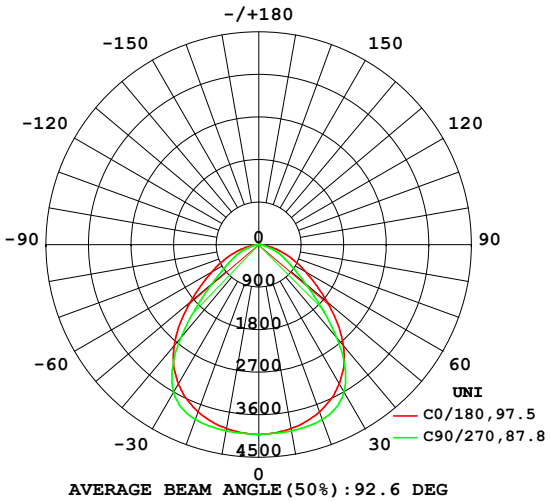
LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:229.9V I:0.3096A P:69.83W PF:0.9809 Freq:49.99Hz UTHDi:0% ITHDi:0% Lamp Flux:8889.17x1 lm		
NAME: LHB19-070-5080-L00118	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

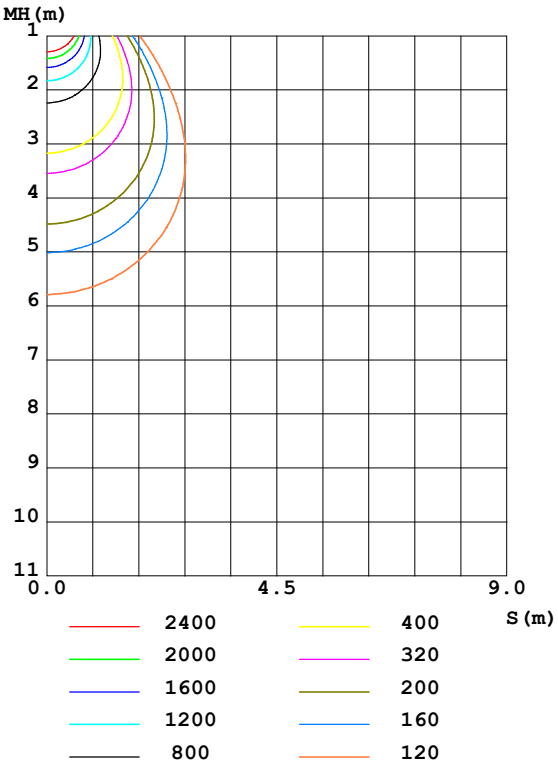
DATA OF LAMP		PHOTOMETRIC DATA Eff: 127.31 lm/W			
MODEL	SMD283	Imax(cd)	4024	S/MH(C0/180)	1.25
NOMINAL POWER(W)	70	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	8889.2	η UP,DN(C0-180)	0.1,49.9
NOMINAL FLUX(lm)	8889.17	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.1,49.9
LAMPS INSIDE	1	η up(%)	0.2	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	99.8	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



AVERAGE BEAM ANGLE(50%):92.6 DEG

C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-07-30

Checker: LI

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

Assessor:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	3948	3986	4001	3986	3948	3986	4001	3986	0- 10	381.5	381.5	4.29,4.29
20	3760	3869	3928	3869	3760	3869	3928	3869	10- 20	1112	1493	16.8,16.8
30	3403	3576	3602	3576	3403	3576	3602	3576	20- 30	1721	3214	36.2,36.2
40	2786	2734	2563	2734	2786	2734	2563	2734	30- 40	1989	5203	58.5,58.5
50	1893	1598	1298	1598	1893	1598	1298	1598	40- 50	1647	6850	77.1,77.1
60	1136	827.2	686.6	827.2	1136	827.2	686.6	827.2	50- 60	1071	7921	89.1,89.1
70	609.4	394.4	349.3	394.4	609.4	394.4	349.3	394.4	60- 70	632.2	8554	96.2,96.2
80	187.8	102.1	53.10	102.1	187.8	102.1	53.10	102.1	70- 80	277.3	8831	99.3,99.3
90	1.624	1.340	0.2337	1.340	1.624	1.340	0.2337	1.340	80- 90	40.52	8871	99.8,99.8
100	1.209	0.7422	0.4885	0.7422	1.209	0.7422	0.4885	0.7422	90-100	0.6037	8872	99.8,99.8
110	2.108	1.490	1.036	1.490	2.108	1.490	1.036	1.490	100-110	1.189	8873	99.8,99.8
120	2.861	2.346	1.867	2.346	2.861	2.346	1.867	2.346	110-120	1.849	8875	99.8,99.8
130	3.800	3.422	2.978	3.422	3.800	3.422	2.978	3.422	120-130	2.588	8878	99.9,99.9
140	5.140	4.391	4.276	4.391	5.140	4.391	4.276	4.391	130-140	3.093	8881	99.9,99.9
150	5.658	5.448	5.165	5.448	5.658	5.448	5.165	5.448	140-150	3.076	8884	99.9,99.9
160	5.963	6.188	5.551	6.188	5.963	6.188	5.551	6.188	150-160	2.642	8887	100,100
170	7.191	8.092	6.396	8.092	7.191	8.092	6.396	8.092	160-170	1.870	8888	100,100
180	7.469	8.699	8.297	8.699	7.469	8.699	8.297	8.699	170-180	0.7693	8889	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 6100 lm

%lum = 68.6%
%lamp = 68.6%

Conical surface Flux(120deg): 7921.5 lm

%lum = 89.1%
%lamp = 89.1%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-07-30

Checker: LI

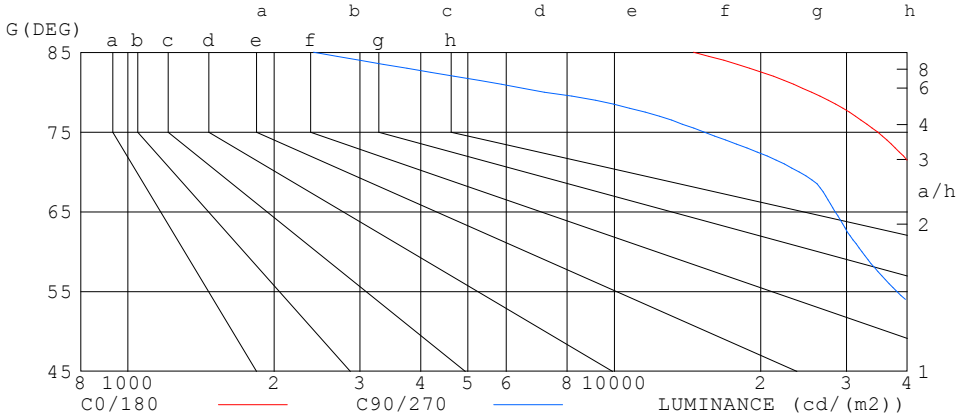
γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

Assessor:

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	14555	2409
80	25453	7185
75	34778	15277
70	41944	23999
65	47824	28445
60	53470	32268
55	60547	38091
50	69313	47462
45	78395	61833

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-07-30

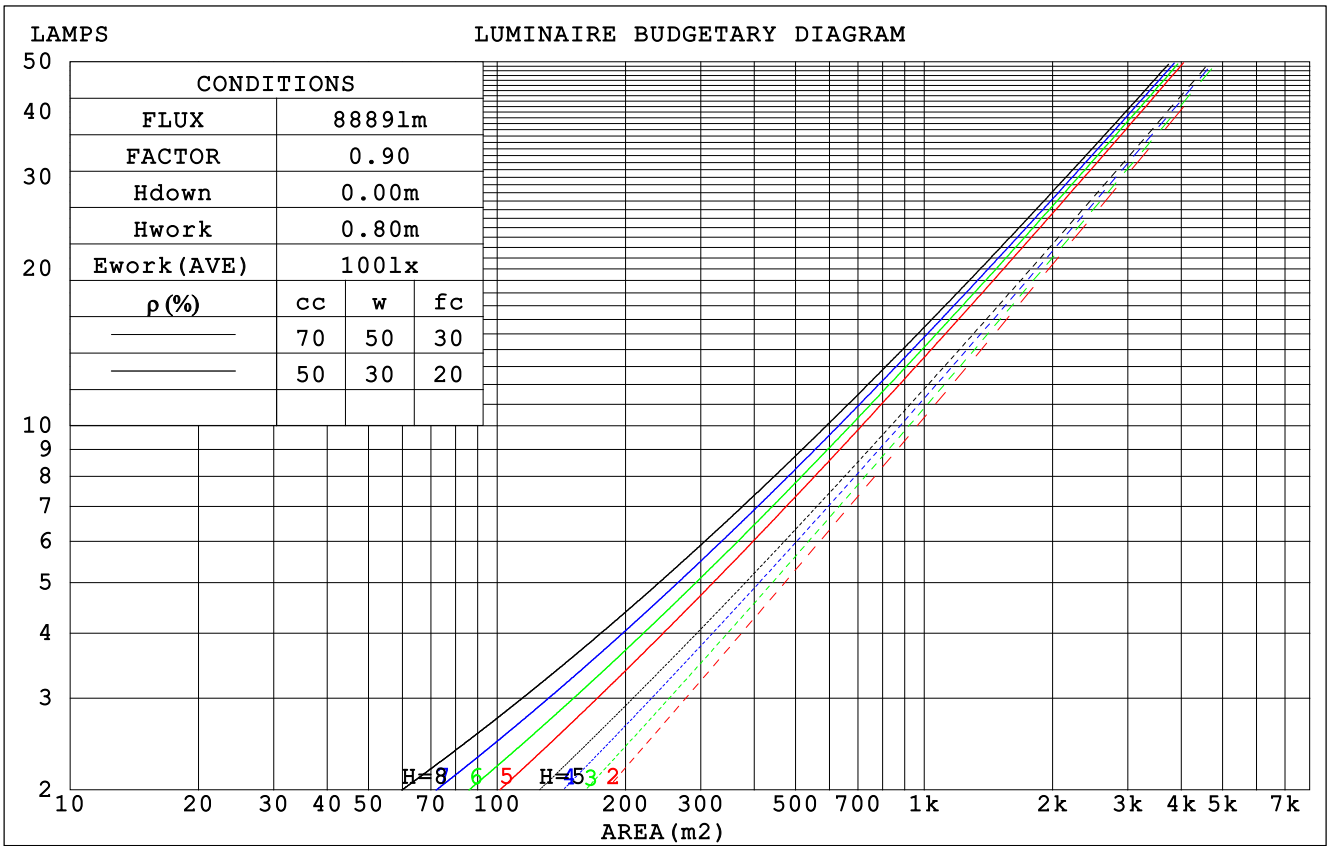
Checker: LI

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

Assessor:

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	1.07	1.03	1.00	1.04	1.01	.98	1.00	.98	.95	.96	.94	.92	.93	.91	.90	.88
2.0	.95	.89	.85	.93	.88	.84	.90	.85	.82	.87	.83	.80	.84	.81	.78	.76
3.0	.85	.78	.72	.84	.77	.72	.81	.75	.71	.78	.73	.69	.76	.72	.68	.66
4.0	.77	.69	.63	.75	.68	.62	.73	.67	.62	.71	.65	.61	.69	.64	.60	.58
5.0	.69	.61	.55	.68	.61	.55	.66	.59	.54	.64	.58	.54	.62	.57	.53	.51
6.0	.63	.55	.49	.62	.54	.49	.60	.53	.48	.59	.53	.48	.57	.52	.48	.46
7.0	.58	.49	.44	.57	.49	.44	.55	.48	.43	.54	.48	.43	.53	.47	.43	.41
8.0	.53	.45	.40	.52	.45	.39	.51	.44	.39	.50	.43	.39	.48	.43	.39	.37
9.0	.49	.41	.36	.48	.41	.36	.47	.40	.36	.46	.40	.35	.45	.39	.35	.34
10.0	.45	.38	.33	.45	.37	.33	.44	.37	.33	.43	.37	.32	.42	.36	.32	.31



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-07-30

Checker: LI

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

Assessor:

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	.254	.144	.046	.247	.141	.045	.234	.134	.043	.222	.128	.041	.211	.122	.039	
2.0	.246	.135	.041	.240	.132	.041	.228	.127	.039	.218	.122	.038	.208	.118	.037	
3.0	.233	.124	.037	.227	.122	.037	.217	.118	.036	.208	.114	.035	.199	.110	.034	
4.0	.219	.114	.033	.214	.112	.033	.205	.109	.032	.197	.106	.032	.189	.103	.031	
5.0	.205	.105	.030	.201	.103	.030	.193	.101	.030	.186	.098	.029	.179	.096	.029	
6.0	.193	.097	.028	.189	.095	.027	.182	.093	.027	.175	.091	.027	.169	.089	.026	
7.0	.181	.090	.025	.178	.089	.025	.172	.087	.025	.166	.085	.025	.160	.083	.024	
8.0	.171	.083	.023	.168	.083	.023	.162	.081	.023	.157	.080	.023	.152	.078	.023	
9.0	.161	.078	.022	.159	.077	.022	.154	.076	.022	.149	.075	.021	.144	.073	.021	
10.0	.153	.073	.020	.150	.073	.020	.146	.071	.020	.142	.070	.020	.137	.069	.020	

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	.192	.192	.192	.164	.164	.164	.112	.112	.112	.064	.064	.064	.021	.021	.021	
1.0	.178	.158	.140	.152	.136	.121	.104	.093	.084	.060	.054	.049	.019	.017	.016	
2.0	.168	.134	.105	.144	.115	.091	.098	.080	.063	.057	.046	.037	.018	.015	.012	
3.0	.159	.116	.081	.136	.100	.070	.093	.069	.049	.054	.040	.029	.017	.013	.010	
4.0	.151	.102	.064	.129	.088	.056	.089	.061	.039	.051	.036	.023	.017	.012	.008	
5.0	.144	.091	.052	.123	.079	.046	.085	.055	.032	.049	.032	.019	.016	.011	.006	
6.0	.137	.083	.044	.117	.072	.038	.081	.050	.027	.047	.029	.016	.015	.010	.005	
7.0	.130	.076	.037	.112	.065	.032	.077	.046	.023	.045	.027	.014	.015	.009	.005	
8.0	.124	.070	.032	.107	.060	.028	.074	.042	.020	.043	.025	.012	.014	.008	.004	
9.0	.119	.065	.028	.102	.056	.025	.071	.040	.018	.041	.023	.010	.013	.008	.003	
10.0	.114	.061	.025	.098	.053	.022	.068	.037	.016	.040	.022	.009	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-07-30

Checker: LI

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

Assessor:

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	25.5	27.0	25.9	27.3	27.6	22.9	24.3	23.2	24.6	25.0
	3H	27.0	28.2	27.3	28.6	28.9	24.1	25.4	24.5	25.7	26.1
	4H	27.4	28.6	27.8	29.0	29.4	24.3	25.5	24.7	25.9	26.2
	6H	27.7	28.8	28.1	29.1	29.5	24.3	25.4	24.8	25.8	26.2
	8H	27.7	28.8	28.1	29.2	29.6	24.3	25.4	24.7	25.8	26.2
	12H	27.7	28.7	28.1	29.1	29.5	24.3	25.3	24.7	25.7	26.1
4H	2H	25.7	26.9	26.1	27.3	27.6	23.4	24.6	23.8	25.0	25.4
	3H	27.3	28.3	27.7	28.7	29.1	24.8	25.8	25.2	26.2	26.6
	4H	27.8	28.7	28.3	29.1	29.6	25.1	25.9	25.5	26.4	26.8
	6H	28.2	29.0	28.6	29.4	29.9	25.1	25.9	25.6	26.4	26.8
	8H	28.2	29.0	28.7	29.4	29.9	25.1	25.8	25.6	26.3	26.7
	12H	28.3	28.9	28.8	29.4	29.9	25.1	25.7	25.6	26.2	26.7
8H	4H	27.9	28.6	28.3	29.0	29.5	25.3	26.0	25.7	26.4	26.9
	6H	28.2	28.8	28.7	29.3	29.8	25.4	25.9	25.9	26.4	26.9
	8H	28.3	28.9	28.9	29.4	29.9	25.3	25.9	25.8	26.4	26.9
	12H	28.4	28.9	28.9	29.4	29.9	25.3	25.8	25.8	26.3	26.8
12H	4H	27.8	28.5	28.3	28.9	29.4	25.3	25.9	25.8	26.4	26.9
	6H	28.2	28.7	28.7	29.2	29.8	25.4	25.9	25.9	26.4	26.9
	8H	28.3	28.8	28.8	29.3	29.9	25.4	25.8	25.9	26.3	26.9
CIE190: 2010											

CIE190: 2010
Area: 0.04256 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-07-30

Checker: LI

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

Assessor:

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	66	55	49	65	55	49	64	55	49	43
0.80	75	66	59	75	65	59	73	64	59	53
1.00	83	74	68	82	74	68	80	74	67	61
1.25	90	81	75	89	81	75	86	79	74	68
1.50	94	86	81	93	85	80	90	84	79	72
2.00	100	93	88	98	92	87	95	90	86	79
2.50	103	97	92	101	96	91	98	93	89	82
3.00	106	100	96	104	99	95	100	96	93	85
4.00	109	105	101	107	103	99	103	99	97	88
5.00	111	107	104	109	105	102	104	102	99	91
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended					SHRNOM = 1.25	

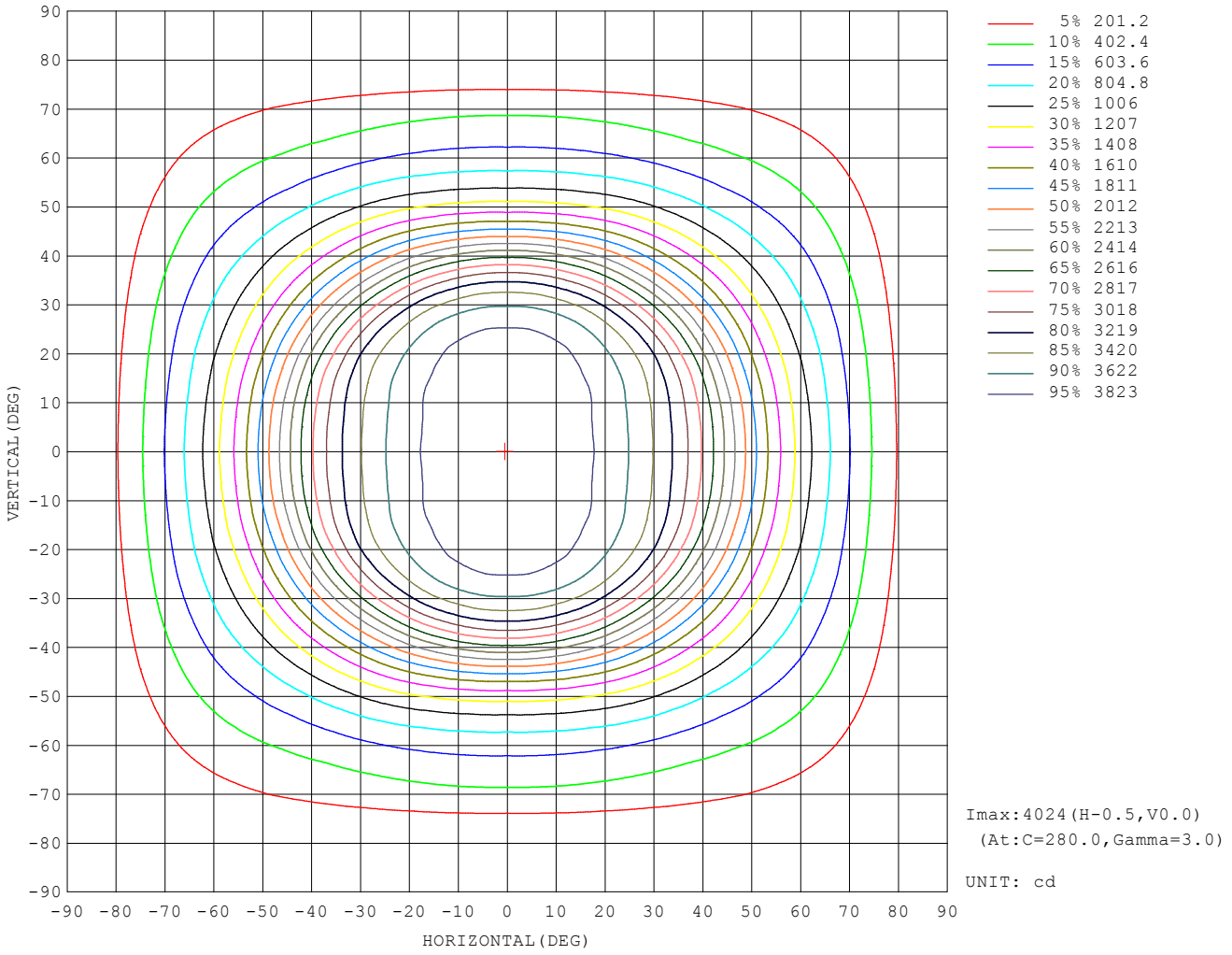
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-07-30

Checker: LI

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

Assessor:

ISOCANDELA DIAGRAM



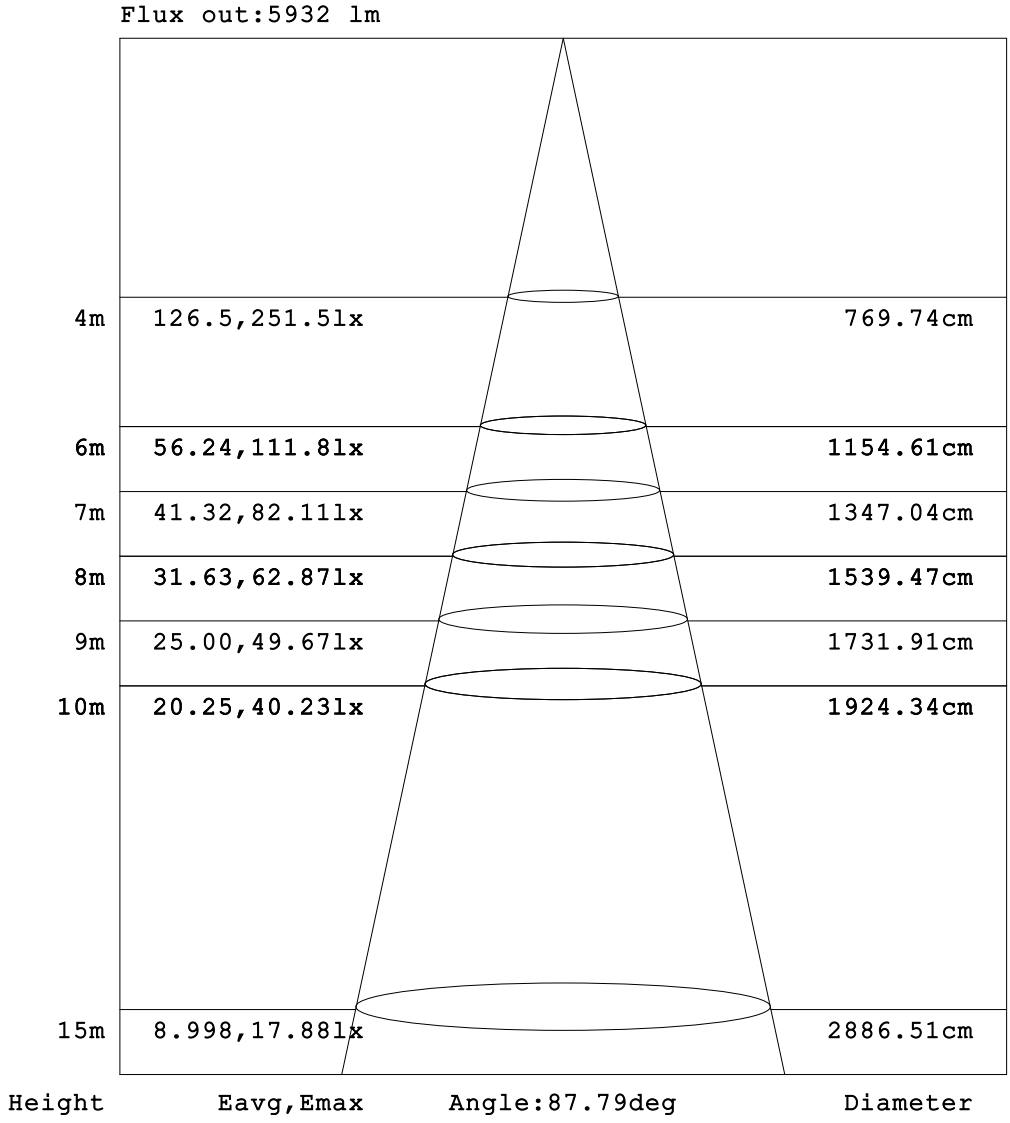
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C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-07-30

Checker: LI

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

Assessor:

AAI Figure



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

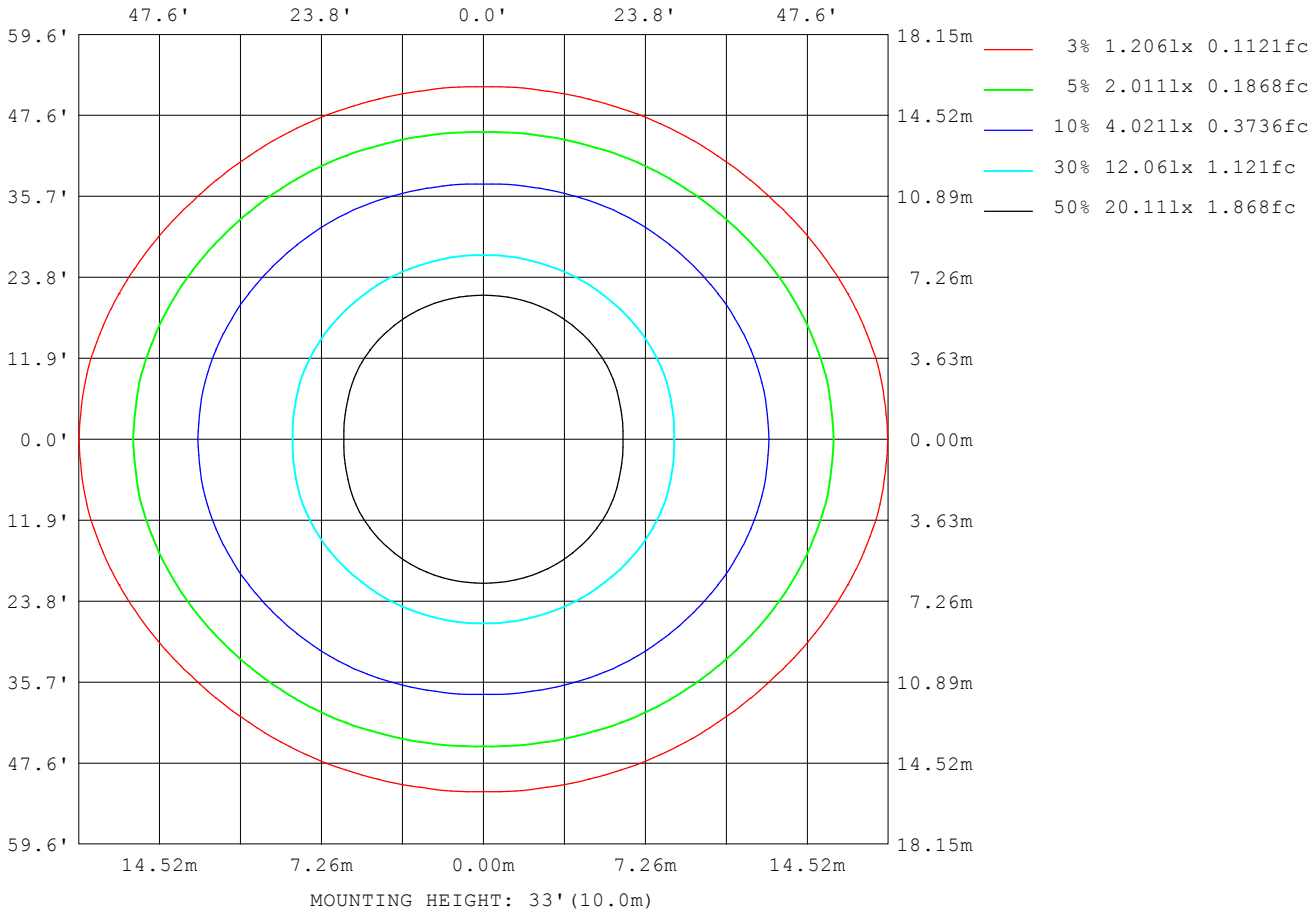
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-07-30

Checker: LI

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

Assessor:

ISOLUX DIAGRAM



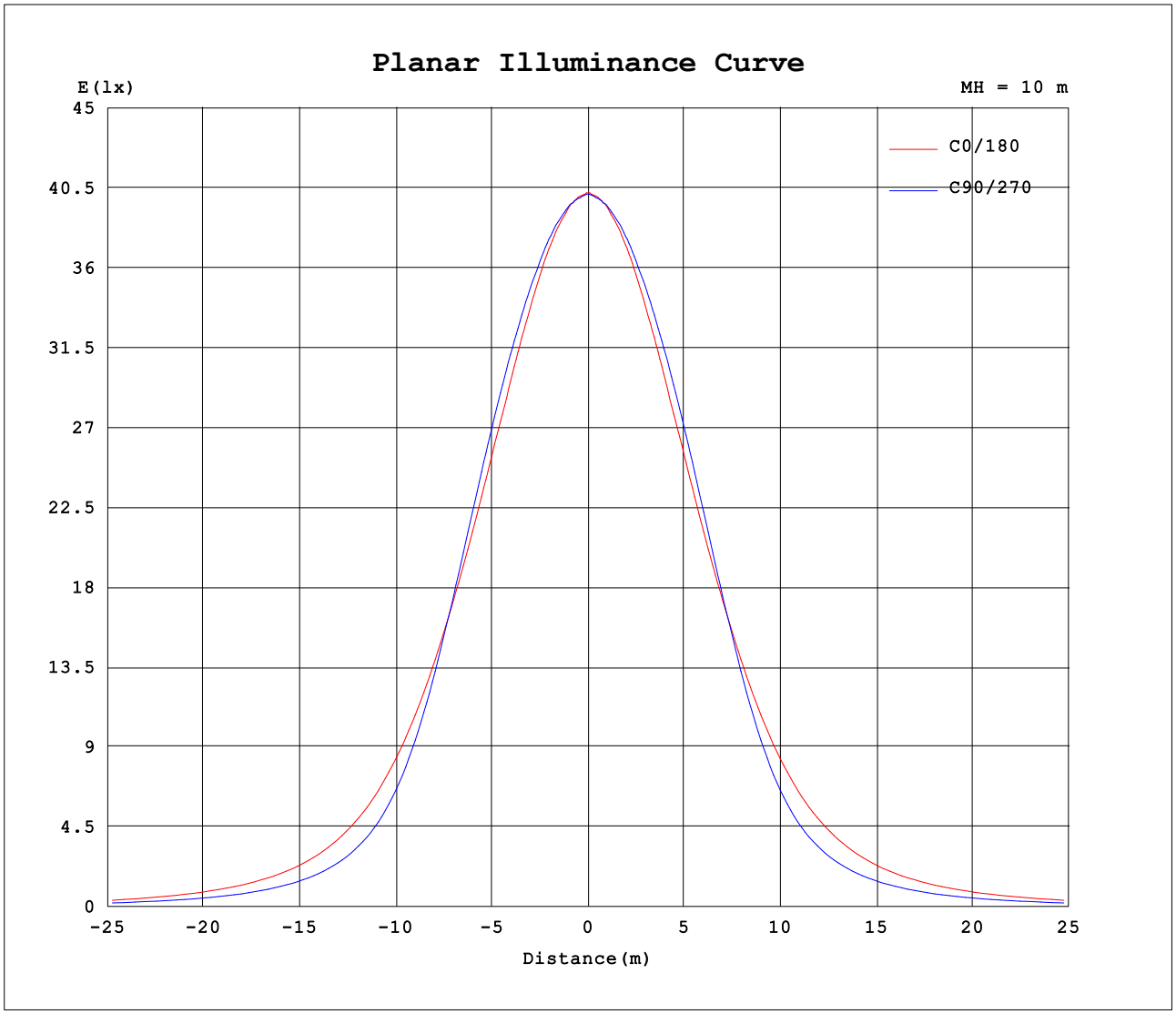
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-07-30

Checker: LI

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

Assessor:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-07-30

Checker: LI

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

Assessor: