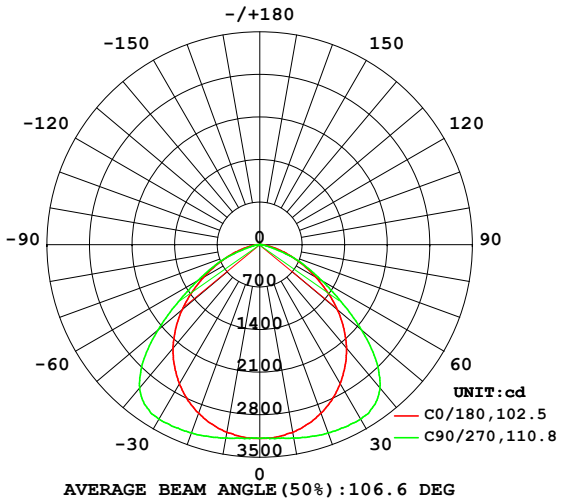
LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:229.9V I:0.3041A P:68.57W PF:0.9807 Freq:50.01Hz UTHDi:0% ITHDi:0% Lamp Flux:9206.89x1 lm		
NAME: LHB19-070-5080-L00116	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

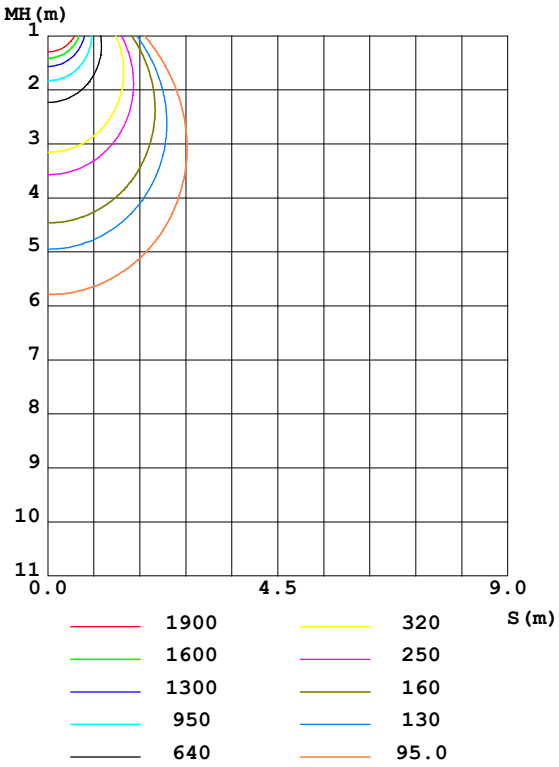
DATA OF LAMP		PHOTOMETRIC DATA Eff: 134.27 lm/W			
MODEL	SMD283	Imax(cd)	3319	S/MH(C0/180)	1.24
NOMINAL POWER(W)	70	LOR(%)	100.0	S/MH(C90/270)	1.52
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	9206.9	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	9206.89	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



AVERAGE BEAM ANGLE(50%):106.6 DEG

C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-09-11

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4574]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	3137	3187	3233	3187	3137	3187	3233	3187	0- 10	304.1	304.1	3.3,3.3
20	2951	3150	3293	3150	2951	3150	3293	3150	10- 20	896.8	1201	13,13
30	2643	3055	3317	3055	2643	3055	3317	3055	20- 30	1426	2627	28.5,28.5
40	2222	2868	3076	2868	2222	2868	3076	2868	30- 40	1827	4454	48.4,48.4
50	1669	2341	2189	2341	1669	2341	2189	2341	40- 50	1921	6375	69.2,69.2
60	1061	1415	1169	1415	1061	1415	1169	1415	50- 60	1531	7905	85.9,85.9
70	532.0	636.4	494.1	636.4	532.0	636.4	494.1	636.4	60- 70	909.8	8815	95.7,95.7
80	151.8	132.9	75.71	132.9	151.8	132.9	75.71	132.9	70- 80	347.0	9162	99.5,99.5
90	3.750	3.091	0.3511	3.091	3.750	3.091	0.3511	3.091	80- 90	44.85	9207	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): 5432 lm

%lum = 59.0%
%lamp = 59.0%

Conical surface Flux(120deg): 7905.2 lm

%lum = 85.9%
%lamp = 85.9%

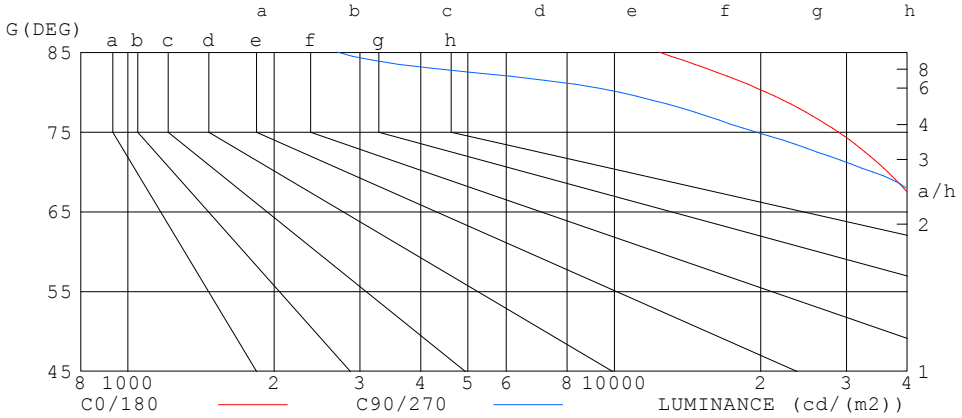
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-09-11

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4574]
Remarks:

LUMINANCE LIMITATION CURVES

LUMINANCE LIMITATION CURVES

GLARE	CLASS	ILLUMINANCE (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h



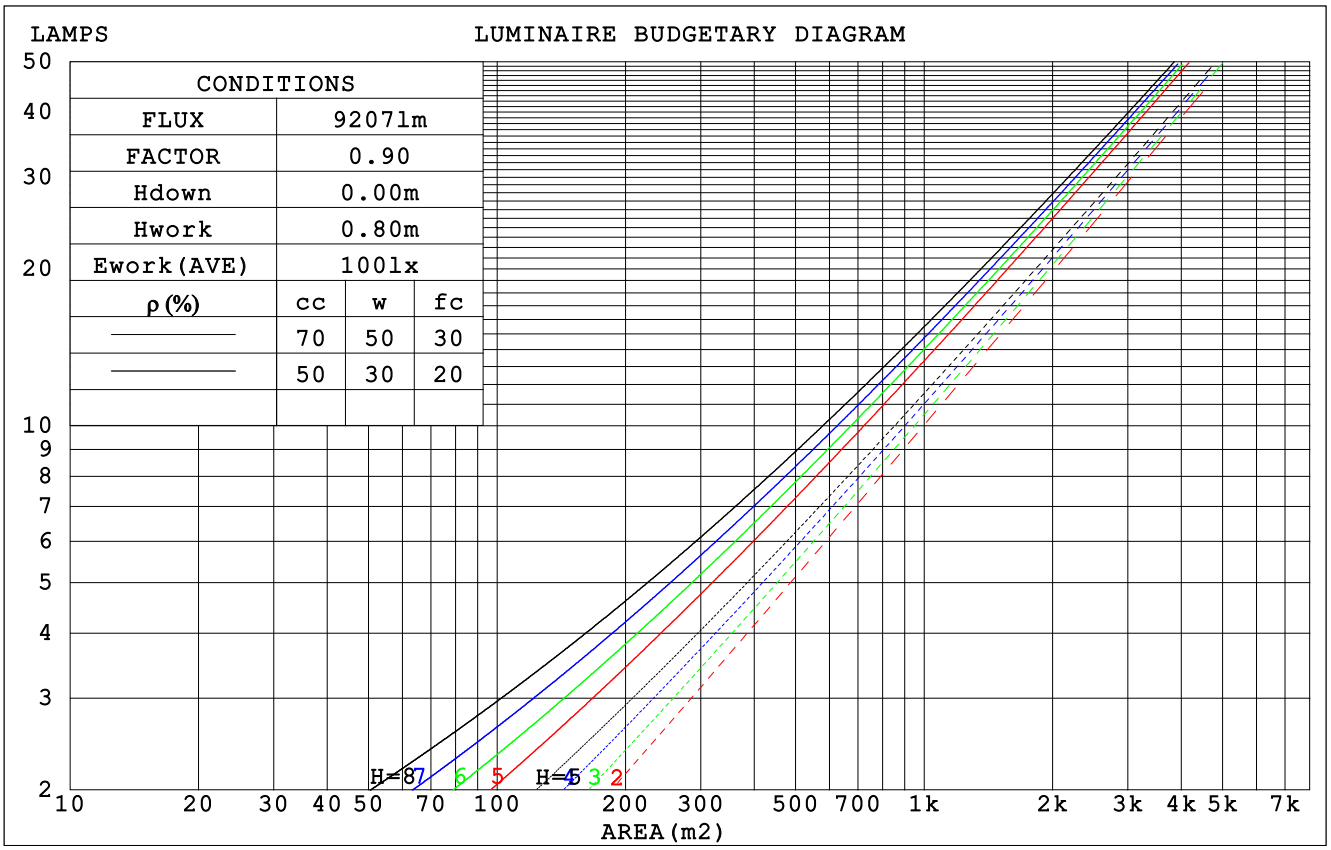
LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	12383	2703
80	20508	10251
75	28868	19515
70	36490	33967
65	43322	45397
60	49802	54971
55	55680	67017
50	60914	80068
45	65002	90175

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-09-11

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4574]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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	1.19	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	.98	1.03	1.00	.97	.99	.96	.94	.95	.93	.91	.92	.90	.88	.86
2.0	.93	.87	.81	.91	.85	.81	.88	.83	.79	.84	.80	.77	.81	.78	.75	.73
3.0	.82	.75	.68	.81	.74	.68	.78	.72	.67	.75	.70	.65	.72	.68	.64	.62
4.0	.73	.65	.58	.72	.64	.58	.69	.62	.57	.67	.61	.56	.65	.60	.56	.53
5.0	.65	.57	.50	.64	.56	.50	.62	.55	.49	.60	.54	.49	.58	.53	.48	.46
6.0	.59	.50	.44	.58	.50	.44	.56	.49	.43	.54	.48	.43	.53	.47	.43	.41
7.0	.53	.45	.39	.52	.44	.39	.51	.44	.38	.50	.43	.38	.48	.42	.38	.36
8.0	.49	.40	.34	.48	.40	.34	.47	.39	.34	.45	.39	.34	.44	.38	.34	.32
9.0	.44	.36	.31	.44	.36	.31	.43	.36	.31	.42	.35	.31	.41	.35	.30	.29
10.0	.41	.33	.28	.40	.33	.28	.39	.33	.28	.39	.32	.28	.38	.32	.28	.26



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-09-11

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4574]
Remarks:

WEC AND CCEC

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						Wall Exitance Coeffcients(WEC)									
0.0																
1.0	.274	.156	.049	.267	.153	.048	.254	.146	.047	.242	.140	.045	.231	.134	.043	
2.0	.267	.146	.045	.261	.144	.044	.249	.138	.043	.238	.134	.042	.229	.129	.041	
3.0	.252	.134	.040	.246	.132	.040	.236	.128	.039	.227	.124	.038	.218	.121	.037	
4.0	.236	.123	.036	.231	.121	.036	.222	.118	.035	.214	.115	.035	.206	.112	.034	
5.0	.220	.112	.033	.216	.111	.032	.208	.108	.032	.201	.106	.032	.194	.104	.031	
6.0	.206	.103	.030	.202	.102	.029	.195	.100	.029	.189	.098	.029	.182	.096	.029	
7.0	.193	.095	.027	.190	.095	.027	.183	.093	.027	.177	.091	.026	.172	.089	.026	
8.0	.181	.089	.025	.178	.088	.025	.173	.086	.025	.167	.085	.024	.162	.083	.024	
9.0	.171	.082	.023	.168	.082	.023	.163	.080	.023	.158	.079	.023	.153	.078	.022	
10.0	.161	.077	.021	.158	.077	.021	.154	.075	.021	.149	.074	.021	.145	.073	.021	

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.178	.156	.137	.152	.134	.118	.104	.092	.082	.060	.053	.047	.019	.017	.015	
2.0	.169	.132	.101	.145	.114	.087	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.161	.114	.077	.138	.098	.067	.095	.068	.047	.055	.040	.028	.018	.013	.009	
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.052	.036	.022	.017	.012	.007	
5.0	.146	.090	.049	.126	.078	.042	.087	.055	.030	.050	.032	.018	.016	.010	.006	
6.0	.140	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005	
7.0	.133	.075	.034	.115	.065	.030	.079	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.127	.069	.029	.109	.060	.026	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.121	.064	.026	.105	.056	.022	.072	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-09-11

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4574]
Remarks:

UGR(Unified Glare Rating) Table

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	26.6	28.2	27.0	28.5	28.8	26.4	28.0	26.8	28.3	28.6
3H	27.7	29.1	28.0	29.4	29.8	27.4	28.8	27.7	29.1	29.5
4H	28.0	29.3	28.3	29.6	30.0	27.5	28.8	27.9	29.1	29.5
6H	28.1	29.3	28.5	29.7	30.1	27.5	28.7	27.9	29.1	29.5
8H	28.1	29.3	28.5	29.7	30.1	27.5	28.6	27.9	29.0	29.4
12H	28.1	29.2	28.5	29.6	30.0	27.4	28.5	27.9	28.9	29.3
4H 2H	27.1	28.4	27.5	28.8	29.2	27.0	28.3	27.4	28.7	29.0
3H	28.4	29.5	28.8	29.9	30.3	28.1	29.2	28.5	29.6	30.0
4H	28.8	29.8	29.2	30.2	30.6	28.2	29.2	28.7	29.6	30.1
6H	29.0	29.9	29.5	30.3	30.8	28.3	29.1	28.7	29.6	30.0
8H	29.0	29.8	29.5	30.3	30.7	28.2	29.0	28.7	29.5	29.9
12H	29.0	29.7	29.5	30.2	30.7	28.2	28.9	28.7	29.4	29.9
8H 4H	28.9	29.7	29.4	30.1	30.6	28.4	29.2	28.8	29.6	30.1
6H	29.2	29.8	29.7	30.3	30.8	28.4	29.1	28.9	29.6	30.0
8H	29.2	29.8	29.7	30.3	30.8	28.4	29.0	28.9	29.5	30.0
12H	29.2	29.7	29.7	30.2	30.8	28.4	28.9	28.9	29.4	29.9
12H 4H	28.9	29.6	29.4	30.1	30.5	28.4	29.1	28.8	29.6	30.0
6H	29.1	29.7	29.7	30.2	30.7	28.4	29.0	28.9	29.5	30.0
8H	29.2	29.7	29.7	30.2	30.8	28.4	28.9	28.9	29.4	30.0
CIE190: 2010										

CIE190: 2010
Area: 0.04256 m2

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-09-11

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4574]
Remarks:

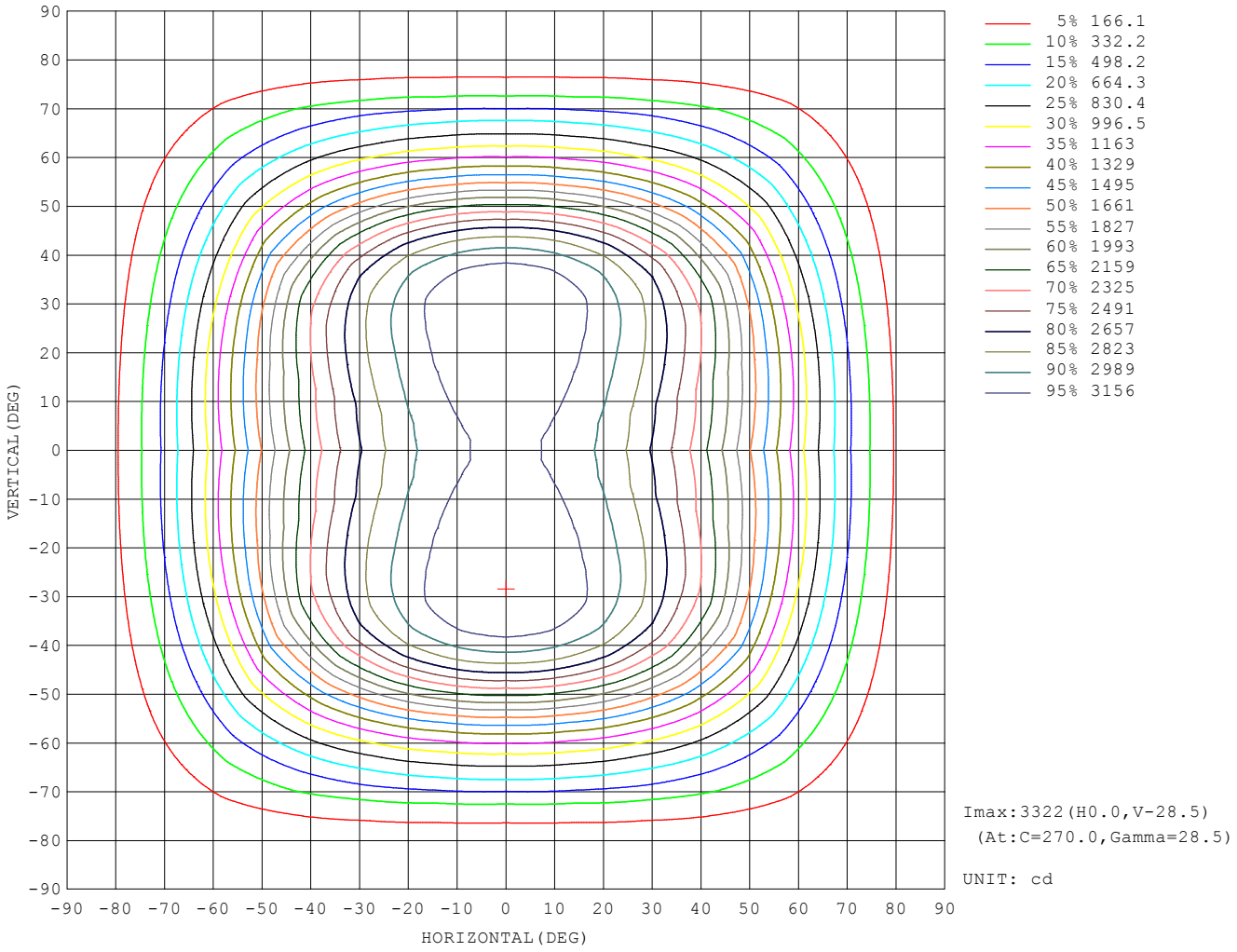
UTILIZATION FACTORS TABLE

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	59	48	41	58	48	41	57	47	41	34
0.80	70	59	51	69	58	51	67	57	51	44
1.00	79	68	61	78	68	61	75	69	60	54
1.25	86	76	69	84	75	69	82	74	68	61
1.50	91	82	75	89	81	75	86	79	74	67
2.00	97	90	84	96	89	83	92	86	82	74
2.50	101	94	89	99	93	88	95	90	86	78
3.00	104	98	93	102	96	92	98	94	90	82
4.00	108	103	99	105	101	97	101	98	94	86
5.00	110	106	102	108	104	100	103	100	97	88
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:LYJ
Test Date:2020-09-11

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4574]
Remarks:

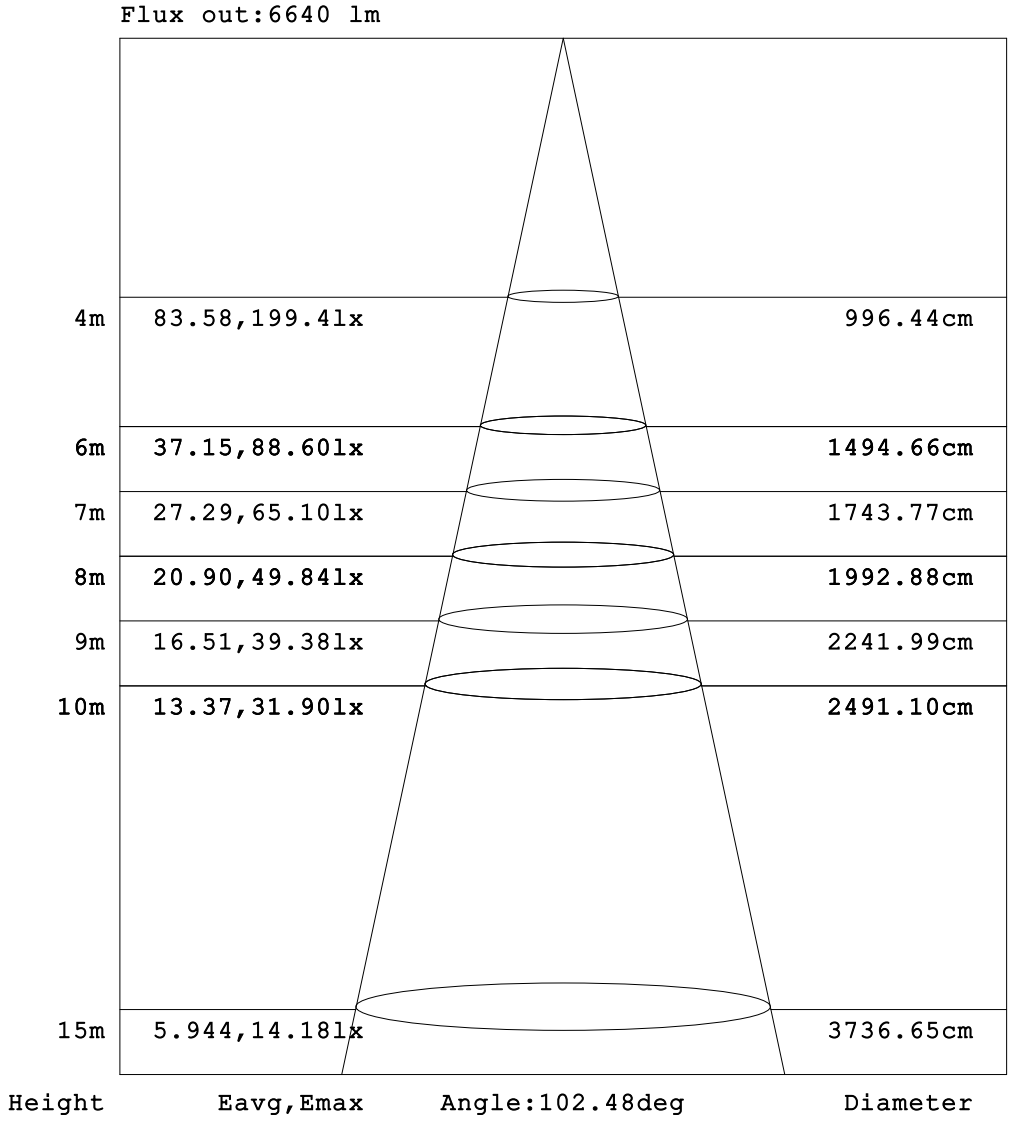
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-09-11

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4574]
Remarks:

AAI Figure

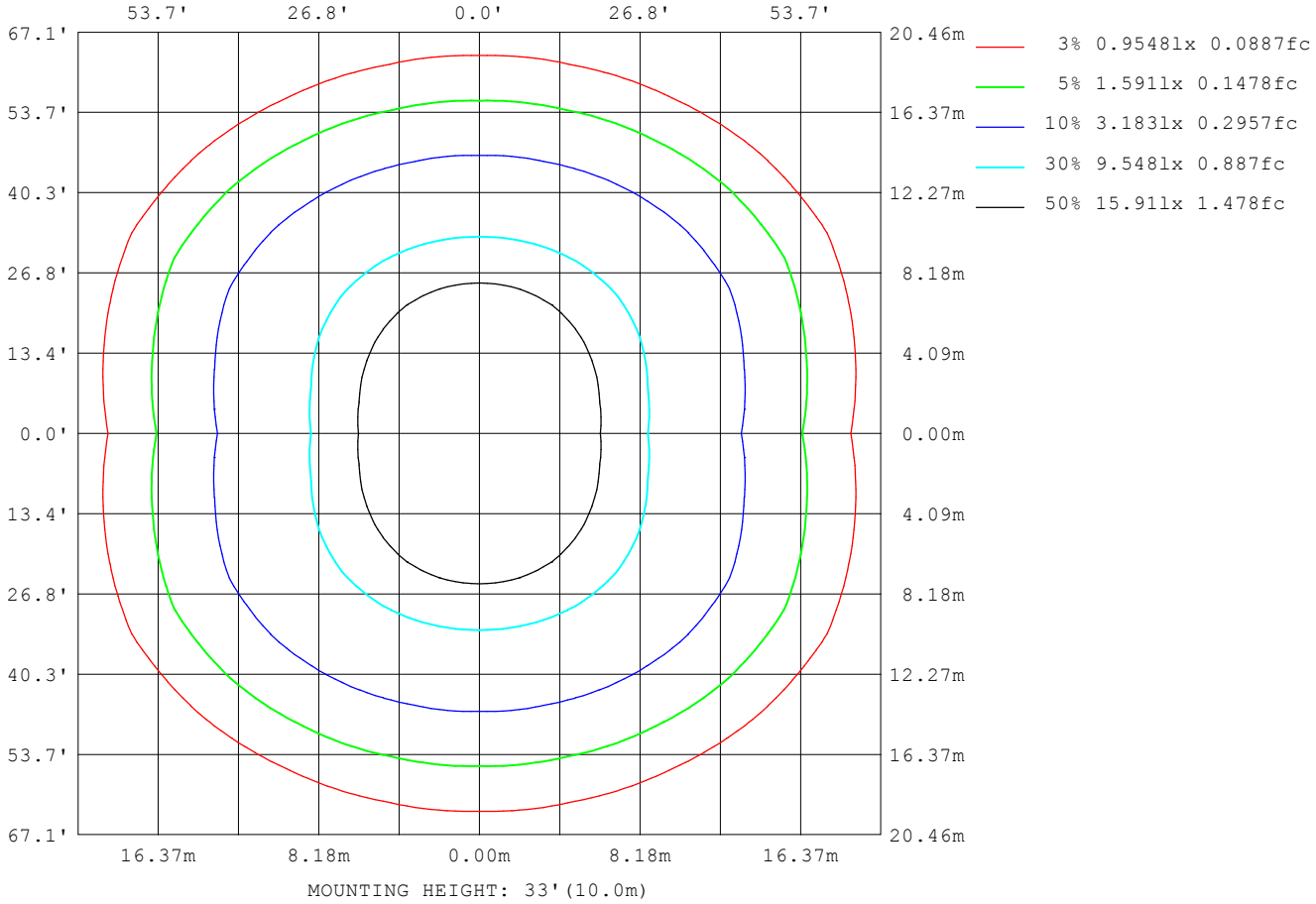


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-09-11

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4574]
Remarks:

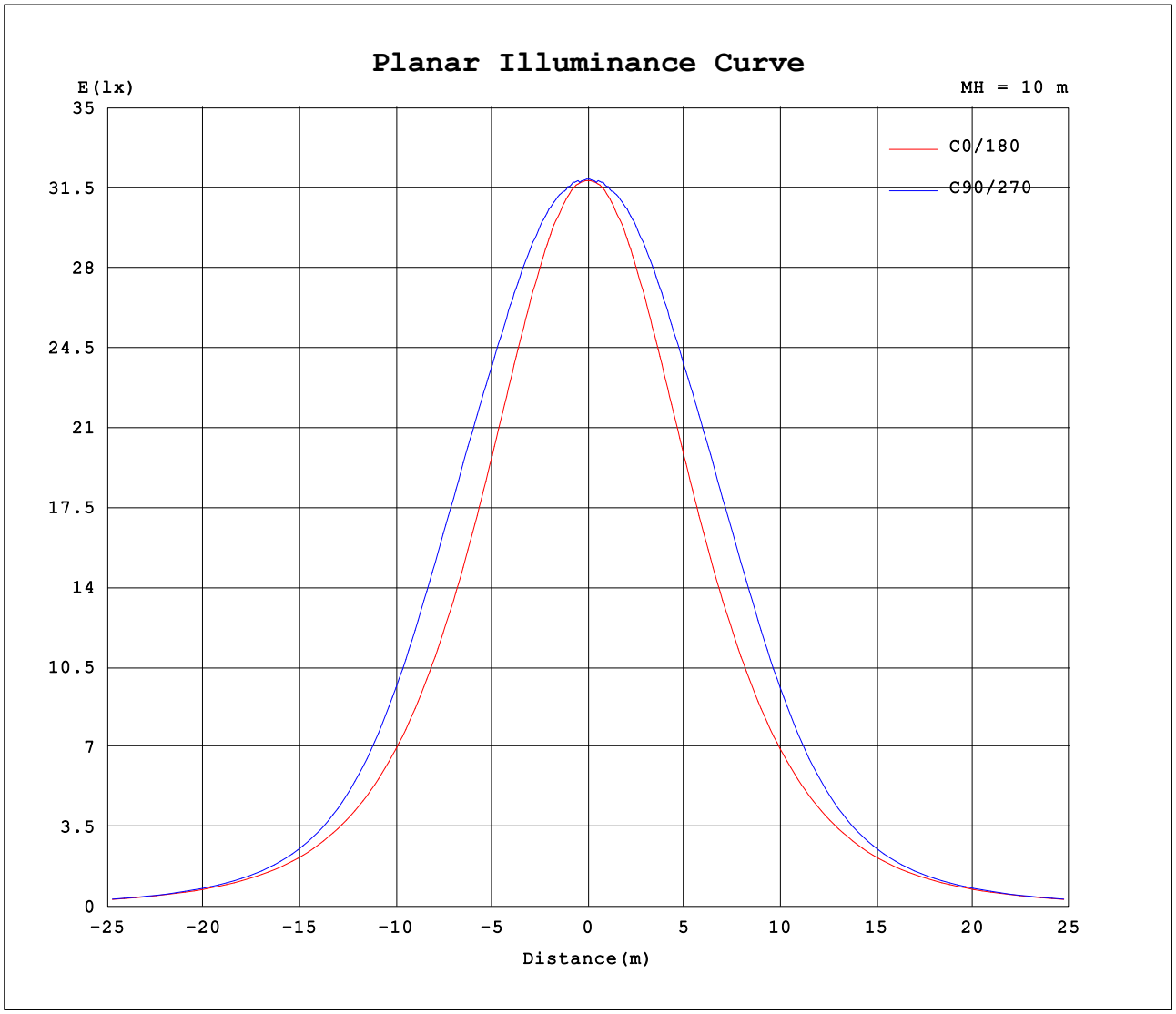
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-09-11

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4574]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-09-11

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4574]
Remarks: