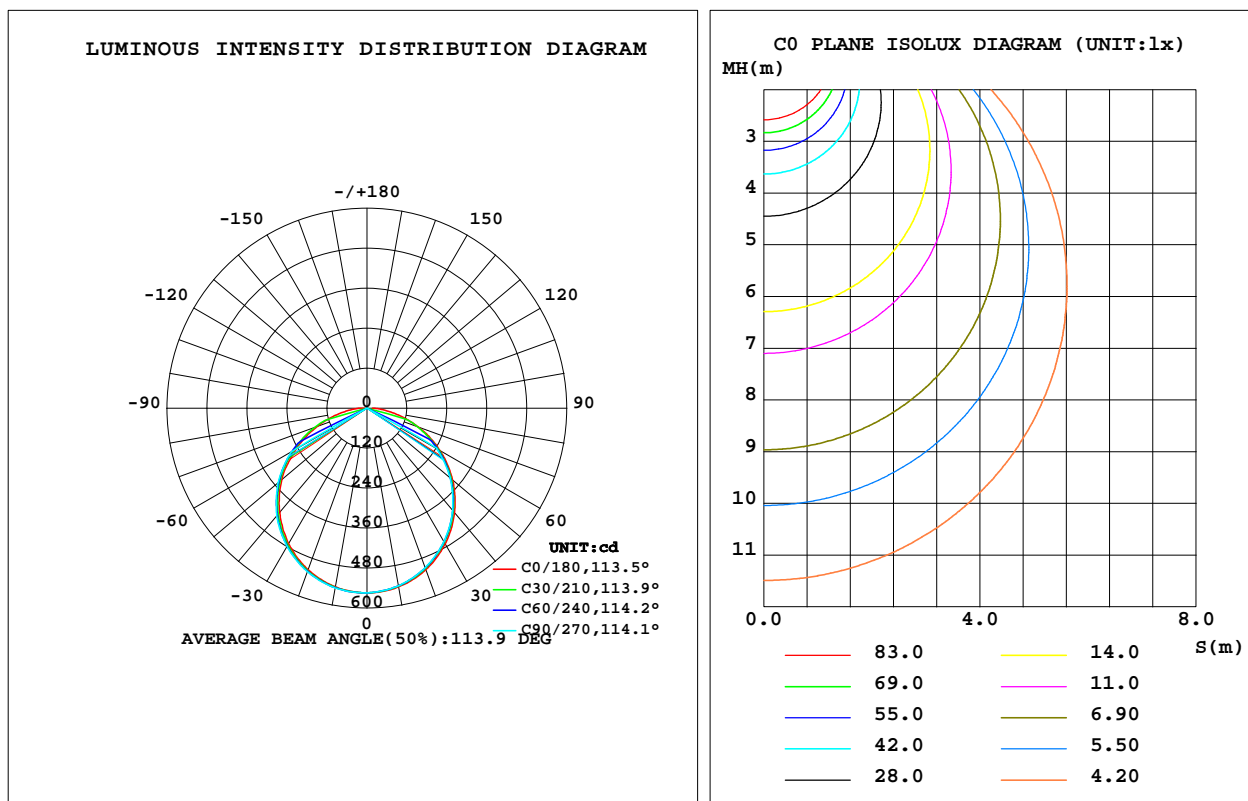


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: PP020016-MH	TYPE:LED	WEIGHT:3.648(Kg)
DIM.: D600*70	SPEC.:	SERIAL No.:
MFR.:	SUR.:f600	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 39.05 lm/W			
MODEL		Imax(cd)	554.4	S/MH(C0/180)	1.26
NOMINAL POWER(W)	38	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	1446.9	h UP,DN(C0-180)	0.0,49.1
NOMINAL FLUX(lm)	1446.92	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.0,50.9
LAMPS INSIDE	1	h up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	219.1	h down(%)	100.0	CIBSE SHR MAX	1.30



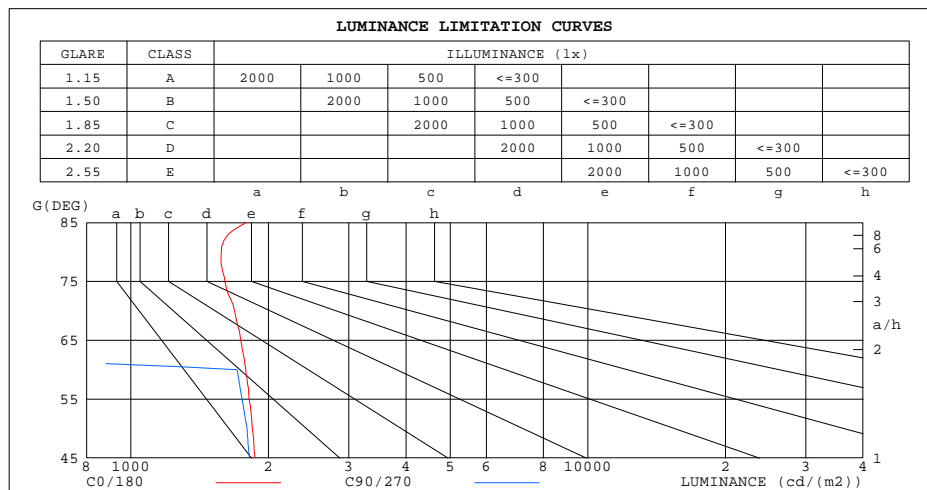
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-11

g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:9.650m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
5	552.1	550.3	550.1	550.6	552.0	552.7	553.1	552.6	0- 5	13.22	13.22	0.91,0.91
10	544.7	541.9	541.8	542.3	544.8	546.7	548.1	546.3	5- 10	39.21	52.43	3.62,3.62
15	532.6	528.9	527.8	529.7	532.7	536.3	537.3	535.7	10- 15	63.88	116.3	8.04,8.04
20	516.0	511.2	510.3	512.1	516.4	520.7	522.7	520.1	15- 20	86.41	202.7	14,14
25	495.1	489.4	487.9	489.9	495.7	500.6	503.0	500.4	20- 25	106.0	308.8	21.3,21.3
30	470.1	463.5	462.7	464.2	470.5	476.6	479.9	476.3	25- 30	122.2	430.9	29.8,29.8
35	441.2	434.1	432.6	435.0	441.0	448.9	452.0	448.4	30- 35	134.3	565.2	39.1,39.1
40	409.1	402.4	400.3	401.7	407.7	416.5	421.4	418.0	35- 40	142.0	707.2	48.9,48.9
45	373.7	366.6	363.4	366.1	372.3	382.2	385.0	383.0	40- 45	145.1	852.2	58.9,58.9
50	335.6	329.4	326.5	327.1	333.9	344.0	348.6	346.2	45- 50	143.4	995.6	68.8,68.8
55	294.6	286.5	284.1	285.3	290.3	302.0	305.5	302.8	50- 55	137.1	1133	78.3,78.3
60	252.3	243.6	241.7	243.5	245.8	259.9	262.4	259.1	55- 60	126.0	1259	87,87
65	208.1	202.0	0	197.3	202.3	213.3	0	215.9	60- 65	90.17	1349	93.2,93.2
70	163.0	0	0	0	157.9	0	0	0	65- 70	50.72	1400	96.7,96.7
75	117.7	0	0	0	113.8	0	0	0	70- 75	28.31	1428	98.7,98.7
80	77.46	0	0	0	74.58	0	0	0	75- 80	13.40	1441	99.6,99.6
85	44.09	0	0	0	43.11	0	0	0	80- 85	4.711	1446	99.9,99.9
90	16.83	0	0	0	8.397	0	0	0	85- 90	0.8916	1447	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



LUMINANCE cd/(m2)		
G(°)	C0/180	C90/270
85	1789	0
80	1578	0
75	1608	0
70	1686	0
65	1741	0
60	1785	1709
55	1816	1752
50	1847	1797
45	1869	1818

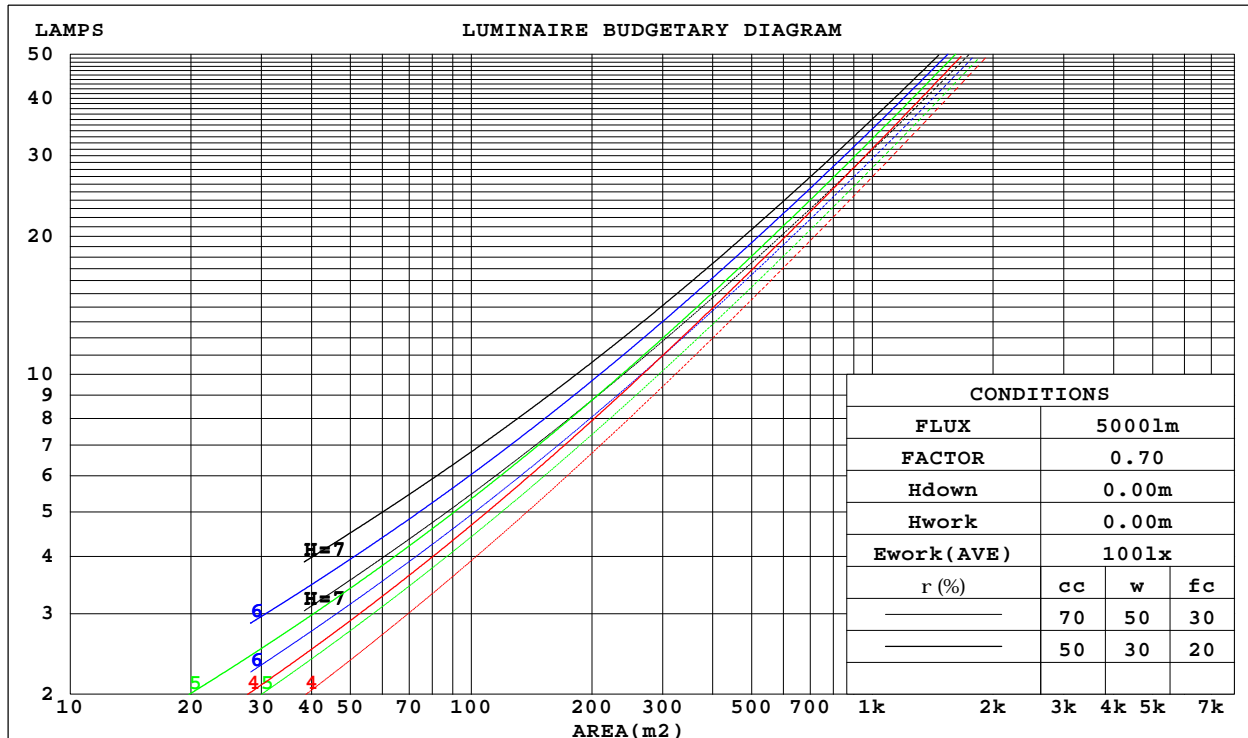
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ZENGQG
 Test Date:2019-11-11

g Range: 0 - 90DEG
 g Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:9.650m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: PP020016-MH	TYPE:LED	WEIGHT:3.648(Kg)
DIM.: D600*70	SPEC.:	SERIAL No.:
MFR.:	SUR.:f600	PROTECTION ANGLE:

r _{cc}	80%			70%			50%			30%			10%			0
r _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r _{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	.00
1.0	1.06	1.02	.99	1.04	1.00	.97	.90	.97	.94	.96	.93	.91	.92	.90	.89	.87
2.0	.93	.87	.82	.92	.86	.81	.88	.83	.79	.85	.81	.77	.82	.79	.76	.74
3.0	.83	.75	.69	.81	.74	.68	.78	.72	.67	.76	.70	.66	.73	.69	.65	.63
4.0	.74	.65	.59	.72	.64	.58	.70	.63	.58	.67	.62	.57	.65	.60	.56	.54
5.0	.66	.57	.51	.65	.57	.51	.63	.55	.50	.61	.54	.50	.59	.53	.49	.47
6.0	.59	.51	.44	.58	.50	.44	.57	.49	.44	.55	.48	.44	.53	.48	.43	.41
7.0	.54	.45	.39	.53	.45	.39	.51	.44	.39	.50	.43	.39	.49	.43	.38	.36
8.0	.49	.41	.35	.48	.40	.35	.47	.40	.35	.46	.39	.35	.45	.39	.34	.32
9.0	.45	.37	.32	.44	.37	.31	.43	.36	.31	.42	.36	.31	.41	.35	.31	.29
10.0	.41	.34	.29	.41	.34	.28	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-11

g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:9.650m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: PP020016-MH	TYPE:LED	WEIGHT:3.648(Kg)
DIM.: D600*70	SPEC.:	SERIAL No.:
MFR.:	SUR.:f600	PROTECTION 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	.269	.153	.048	.262	.149	.047	.249	.143	.046	.237	.137	.044	.226	.131	.042	
2.0	.262	.144	.044	.256	.141	.044	.245	.136	.042	.234	.132	.041	.225	.127	.040	
3.0	.249	.132	.040	.243	.130	.039	.233	.126	.038	.224	.123	.038	.215	.119	.037	
4.0	.234	.121	.036	.229	.120	.035	.220	.117	.035	.212	.114	.034	.204	.111	.034	
5.0	.219	.111	.032	.214	.110	.032	.206	.107	.032	.199	.105	.031	.192	.103	.031	
6.0	.205	.103	.029	.201	.101	.029	.194	.099	.029	.187	.097	.029	.181	.095	.028	
7.0	.192	.095	.027	.188	.094	.027	.182	.092	.027	.176	.090	.026	.171	.089	.026	
8.0	.180	.088	.025	.177	.087	.025	.171	.086	.024	.166	.084	.024	.161	.083	.024	
9.0	.169	.082	.023	.167	.081	.023	.162	.080	.023	.157	.079	.022	.152	.077	.022	
10.0	.160	.077	.021	.157	.076	.021	.153	.075	.021	.148	.074	.021	.144	.073	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.177	.156	.138	.152	.134	.118	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.168	.132	.102	.144	.114	.088	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.160	.114	.077	.138	.098	.067	.094	.068	.047	.055	.040	.028	.018	.013	.009	
4.0	.153	.101	.061	.131	.087	.053	.090	.061	.037	.052	.035	.022	.017	.012	.007	
5.0	.146	.090	.049	.125	.078	.043	.086	.054	.030	.050	.032	.018	.016	.010	.006	
6.0	.139	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.015	.010	.005	
7.0	.133	.075	.034	.114	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004	
8.0	.127	.069	.029	.109	.060	.026	.075	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.121	.064	.026	.104	.056	.022	.072	.039	.016	.042	.023	.010	.014	.008	.003	
10.0	.115	.060	.023	.099	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-11

g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:9.650m [K=1.0000]
Remarks:

Uncorrected UGR Table

NAME: PP020016-MH					TYPE:LED			WEIGHT:3.648(Kg)			
DIM.: D600*70					SPEC.:			SERIAL No.:			
MFR.:					SUR.:f600			PROTECTION 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	15.3	16.7	15.6	16.9	17.1	14.3	15.8	14.6	16.0	16.2	
	3H	16.9	18.2	17.2	18.5	18.7	14.1	15.5	14.4	15.7	15.9
	4H	17.6	18.8	17.9	19.1	19.3	14.0	15.3	14.3	15.5	15.8
	6H	18.1	19.3	18.4	19.6	19.8	13.9	15.1	14.2	15.4	15.6
	8H	18.3	19.4	18.6	19.7	20.0	13.9	15.0	14.2	15.3	15.6
	12H	18.4	19.5	18.8	19.8	20.1	13.8	14.9	14.2	15.2	15.5
4H	2H	15.8	17.1	16.1	17.3	17.6	14.9	16.2	15.3	16.5	16.7
	3H	17.6	18.7	17.9	19.0	19.3	14.7	15.8	15.1	16.1	16.4
	4H	18.4	19.4	18.8	19.7	20.0	14.6	15.6	15.0	15.9	16.3
	6H	19.0	19.9	19.4	20.2	20.6	14.5	15.4	14.9	15.8	16.1
	8H	19.2	20.0	19.6	20.4	20.7	14.5	15.3	14.9	15.7	16.1
	12H	19.3	20.1	19.8	20.5	20.9	14.5	15.2	14.9	15.6	16.0
8H	4H	18.2	19.1	18.7	19.4	19.8	14.7	15.5	15.1	15.9	16.3
	6H	18.9	19.5	19.3	19.9	20.3	14.6	15.3	15.1	15.7	16.1
	8H	19.1	19.6	19.5	20.1	20.5	14.6	15.2	15.1	15.6	16.1
	12H	19.2	19.7	19.7	20.2	20.6	14.6	15.1	15.0	15.5	16.0
12H	4H	18.2	18.9	18.6	19.3	19.7	14.7	15.4	15.1	15.8	16.2
	6H	18.8	19.4	19.3	19.8	20.3	14.6	15.2	15.1	15.6	16.1
	8H	19.0	19.5	19.5	20.0	20.4	14.6	15.1	15.0	15.5	16.0
Variations with the observer position at spacings:											
S = 1.0H	+ 0.4 / - 0.5					+ 0.4 / - 0.5					
1.5H	+ 0.3 / - 0.2					+ 1.2 / - 2.0					
2.0H	+ 0.4 / - 1.0					+ 0.8 / - 1.3					

CIE Pub.117 Corrected 1447 lm Total Lamp Luminous Flux.(8log(F/F0) = 1.3)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-11

g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:9.650m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: PP020016-MH	TYPE:LED	WEIGHT:3.648(Kg)
DIM.: D600*70	SPEC.:	SERIAL No.:
MFR.:	SUR.:f600	PROTECTION ANGLE:

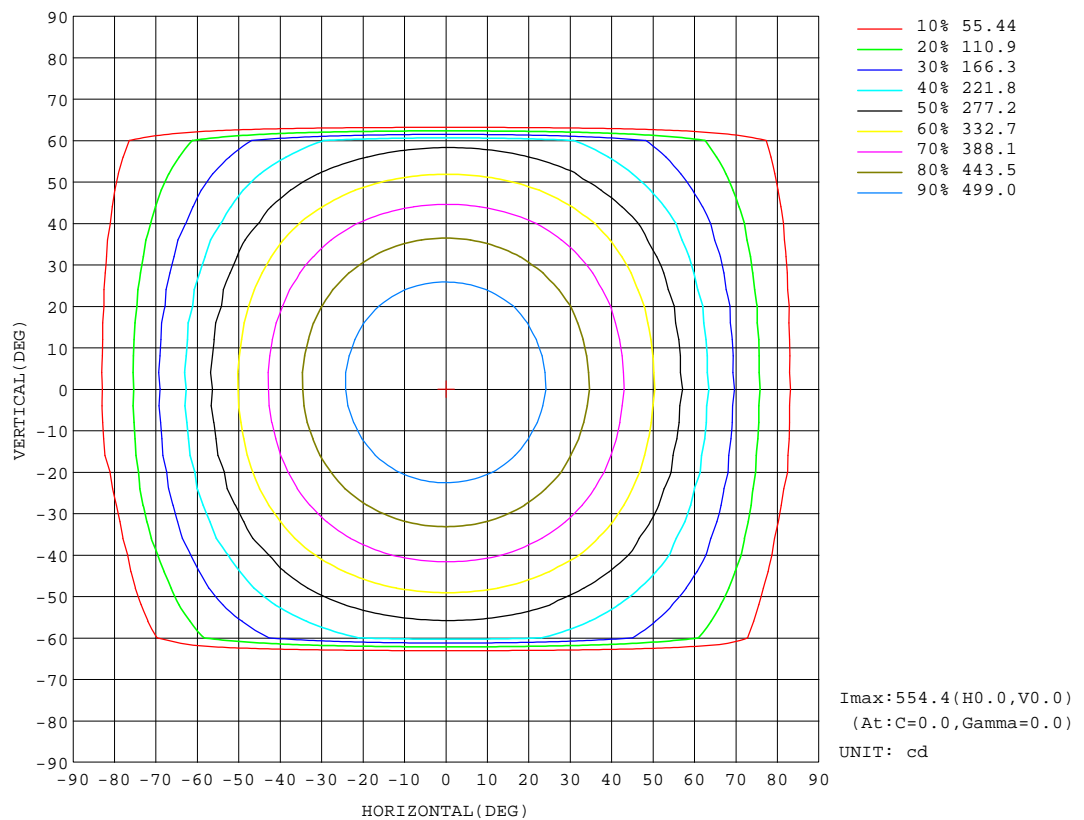
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	59	48	41	58	48	41	57	47	41	34
0.80	70	59	52	69	58	52	67	58	51	45
1.00	79	69	62	78	68	61	76	69	61	54
1.25	86	77	70	85	76	70	82	74	69	62
1.50	91	82	76	90	81	75	87	80	74	67
2.00	98	90	84	96	89	84	93	87	82	75
2.50	101	94	89	99	93	88	96	90	86	78
3.00	104	98	94	102	97	92	98	94	90	82
4.00	108	103	99	106	101	98	102	98	95	86
5.00	110	106	102	108	104	101	103	100	98	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-11

g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:9.650m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: PP020016-MH	TYPE:LED	WEIGHT:3.648(Kg)
DIM.: D600*70	SPEC.:	SERIAL No.:
MFR.:	SUR.:f600	PROTECTION ANGLE:

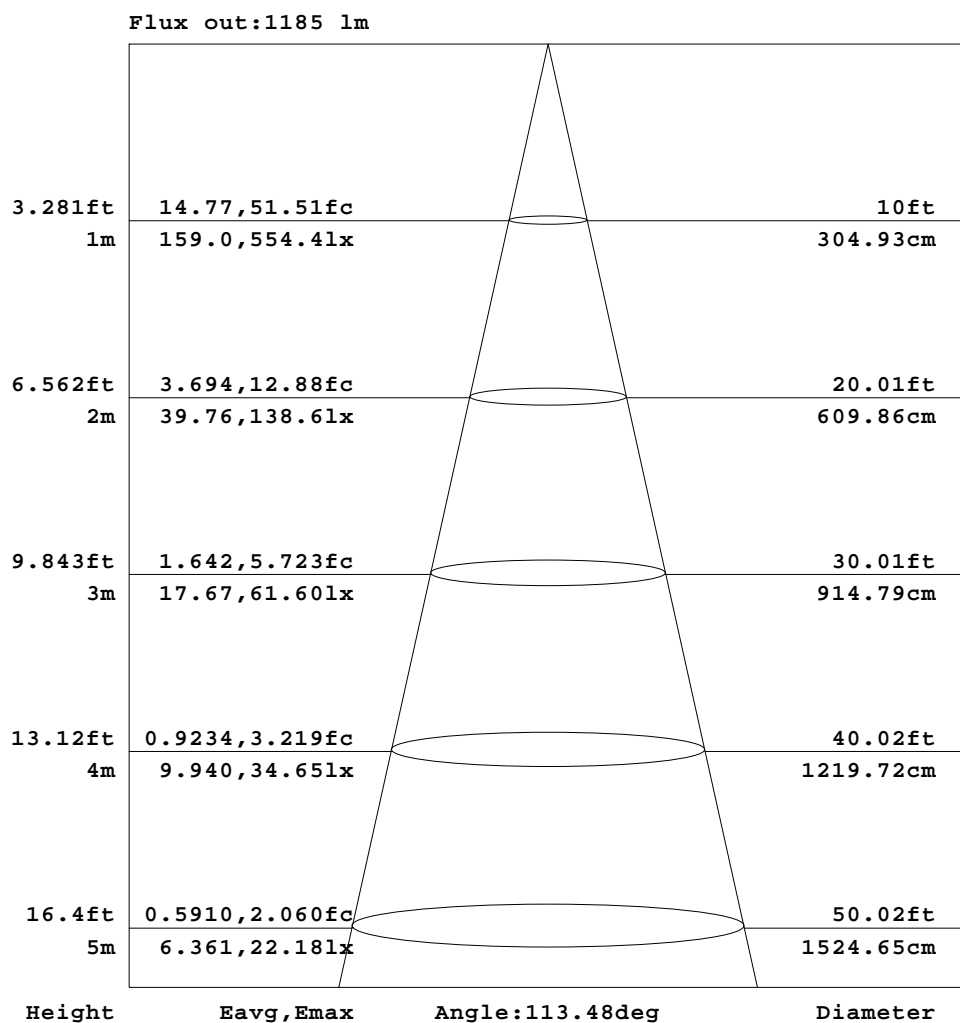


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-11

g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:9.650m [K=1.0000]
Remarks:

AAI Figure

NAME: PP020016-MH	TYPE:LED	WEIGHT:3.648(Kg)
DIM.: D600*70	SPEC.:	SERIAL No.:
MFR.:	SUR.:f600	PROTECTION ANGLE:



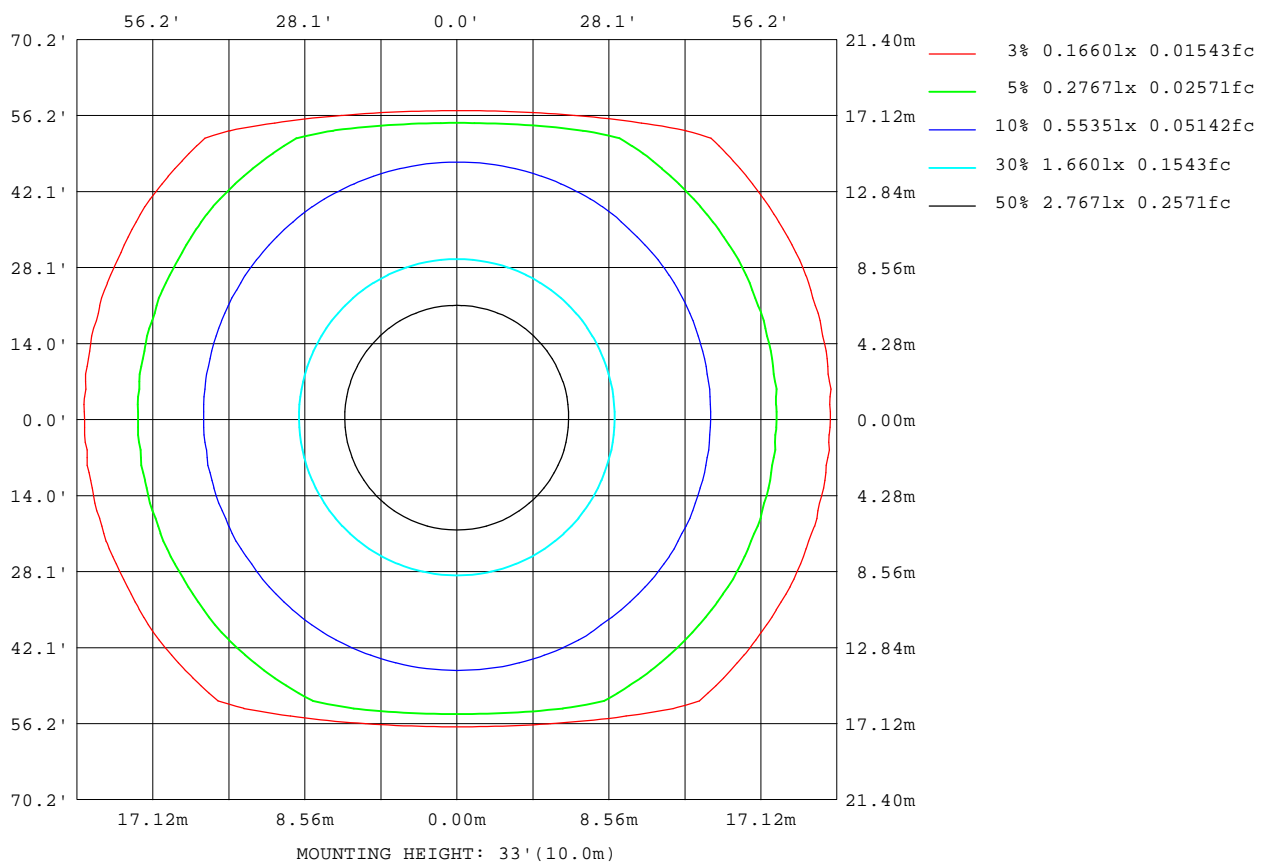
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ZENGQ
Test Date: 2019-11-11

g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity: 65.0%
Test Distance: 9.650m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

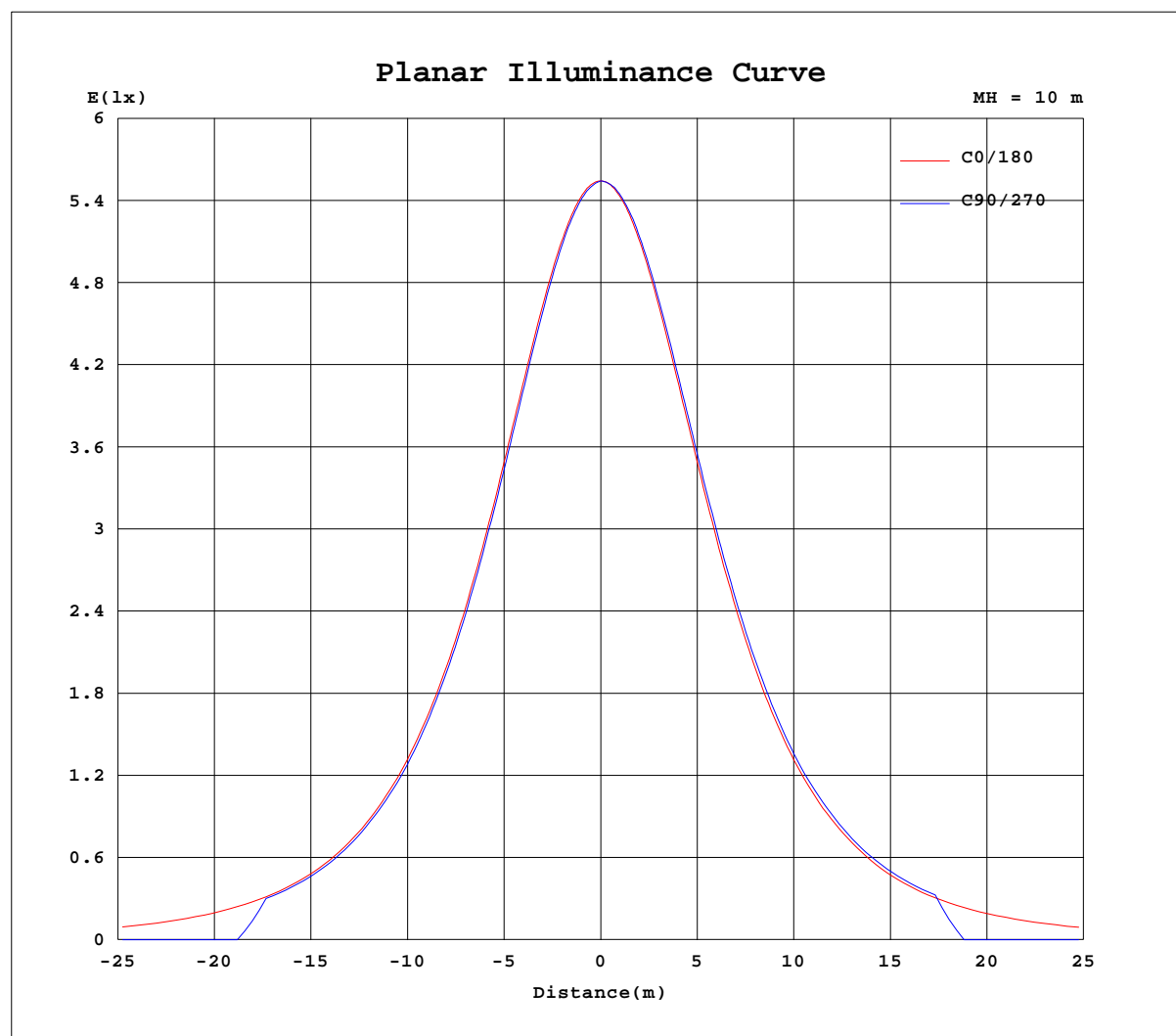
NAME: PP020016-MH	TYPE:LED	WEIGHT:3.648(Kg)
DIM.: D600*70	SPEC.:	SERIAL No.:
MFR.:	SUR.:f600	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-11

g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:9.650m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ZENGQG
Test Date: 2019-11-11

g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity: 65.0%
Test Distance: 9.650m [K=1.0000]
Remarks: