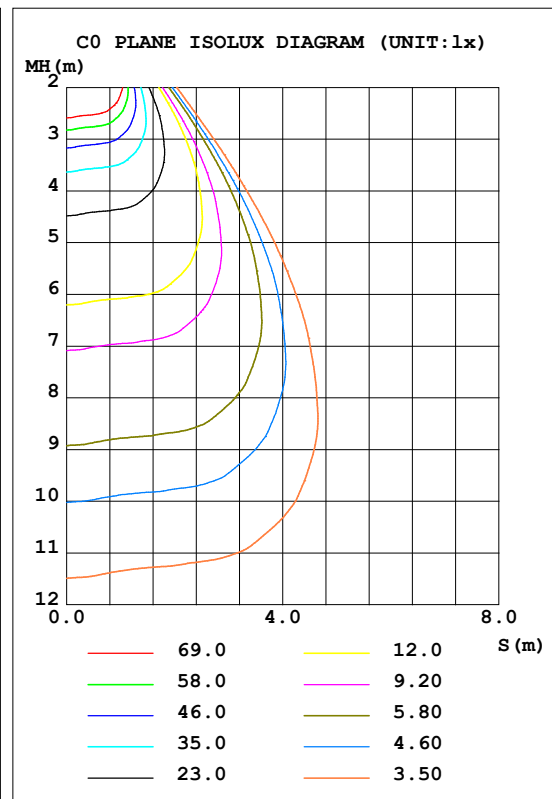
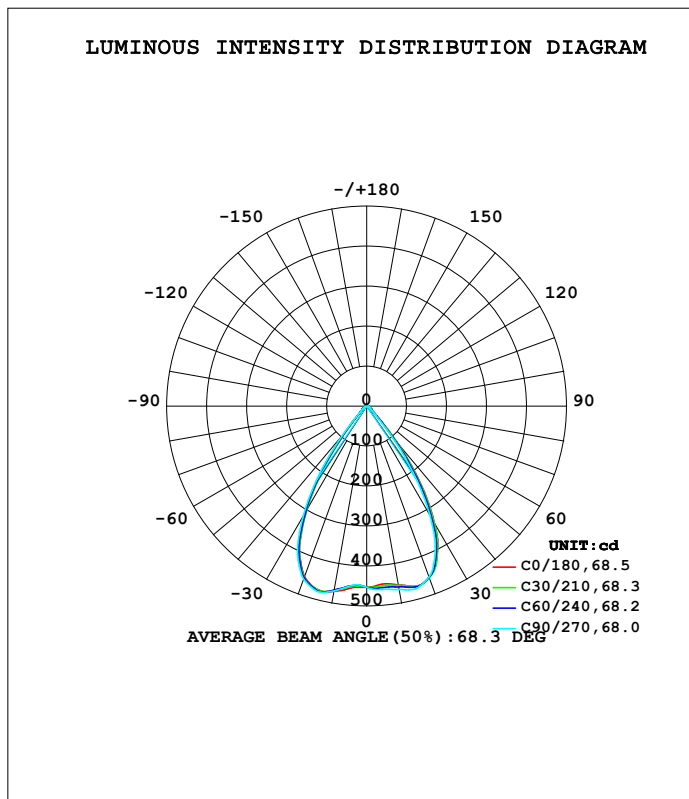


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:11.831V I:0.7103A P:6.4276W PF:0.7648 Freq:60.00Hz Lamp Flux:542.977x1 lm		
NAME: 486719-MR16-7W-3000K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		I _{max} (cd)	481.4	S/MH (C0/180)	0.96
NOMINAL POWER (W)	--	LOR (%)	100.0	S/MH (C90/270)	0.99
RATED VOLTAGE (V)	--	TOTAL FLUX (lm)	542.98	η UP, DN (C0-180)	0.0,49.8
NOMINAL FLUX (lm)	542.977	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0,50.2
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE (V)	--	η down (%)	100.0	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-05-30

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	454.6	458.1	465.7	475.9	470.3	467.5	469.2	471.9	0- 10	43.82	43.82	8.07,8.07
20	456.2	458.4	455.0	454.2	454.3	456.0	460.9	464.6	10- 20	133.0	176.9	32.6,32.6
30	340.5	337.7	316.8	294.9	300.4	301.1	317.7	343.6	20- 30	183.7	360.6	66.4,66.4
40	117.4	113.4	90.90	71.75	72.94	73.65	90.22	118.6	30- 40	126.7	487.3	89.7,89.7
50	22.25	19.08	17.97	17.47	17.44	17.70	18.23	22.37	40- 50	32.12	519.4	95.7,95.7
60	12.05	11.35	8.505	10.44	10.80	10.89	8.769	12.47	50- 60	12.76	532.2	98,98
70	5.845	5.395	3.543	4.300	5.444	4.772	3.372	5.262	60- 70	7.152	539.3	99.3,99.3
80	3.084	1.073	0.0590	0.2993	2.955	0.3766	0.0507	1.539	70- 80	3.184	542.5	99.9,99.9
90	0.0109	0	0	0	0.0168	0.0111	0.0060	0.0091	80- 90	0.4847	543.0	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): 509.28 lm

%lum = 93.8%
%lamp = 93.8%

Conical surface Flux(120deg): 532.16 lm

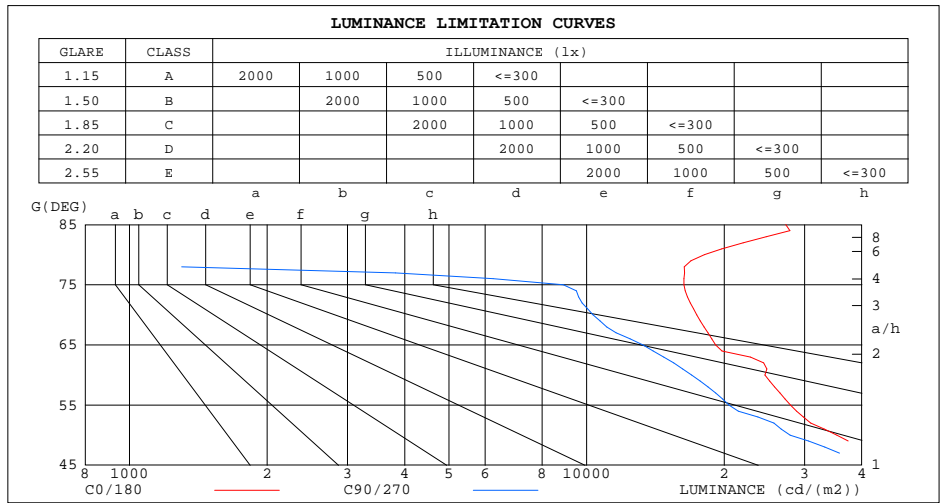
%lum = 98.0%
%lamp = 98.0%

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-05-30

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:11.831V I:0.7103A P:6.4276W PF:0.7648 Freq:60.00Hz Lamp Flux:542.977x1 lm		
NAME: 486719-MR16-7W-3000K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	27290	28
80	18109	339
75	16338	8890
70	17425	10336
65	19171	13280
60	24574	16972
55	27954	20504
50	35298	27890
45	63458	46931

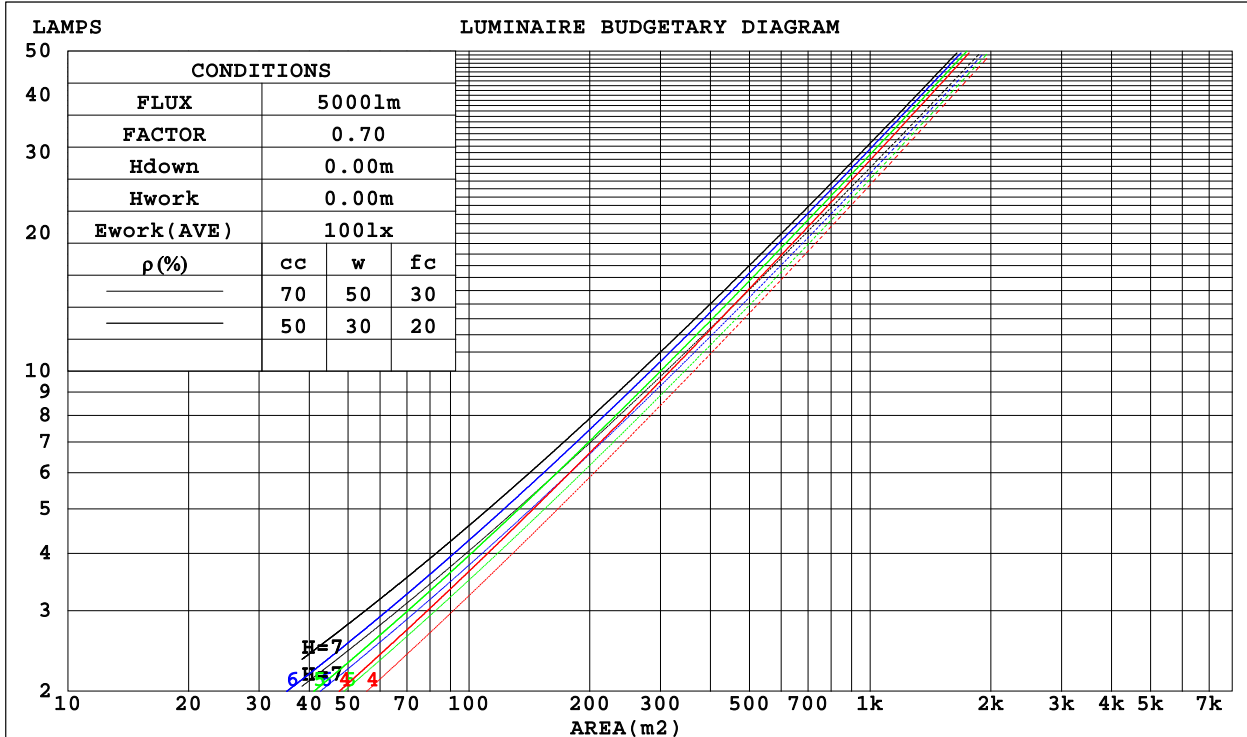
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-05-30

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:11.831V I:0.7103A P:6.4276W PF:0.7648 Freq:60.00Hz Lamp Flux:542.977x1 lm		
NAME: 486719-MR16-7W-3000K-60°	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	1.10	1.08	1.05	1.08	1.06	1.03	1.04	1.02	1.00	1.00	.99	.97	.97	.96	.94	.93
2.0	1.02	.98	.94	1.00	.96	.93	.97	.94	.91	.94	.91	.89	.91	.89	.87	.85
3.0	.94	.89	.85	.93	.88	.84	.90	.86	.83	.88	.84	.82	.86	.83	.80	.79
4.0	.88	.82	.77	.87	.81	.77	.84	.80	.76	.82	.78	.75	.80	.77	.74	.73
5.0	.82	.76	.71	.81	.75	.71	.79	.74	.70	.77	.73	.69	.76	.72	.69	.67
6.0	.76	.70	.65	.75	.70	.65	.74	.69	.65	.72	.68	.64	.71	.67	.64	.62
7.0	.71	.65	.61	.71	.65	.60	.69	.64	.60	.68	.63	.60	.67	.63	.59	.58
8.0	.67	.61	.56	.66	.60	.56	.65	.60	.56	.64	.59	.56	.63	.59	.55	.54
9.0	.63	.57	.52	.62	.56	.52	.61	.56	.52	.60	.56	.52	.60	.55	.52	.50
10.0	.59	.53	.49	.59	.53	.49	.58	.53	.49	.57	.52	.49	.56	.52	.49	.47



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-05-30

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:11.831V I:0.7103A P:6.4276W PF:0.7648 Freq:60.00Hz Lamp Flux:542.977x1 lm		
NAME: 486719-MR16-7W-3000K-60°	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	.190	.108	.034	.183	.104	.033	.170	.098	.031	.159	.091	.029	.148	.086	.028	
2.0	.182	.100	.031	.177	.097	.030	.166	.092	.029	.156	.087	.027	.147	.083	.026	
3.0	.174	.092	.028	.169	.090	.027	.160	.086	.026	.151	.083	.025	.143	.079	.025	
4.0	.165	.086	.025	.161	.084	.025	.153	.081	.024	.146	.078	.024	.139	.075	.023	
5.0	.157	.080	.023	.154	.079	.023	.147	.076	.022	.140	.074	.022	.134	.072	.022	
6.0	.150	.075	.022	.147	.074	.021	.140	.072	.021	.135	.070	.021	.129	.068	.020	
7.0	.143	.071	.020	.140	.070	.020	.135	.068	.020	.130	.066	.019	.125	.065	.019	
8.0	.137	.067	.019	.134	.066	.019	.129	.065	.018	.125	.063	.018	.120	.062	.018	
9.0	.131	.063	.018	.129	.063	.018	.124	.061	.017	.120	.060	.017	.116	.059	.017	
10.0	.125	.060	.017	.123	.060	.017	.119	.058	.016	.116	.057	.016	.112	.056	.016	

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	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.158	.132	.111	.135	.114	.096	.093	.079	.067	.053	.046	.039	.017	.015	.013	
3.0	.146	.114	.088	.125	.098	.076	.086	.068	.053	.050	.040	.032	.016	.013	.010	
4.0	.136	.099	.071	.117	.086	.062	.080	.060	.043	.046	.035	.026	.015	.011	.008	
5.0	.128	.088	.058	.110	.076	.050	.076	.053	.036	.044	.031	.021	.014	.010	.007	
6.0	.121	.079	.048	.104	.068	.042	.072	.048	.030	.042	.028	.018	.013	.009	.006	
7.0	.114	.071	.041	.098	.062	.036	.068	.043	.025	.039	.025	.015	.013	.008	.005	
8.0	.109	.065	.035	.094	.056	.030	.065	.040	.022	.038	.023	.013	.012	.008	.004	
9.0	.104	.060	.030	.089	.052	.026	.062	.037	.019	.036	.022	.011	.012	.007	.004	
10.0	.099	.056	.027	.085	.048	.023	.059	.034	.016	.035	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-05-30

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:11.831V I:0.7103A P:6.4276W PF:0.7648 Freq:60.00Hz Lamp Flux:542.977x1 lm										
NAME: 486719-MR16-7W-3000K-60°					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	24.4	25.4	24.6	25.6	25.8	23.6	24.6	23.9	24.8	25.0
3H	24.4	25.3	24.7	25.6	25.8	23.5	24.5	23.8	24.7	24.9
4H	24.4	25.3	24.7	25.5	25.8	23.5	24.4	23.8	24.6	24.8
6H	24.4	25.3	24.7	25.5	25.8	23.4	24.2	23.7	24.5	24.7
8H	24.5	25.3	24.8	25.5	25.8	23.4	24.2	23.7	24.4	24.7
12H	24.5	25.3	24.9	25.6	25.9	23.3	24.1	23.6	24.4	24.6
4H 2H	24.2	25.1	24.5	25.3	25.6	23.5	24.4	23.8	24.6	24.8
3H	24.3	25.1	24.6	25.4	25.6	23.5	24.2	23.8	24.5	24.8
4H	24.4	25.1	24.7	25.4	25.7	23.4	24.1	23.8	24.4	24.7
6H	24.5	25.1	24.8	25.4	25.8	23.3	23.9	23.7	24.3	24.6
8H	24.6	25.1	25.0	25.5	25.8	23.3	23.9	23.7	24.2	24.6
12H	24.7	25.2	25.1	25.6	26.0	23.2	23.8	23.7	24.1	24.5
8H 4H	24.3	24.9	24.7	25.2	25.6	23.4	23.9	23.8	24.3	24.6
6H	24.4	24.9	24.9	25.3	25.7	23.3	23.7	23.7	24.1	24.5
8H	24.5	25.0	25.0	25.4	25.8	23.2	23.6	23.7	24.0	24.5
12H	24.8	25.1	25.2	25.5	26.0	23.2	23.5	23.6	24.0	24.4
12H 4H	24.3	24.8	24.7	25.1	25.5	23.3	23.8	23.7	24.2	24.6
6H	24.4	24.8	24.8	25.2	25.6	23.2	23.6	23.7	24.1	24.5
8H	24.5	24.8	25.0	25.3	25.8	23.2	23.5	23.7	24.0	24.4
Variations with the observer position at spacings:										
S = 1.0H	+ 2.6 / - 3.9					+ 2.7 / - 5.4				
1.5H	+ 4.8 / - 3.5					+ 4.9 / - 4.4				
2.0H	+ 2.6 / - 0.9					+ 2.5 / - 1.8				

CIE Pub.117, 543.0 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -2.1)
Area: 0.001 m2

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-05-30

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:11.831V I:0.7103A P:6.4276W PF:0.7648 Freq:60.00Hz Lamp Flux:542.977x1 lm		
NAME: 486719-MR16-7W-3000K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

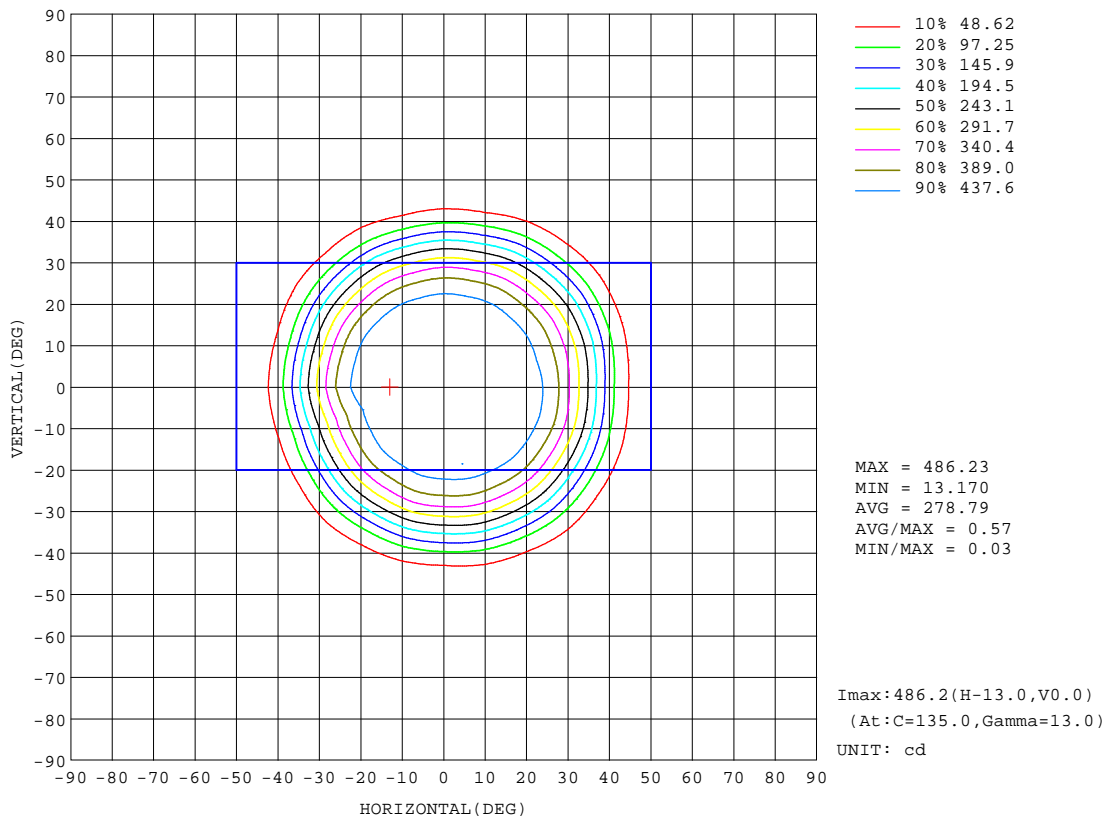
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	85	78	74	85	78	74	84	78	74	70
0.80	93	87	83	92	86	82	91	86	82	78
1.00	98	92	88	97	91	88	95	91	87	83
1.25	102	96	93	101	96	92	99	95	91	87
1.50	105	100	96	103	99	96	101	97	95	90
2.00	108	103	100	106	102	99	104	100	98	92
2.50	110	105	102	108	104	101	105	102	100	93
3.00	111	108	105	109	106	104	106	103	101	95
4.00	113	110	108	111	109	107	108	106	104	97
5.00	115	112	110	113	110	109	109	107	106	98
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:2022-05-30

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:11.831V I:0.7103A P:6.4276W PF:0.7648 Freq:60.00Hz Lamp Flux:542.977x1 lm		
NAME: 486719-MR16-7W-3000K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



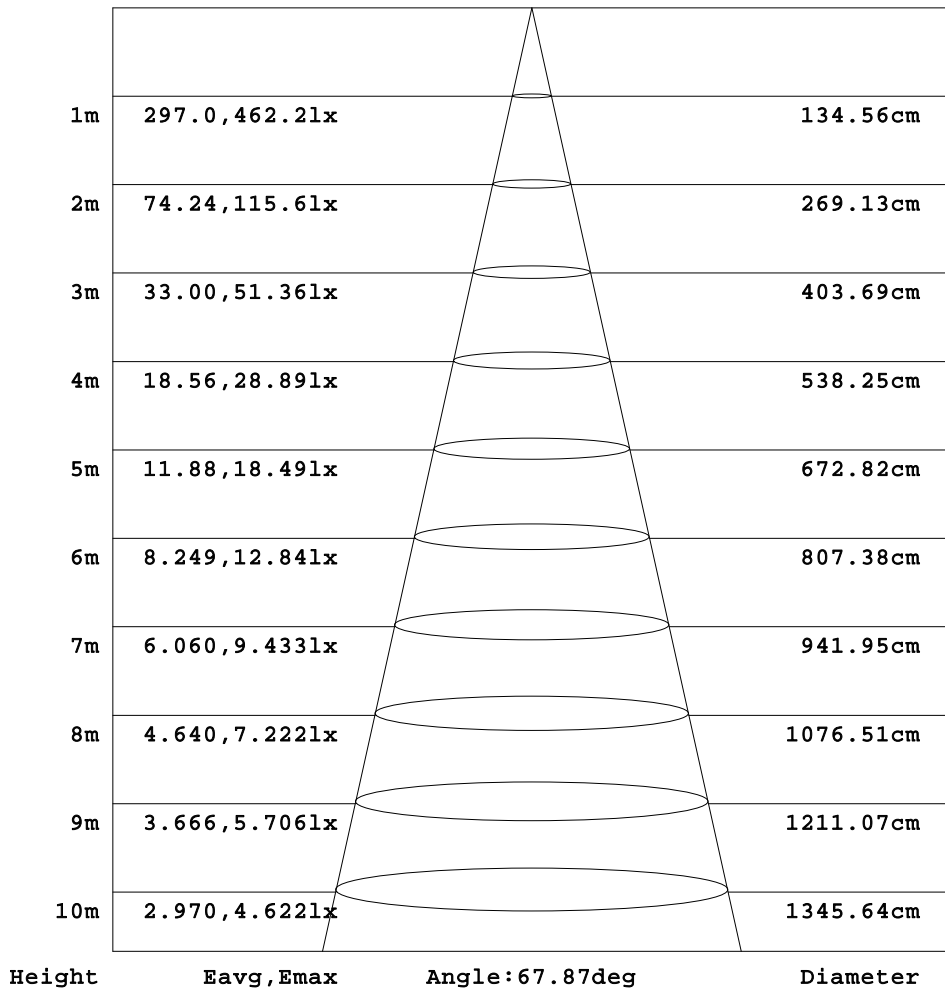
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-05-30

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:11.831V I:0.7103A P:6.4276W PF:0.7648 Freq:60.00Hz Lamp Flux:542.977x1 lm		
NAME: 486719-MR16-7W-3000K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

Flux out:424.5 lm



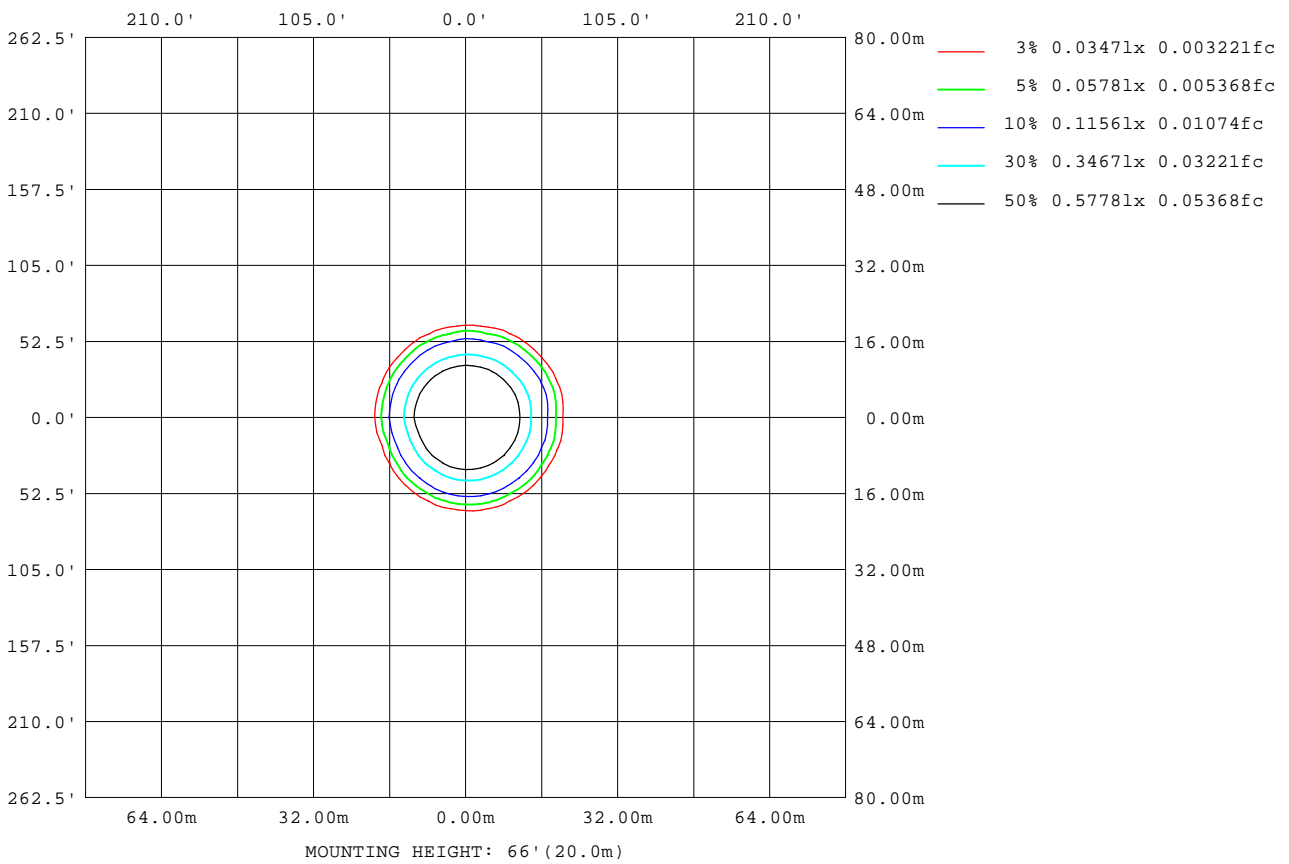
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-05-30

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:11.831V I:0.7103A P:6.4276W PF:0.7648 Freq:60.00Hz Lamp Flux:542.977x1 lm		
NAME: 486719-MR16-7W-3000K-60°	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:2022-05-30

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:11.831V I:0.7103A P:6.4276W PF:0.7648 Freq:60.00Hz Lamp Flux:542.977x1 lm		
NAME: 486719-MR16-7W-3000K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

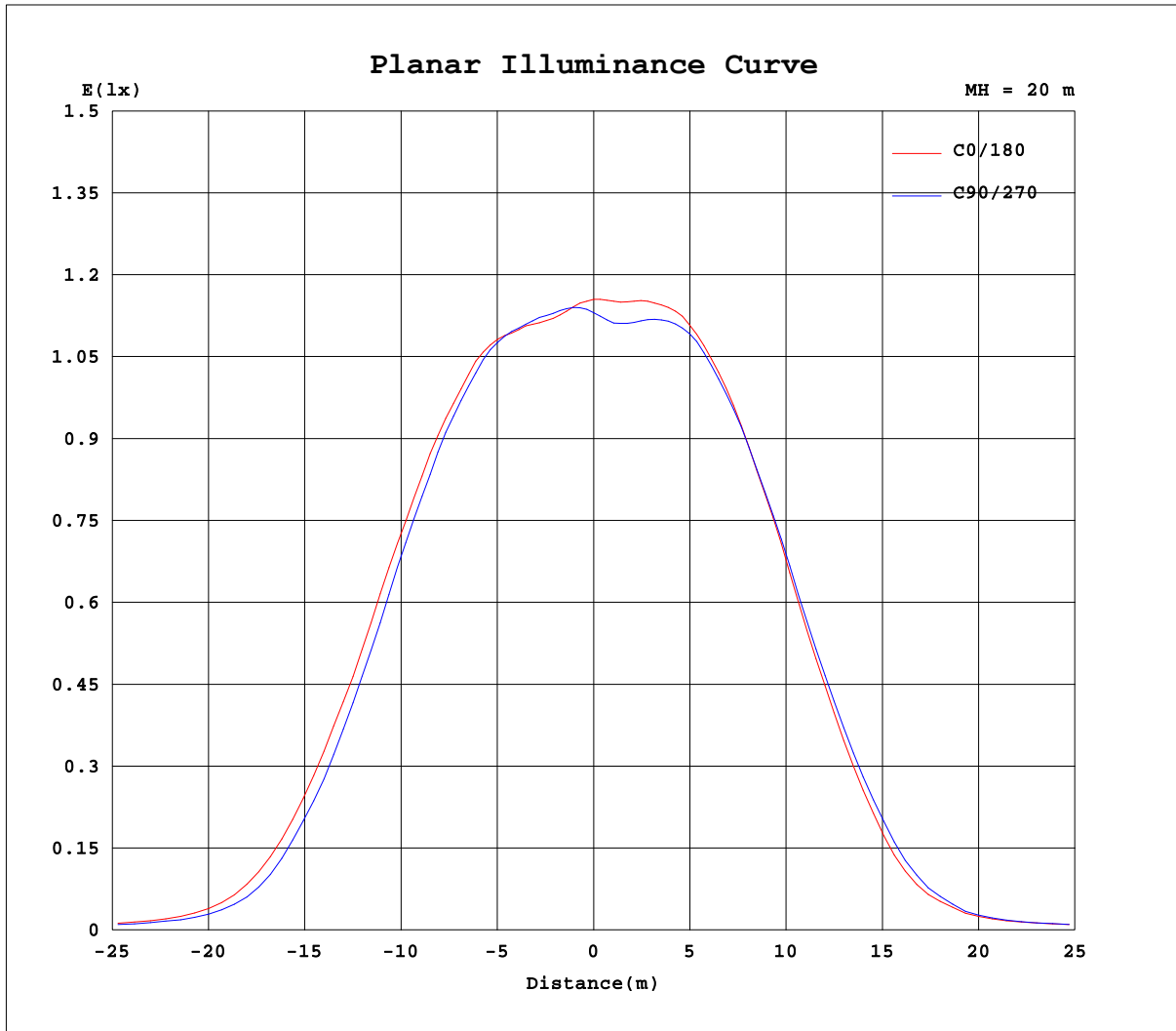
AvgL	cd/m2
L_0~180 (65) av	18312
L_0~180 (75) av	15353
L_0~180 (85) av	17588
L_90~270 (65) av	13492
L_90~270 (75) av	8740
L_90~270 (85) av	44
L_45 (65) av	17474
L_45 (75) av	11772
L_45 (85) av	360

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-05-30

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: 2022-05-30

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:

