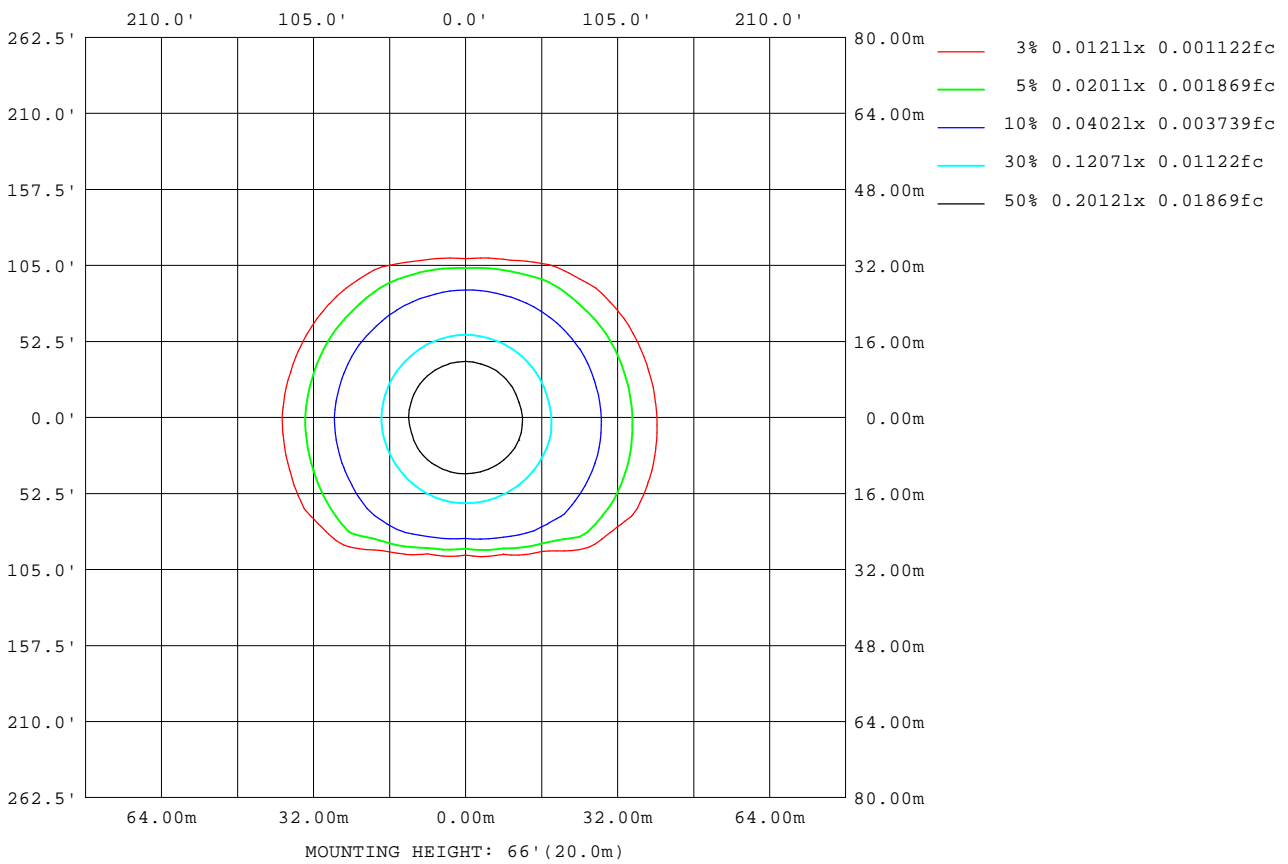
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-06-01

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.411
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:11.917V I:0.4831A P:4.2317W PF:0.7351 Freq:60.00Hz Lamp Flux:370.82lx1 lm		
NAME: 486747-MR16-4W-2700K-120°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-06-01

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.411
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:11.917V I:0.4831A P:4.2317W PF:0.7351 Freq:60.00Hz Lamp Flux:370.821x1 lm		
NAME: 486747-MR16-4W-2700K-120°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

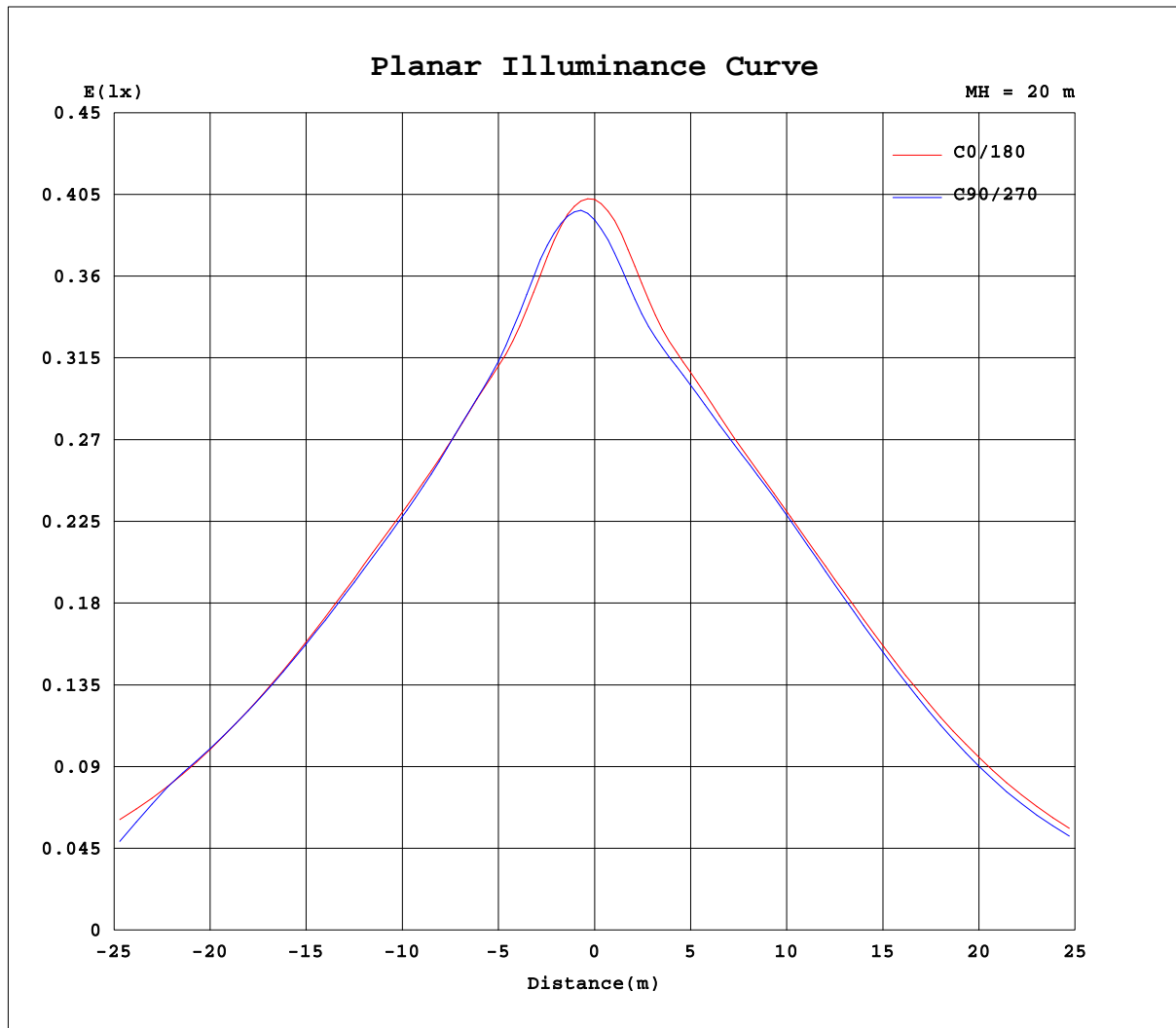
AvgL	cd/m2
L_0~180(65)av	104399
L_0~180(75)av	53870
L_0~180(85)av	10622
L_90~270(65)av	13779
L_90~270(75)av	6126
L_90~270(85)av	22
L_45(65)av	68683
L_45(75)av	10862
L_45(85)av	1206

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-06-01

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.411
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2022-06-01

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.411
 Humidity: 65.0%
 Test Distance: 9.000m [K=1.0000]
 Remarks:

