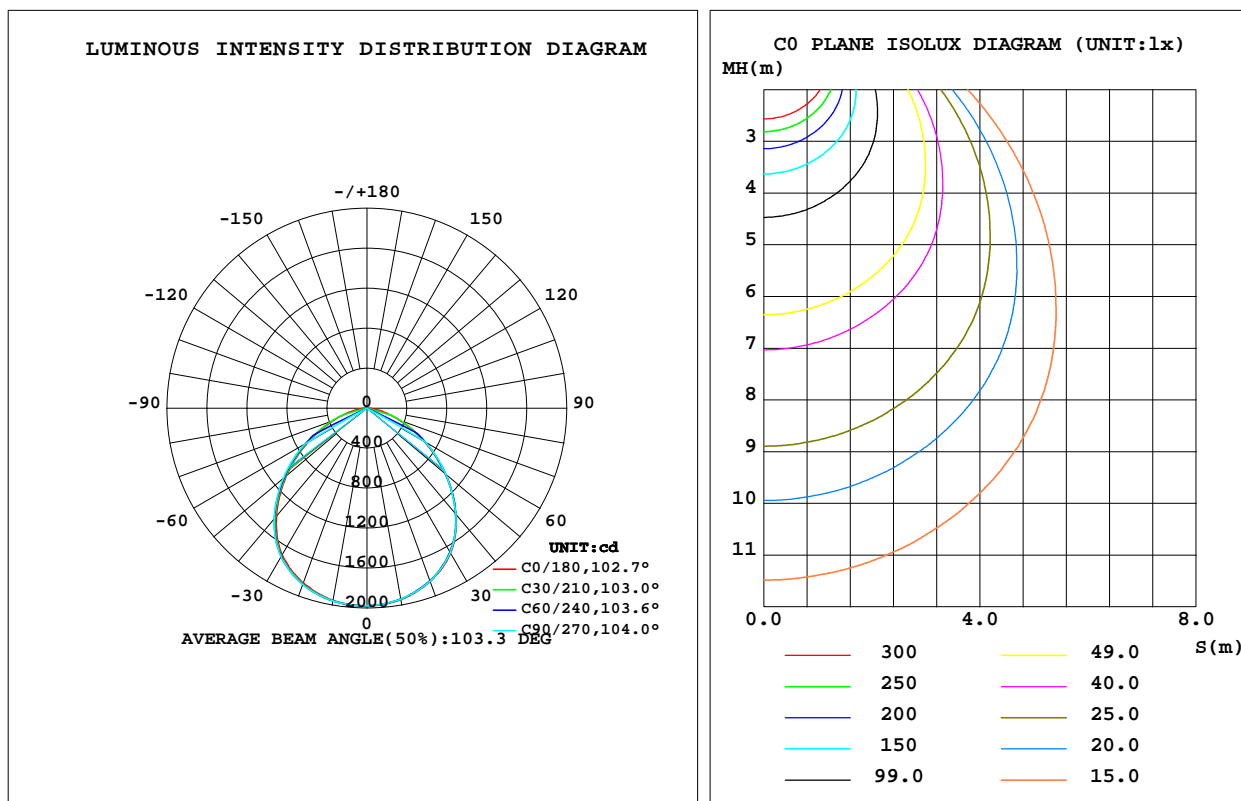


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: PP020120-MH/FB	TYPE:LED	WEIGHT:4.553(Kg)
DIM.: D850*80	SPEC.:	SERIAL No.:
MFR.:	SUR.:D850	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 80.40 lm/W			
MODEL		I _{max} (cd)	1979	S/MH(C0/180)	1.25
NOMINAL POWER(W)	58	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	4691.3	h UP,DN(C0-180)	0.0,49.3
NOMINAL FLUX(lm)	4691.35	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.0,50.7
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



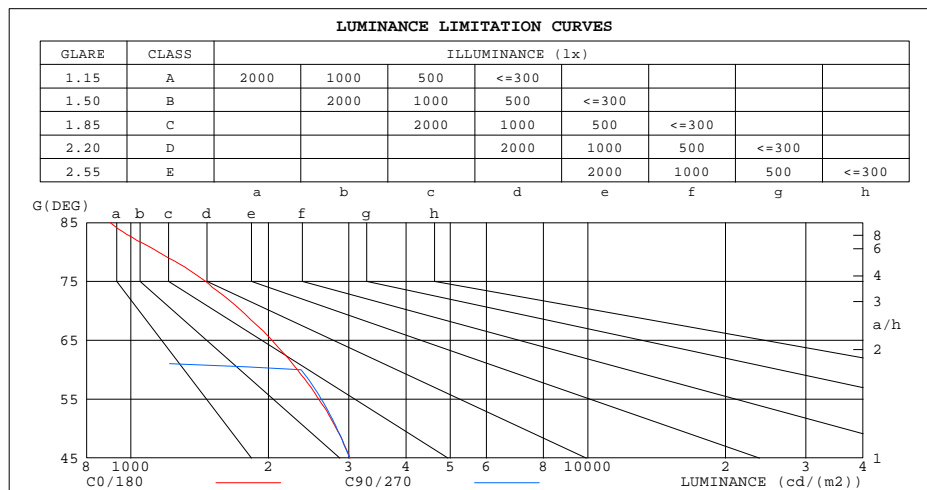
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-12

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	1968	1965	1965	1969	1973	1975	1974	1971	0- 5	47.19	47.19	1.01,1.01
10	1945	1940	1941	1945	1952	1958	1959	1950	5- 10	140.2	187.3	3.99,3.99
15	1903	1898	1898	1907	1916	1926	1926	1917	10- 15	228.9	416.3	8.87,8.87
20	1847	1839	1843	1849	1862	1876	1879	1864	15- 20	310.5	726.8	15.5,15.5
25	1772	1763	1764	1775	1792	1804	1807	1793	20- 25	381.8	1109	23.6,23.6
30	1672	1662	1669	1677	1699	1714	1720	1700	25- 30	439.5	1548	33,33
35	1544	1534	1539	1549	1569	1590	1597	1580	30- 35	479.1	2027	43.2,43.2
40	1386	1383	1385	1390	1409	1432	1449	1430	35- 40	495.6	2523	53.8,53.8
45	1211	1207	1208	1223	1232	1262	1273	1257	40- 45	488.8	3012	64.2,64.2
50	1028	1029	1031	1044	1053	1074	1097	1083	45- 50	461.7	3473	74,74
55	839.1	843.5	850.1	857.9	866.8	886.7	907.6	890.3	50- 55	417.1	3890	82.9,82.9
60	657.0	666.1	669.2	679.8	681.5	706.0	718.2	705.7	55- 60	358.2	4249	90.6,90.6
65	488.6	504.2	0	509.0	507.5	531.7	0	532.9	60- 65	236.0	4485	95.6,95.6
70	339.0	0	0	0	356.4	0	0	0	65- 70	118.8	4603	98.1,98.1
75	214.1	0	0	0	226.1	0	0	0	70- 75	57.69	4661	99.4,99.4
80	113.2	0	0	0	121.6	0	0	0	75- 80	22.99	4684	99.8,99.8
85	44.55	0	0	0	49.61	0	0	0	80- 85	6.444	4691	100,100
90	9.405	0	0	0	8.402	0	0	0	85- 90	0.8338	4691	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		



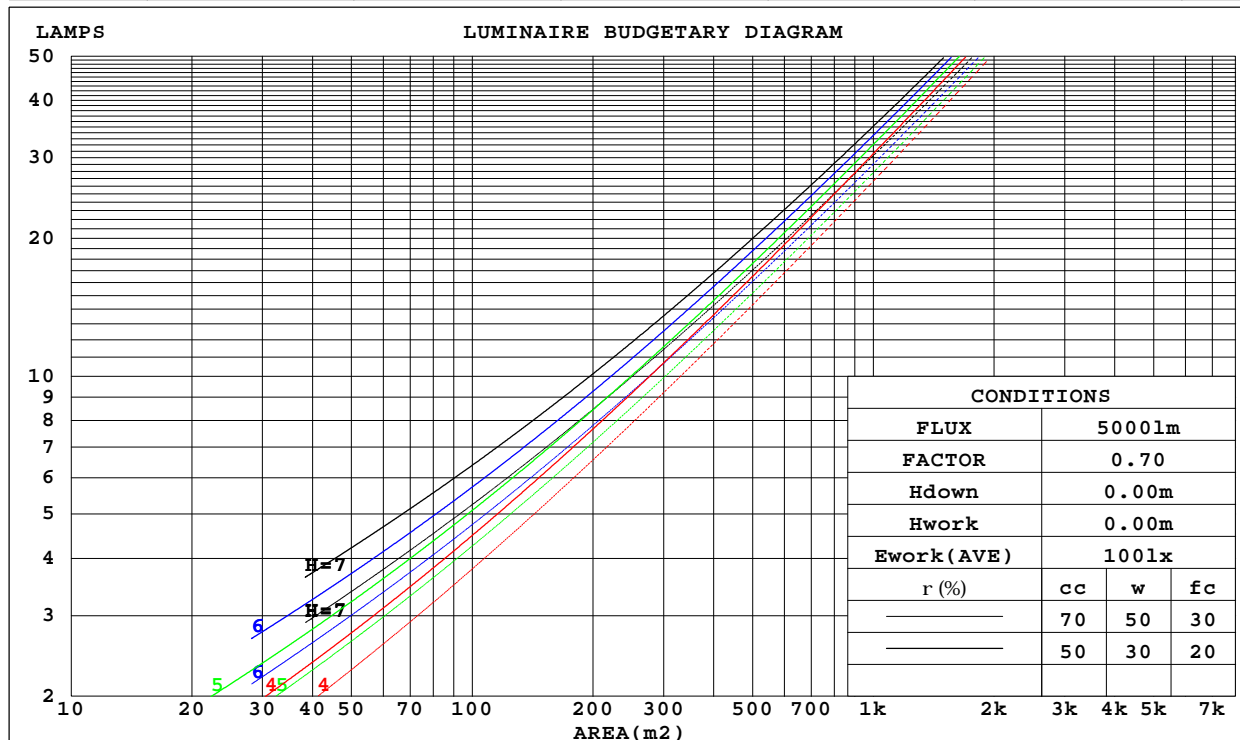
LUMINANCE cd/(m²)		
G(°)	C0/180	C90/270
85	901	0
80	1148	0
75	1458	0
70	1747	0
65	2037	0
60	2316	2358
55	2578	2612
50	2818	2827
45	3019	3011

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-12

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:

NAME: PP020120-MH/FB	TYPE:LED	WEIGHT:4.553(Kg)
DIM.: D850*80	SPEC.:	SERIAL No.:
MFR.:	SUR.:D850	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			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	1.00	1.05	1.01	.99	1.00	.98	.96	.97	.95	.93	.93	.91	.90	.88
2.0	.95	.89	.84	.93	.88	.83	.90	.85	.81	.87	.83	.80	.84	.81	.78	.76
3.0	.85	.77	.72	.83	.76	.71	.80	.75	.70	.78	.73	.69	.75	.71	.68	.66
4.0	.76	.68	.62	.74	.67	.61	.72	.66	.61	.70	.64	.60	.68	.63	.59	.57
5.0	.68	.60	.54	.67	.59	.53	.65	.58	.53	.63	.57	.52	.61	.56	.52	.50
6.0	.62	.53	.47	.61	.53	.47	.59	.52	.47	.57	.51	.46	.56	.50	.46	.44
7.0	.56	.48	.42	.55	.47	.42	.54	.47	.42	.52	.46	.41	.51	.45	.41	.39
8.0	.51	.43	.38	.51	.43	.38	.49	.42	.37	.48	.42	.37	.47	.41	.37	.35
9.0	.47	.39	.34	.46	.39	.34	.45	.39	.34	.44	.38	.34	.43	.38	.33	.32
10.0	.43	.36	.31	.43	.36	.31	.42	.35	.31	.41	.35	.31	.40	.35	.30	.29



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ZENGQG
Test Date: 2019-11-12

```
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: PP020120-MH/FB	TYPE:LED	WEIGHT:4.553(Kg)
DIM.: D850*80	SPEC.:	SERIAL No.:
MFR.:	SUR.:D850	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	.252	.143	.045	.245	.140	.044	.232	.133	.043	.220	.127	.041	.209	.121	.039	
2.0	.248	.136	.042	.242	.133	.041	.230	.128	.040	.220	.123	.039	.210	.119	.037	
3.0	.236	.126	.038	.231	.124	.037	.221	.120	.036	.212	.116	.036	.203	.113	.035	
4.0	.223	.116	.034	.218	.114	.034	.210	.111	.033	.201	.108	.033	.194	.105	.032	
5.0	.210	.107	.031	.206	.106	.031	.198	.103	.030	.191	.101	.030	.184	.098	.030	
6.0	.197	.099	.028	.194	.098	.028	.187	.096	.028	.180	.094	.028	.174	.092	.027	
7.0	.186	.092	.026	.182	.091	.026	.176	.089	.026	.170	.087	.025	.165	.086	.025	
8.0	.175	.085	.024	.172	.085	.024	.166	.083	.024	.161	.082	.024	.156	.080	.023	
9.0	.165	.080	.022	.162	.079	.022	.157	.078	.022	.153	.076	.022	.148	.075	.022	
10.0	.156	.075	.021	.154	.074	.021	.149	.073	.021	.145	.072	.020	.141	.071	.020	

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	.176	.157	.139	.151	.134	.120	.103	.092	.083	.059	.054	.048	.019	.017	.016	
2.0	.166	.132	.103	.142	.114	.089	.098	.079	.062	.056	.046	.037	.018	.015	.012	
3.0	.158	.114	.079	.135	.098	.069	.093	.068	.048	.054	.040	.028	.017	.013	.009	
4.0	.150	.100	.062	.129	.087	.054	.089	.060	.038	.051	.035	.023	.017	.012	.007	
5.0	.143	.090	.050	.123	.078	.044	.085	.054	.031	.049	.032	.018	.016	.010	.006	
6.0	.137	.081	.042	.117	.070	.036	.081	.049	.026	.047	.029	.015	.015	.009	.005	
7.0	.130	.074	.035	.112	.064	.031	.077	.045	.022	.045	.027	.013	.015	.009	.004	
8.0	.124	.069	.030	.107	.059	.026	.074	.042	.019	.043	.025	.011	.014	.008	.004	
9.0	.119	.064	.026	.102	.055	.023	.071	.039	.016	.041	.023	.010	.013	.008	.003	
10.0	.114	.059	.023	.098	.052	.020	.068	.036	.014	.040	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-12

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: PP020120-MH/FB					TYPE:LED		WEIGHT:4.553(Kg)				
DIM.: D850*80					SPEC.:		SERIAL No.:				
MFR.:					SUR.:D850		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		16.1	17.5	16.4	17.7	17.9	15.6	17.0	15.8	17.1	17.3
	3H	17.1	18.4	17.4	18.6	18.9	15.4	16.6	15.6	16.8	17.1
	4H	17.4	18.6	17.7	18.9	19.1	15.2	16.5	15.6	16.7	16.9
	6H	17.6	18.7	17.9	19.0	19.3	15.1	16.3	15.5	16.5	16.8
	8H	17.6	18.7	18.0	19.0	19.3	15.1	16.2	15.4	16.5	16.7
	12H	17.6	18.7	18.0	18.9	19.2	15.0	16.1	15.4	16.4	16.7
4H	2H	16.5	17.7	16.8	18.0	18.2	16.0	17.2	16.3	17.4	17.7
	3H	17.7	18.7	18.0	19.0	19.3	15.8	16.8	16.1	17.1	17.4
	4H	18.0	19.0	18.4	19.3	19.6	15.7	16.6	16.0	16.9	17.2
	6H	18.3	19.1	18.6	19.4	19.8	15.6	16.4	16.0	16.7	17.1
	8H	18.3	19.1	18.7	19.4	19.8	15.5	16.3	15.9	16.7	17.0
	12H	18.3	19.0	18.7	19.4	19.8	15.5	16.2	15.9	16.6	17.0
8H	4H	17.9	18.7	18.3	19.0	19.4	15.6	16.4	16.1	16.8	17.1
	6H	18.1	18.7	18.6	19.1	19.6	15.6	16.2	16.0	16.6	17.0
	8H	18.2	18.7	18.6	19.1	19.6	15.5	16.1	16.0	16.5	16.9
	12H	18.2	18.7	18.7	19.1	19.6	15.5	15.9	16.0	16.4	16.9
12H	4H	17.9	18.6	18.3	18.9	19.3	15.6	16.3	16.0	16.7	17.1
	6H	18.1	18.6	18.5	19.1	19.5	15.5	16.1	16.0	16.5	16.9
	8H	18.1	18.6	18.6	19.0	19.5	15.5	15.9	16.0	16.4	16.9
Variations with the observer position at spacings:											
S = 1.0H		+ 0.5 / - 0.6					+ 0.5 / - 0.6				
1.5H		+ 0.2 / - 0.3					+ 0.9 / - 1.4				
2.0H		+ 0.5 / - 1.1					+ 0.8 / - 1.1				

CIE Pub.117 Corrected 4691 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.4)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-12

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: PP020120-MH/FB	TYPE:LED	WEIGHT:4.553(Kg)
DIM.: D850*80	SPEC.:	SERIAL No.:
MFR.:	SUR.:D850	PROTECTION ANGLE:

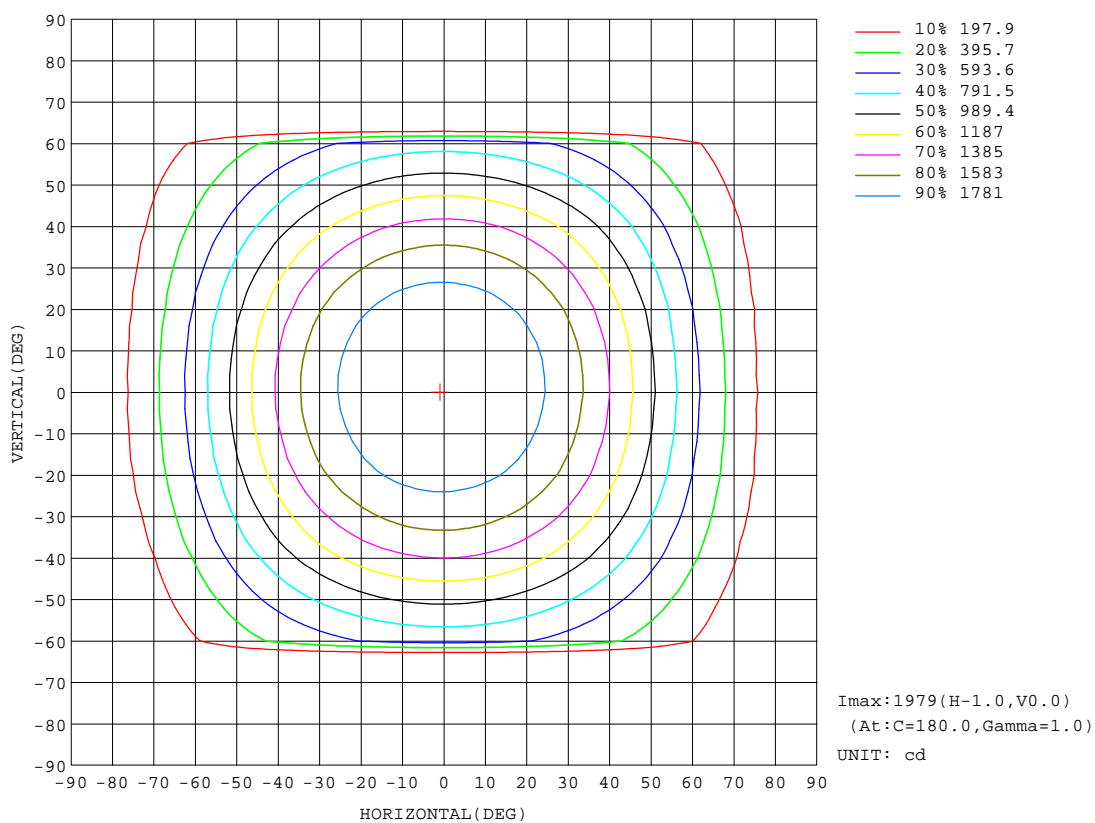
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	62	51	45	61	51	45	60	50	44	38
0.80	73	62	55	72	62	55	70	61	55	49
1.00	82	72	65	80	71	65	78	72	65	58
1.25	89	80	73	87	79	73	85	78	72	66
1.50	93	85	79	92	84	79	89	82	77	71
2.00	100	92	87	98	91	86	95	89	85	78
2.50	103	96	91	101	95	90	97	92	89	81
3.00	106	100	96	104	99	94	100	96	92	85
4.00	109	104	100	107	103	99	103	99	96	88
5.00	111	107	103	108	105	102	104	101	99	90
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:2019-11-12

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: PP020120-MH/FB	TYPE:LED	WEIGHT:4.553(Kg)
DIM.: D850*80	SPEC.:	SERIAL No.:
MFR.:	SUR.:D850	PROTECTION ANGLE:

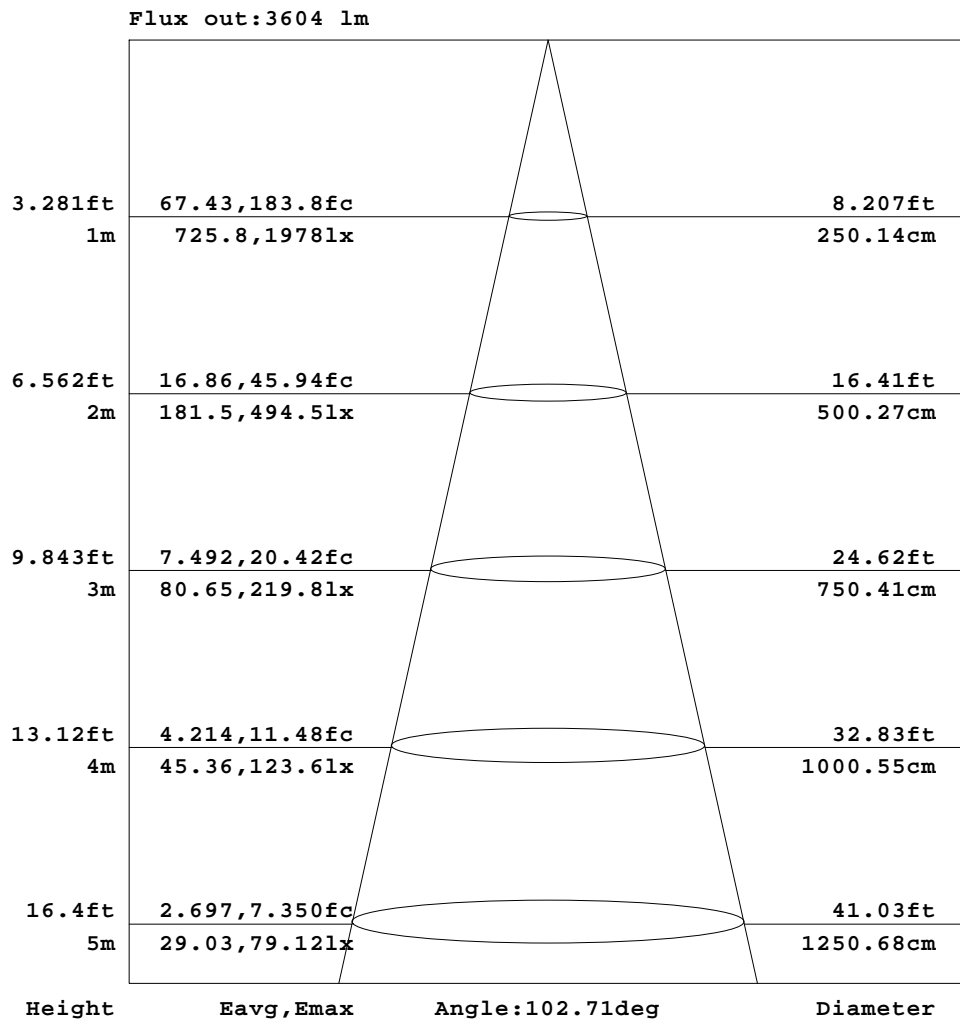


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-12

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: PP020120-MH/FB	TYPE:LED	WEIGHT:4.553(Kg)
DIM.: D850*80	SPEC.:	SERIAL No.:
MFR.:	SUR.:D850	PROTECTION ANGLE:



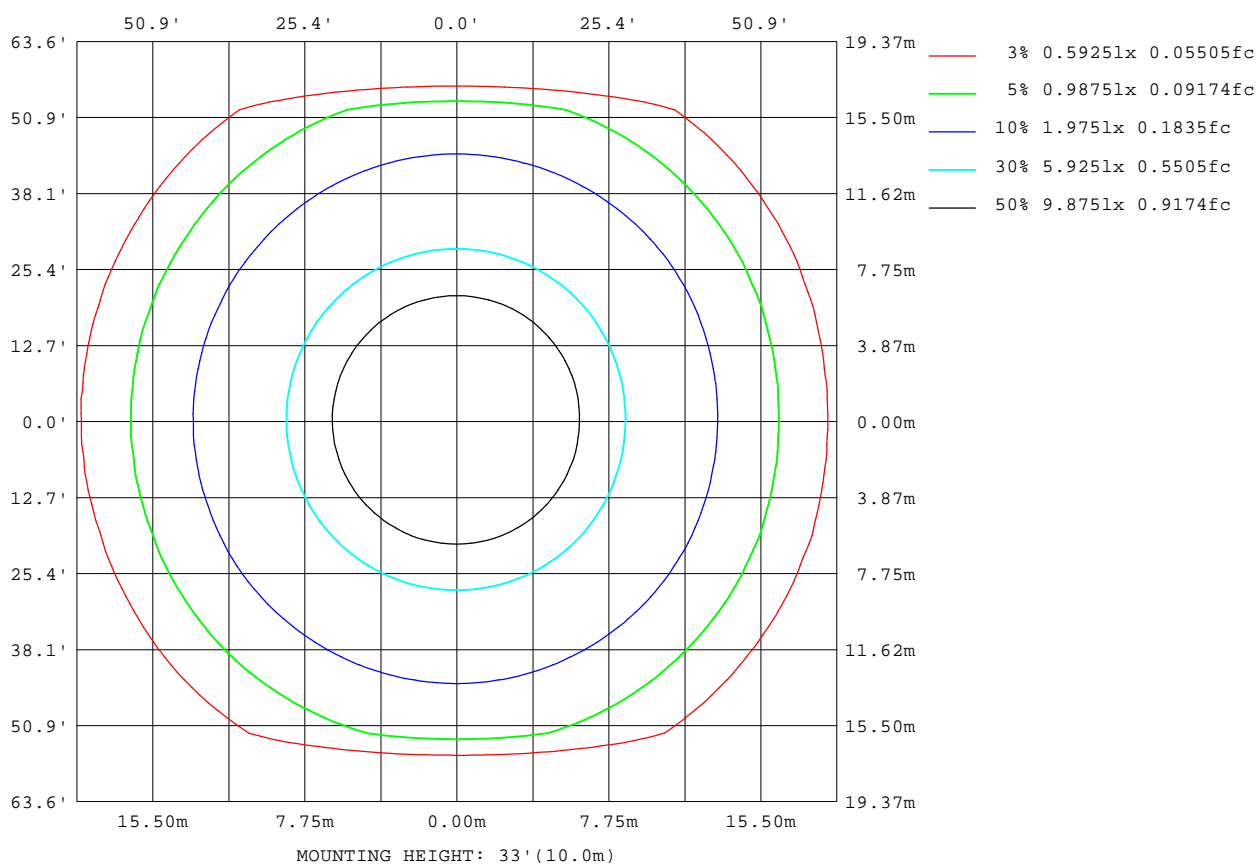
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ZENGQ
Test Date: 2019-11-12

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

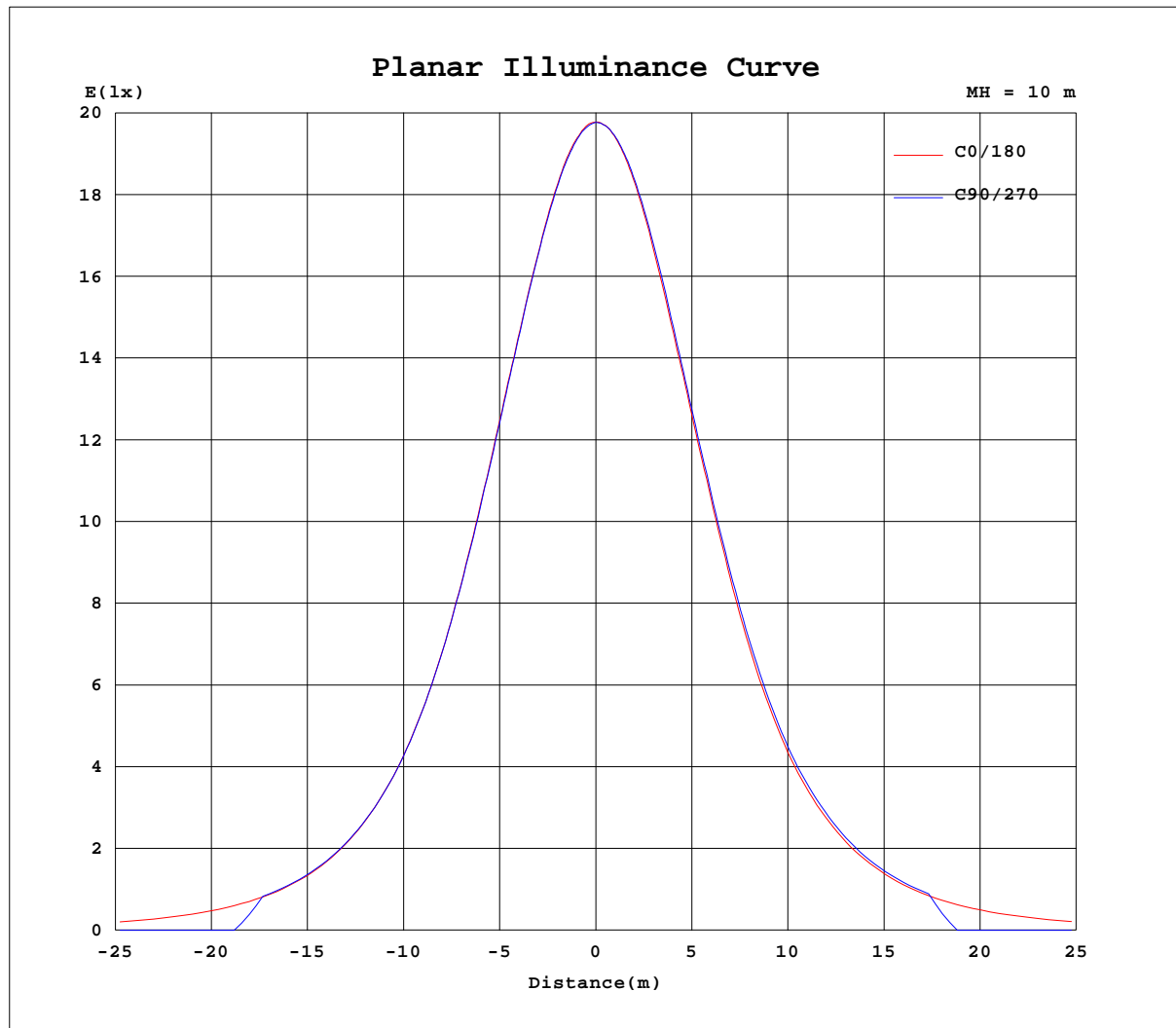
NAME: PP020120-MH/FB	TYPE:LED	WEIGHT:4.553(Kg)
DIM.: D850*80	SPEC.:	SERIAL No.:
MFR.:	SUR.:D850	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-12

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: 2019-11-12

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: