

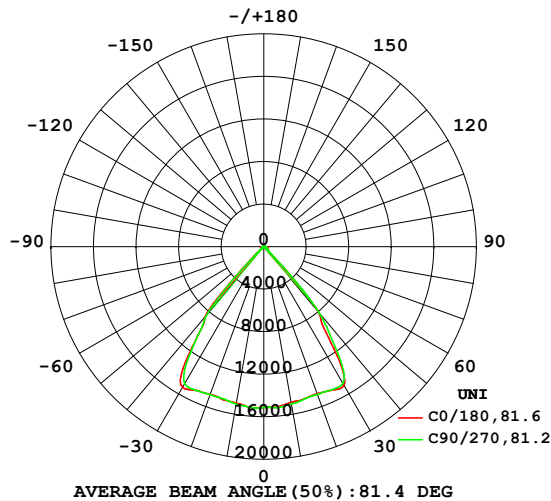
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

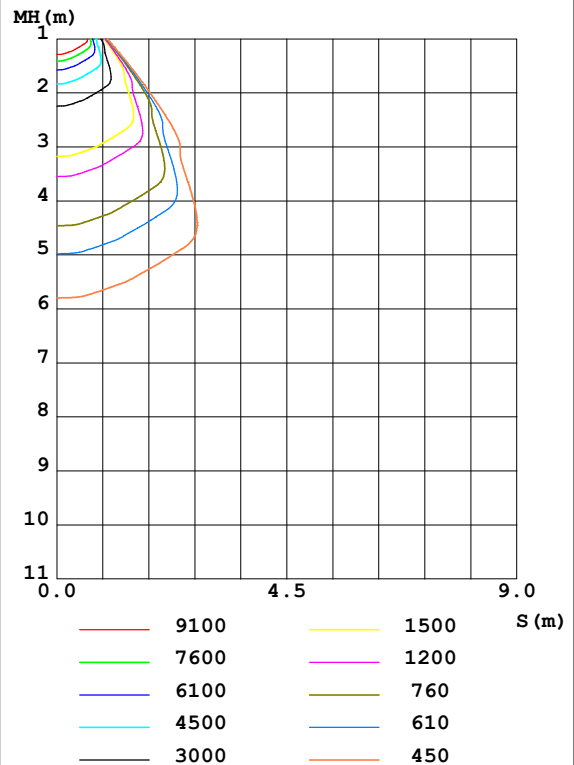
Test:U:230.00V I:0.6540A P:150.10W PF:0.9979 Freq:50.00Hz UTHDi:0% ITHDi:0% Lamp Flux:22722.1x1 lm		
NAME: LHB09-150-5070-L03902	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 151.38 lm/W			
MODEL	/	I _{max} (cd)	15285	S/MH (C0/180)	1.20
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH (C90/270)	1.18
RATED VOLTAGE(V)	/	TOTAL FLUX (lm)	22722	η UP,DN (C0-180)	0.0,50.0
NOMINAL FLUX(lm)	22722.1	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,50.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	0.85

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-03-01

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:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	1488	1491	1502	1501	1493	1490	1503	1486	0- 10	1438	1438	6.33,6.33
20	1472	1455	1479	1457	1479	1463	1482	1454	10- 20	4190	5628	24.8,24.8
30	1506	1469	1486	1480	1527	1479	1486	1463	20- 30	6857	12485	54.9,54.9
40	792.1	706.9	813.8	771.1	853.1	765.5	824.9	678.7	30- 40	7515	20001	88,88
50	39.68	47.80	44.39	47.25	42.59	49.31	41.38	42.79	40- 50	2033	22034	97,97
60	29.42	28.11	25.08	27.83	29.17	27.31	23.06	25.18	50- 60	287.6	22321	98.2,98.2
70	29.51	17.93	18.54	18.40	29.43	17.39	17.15	16.22	60- 70	207.4	22529	99.1,99.1
80	31.83	9.453	5.257	11.06	31.78	11.20	5.174	9.728	70- 80	148.3	22677	99.8,99.8
90	0.0402	0.0234	0.0234	0.0317	0.0485	0.0820	0.0418	0.0251	80- 90	45.06	22722	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:×10cd									UNIT:lm		

Conical surface Flux(90deg): 21709 lm

%lum = 95.5%

%lamp = 95.5%

Conical surface Flux(120deg): 22321 lm

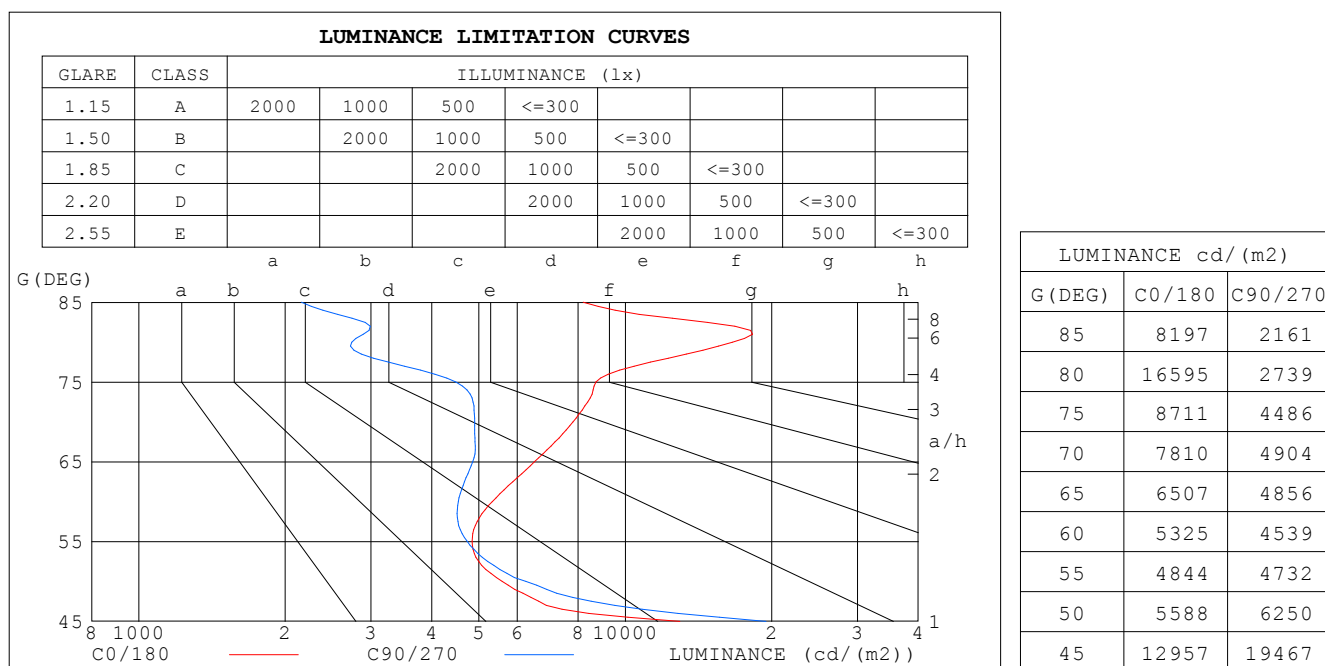
%lum = 98.2%

%lamp = 98.2%

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 γ Interval: 0.5DEG
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Humidity:65.0%
Test Distance:26.000m [K=0.4574]
Remarks:

LUMINANCE LIMITATION CURVES



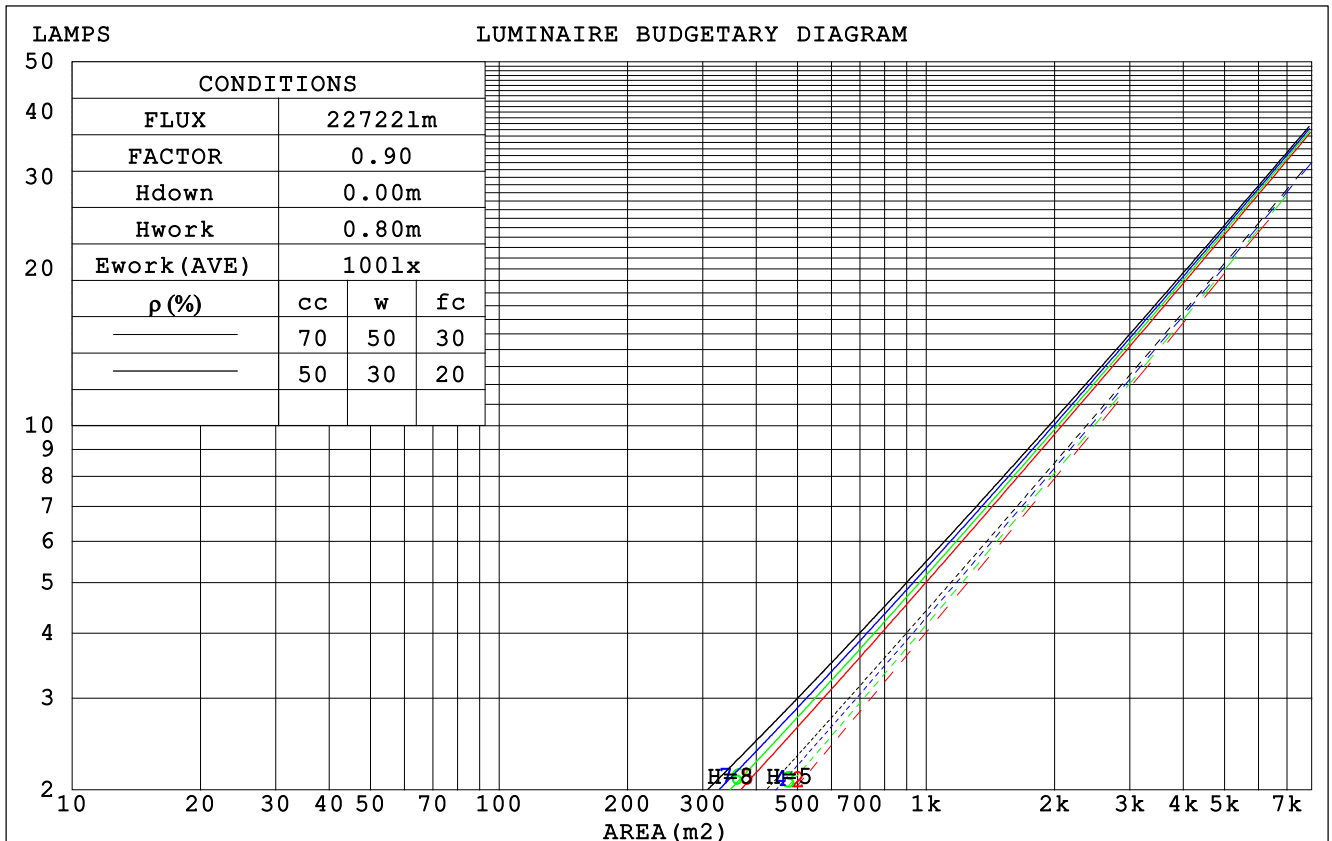
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Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-03-01

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:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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			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	1.07	1.04	1.08	1.05	1.03	1.03	1.01	.00	.00	.98	.97	.96	.95	.94	.92
2.0	1.01	.96	.93	.99	.95	.92	.96	.92	.90	.93	.90	.88	.90	.88	.86	.84
3.0	.93	.87	.83	.92	.86	.82	.89	.85	.81	.86	.83	.80	.84	.81	.78	.77
4.0	.86	.80	.75	.85	.79	.74	.82	.77	.74	.80	.76	.73	.78	.75	.72	.70
5.0	.79	.73	.68	.78	.72	.68	.77	.71	.67	.75	.70	.66	.73	.69	.66	.64
6.0	.74	.67	.62	.73	.66	.62	.71	.66	.61	.70	.65	.61	.68	.64	.61	.59
7.0	.68	.62	.57	.68	.61	.57	.66	.61	.56	.65	.60	.56	.64	.59	.56	.54
8.0	.64	.57	.52	.63	.57	.52	.62	.56	.52	.61	.55	.52	.60	.55	.51	.50
9.0	.59	.53	.48	.59	.52	.48	.58	.52	.48	.57	.52	.48	.56	.51	.48	.46
10.0	.55	.49	.45	.55	.49	.45	.54	.48	.44	.53	.48	.44	.52	.48	.44	.43



C Range: 0 - 360DEG
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Test Speed: HIGH
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Operators: LYJ
Test Date: 2021-03-01

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:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

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	.198	.113	.036	.192	.109	.035	.179	.103	.033	.167	.096	.031	.156	.091	.029		
2.0	.191	.105	.032	.185	.102	.031	.175	.097	.030	.165	.092	.029	.155	.088	.028		
3.0	.183	.097	.029	.178	.095	.029	.168	.091	.028	.160	.088	.027	.152	.084	.026		
4.0	.174	.091	.027	.170	.089	.026	.162	.086	.026	.154	.083	.025	.147	.080	.024		
5.0	.166	.085	.025	.162	.083	.024	.155	.081	.024	.149	.078	.023	.142	.076	.023		
6.0	.159	.080	.023	.155	.078	.023	.149	.076	.022	.143	.074	.022	.138	.072	.022		
7.0	.152	.075	.021	.149	.074	.021	.143	.072	.021	.138	.071	.021	.133	.069	.020		
8.0	.145	.071	.020	.142	.070	.020	.137	.069	.020	.132	.067	.019	.128	.066	.019		
9.0	.139	.067	.019	.136	.066	.019	.132	.065	.018	.127	.064	.018	.123	.063	.018		
10.0	.133	.064	.018	.131	.063	.018	.127	.062	.017	.123	.061	.017	.119	.060	.017		

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	.173	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.050	.019	.017	.016		
2.0	.159	.132	.110	.136	.114	.095	.093	.079	.066	.054	.046	.039	.017	.015	.013		
3.0	.148	.114	.087	.127	.098	.075	.087	.068	.053	.050	.040	.031	.016	.013	.010		
4.0	.138	.099	.069	.119	.086	.060	.082	.060	.043	.047	.035	.025	.015	.011	.008		
5.0	.130	.088	.057	.112	.076	.049	.077	.053	.035	.045	.031	.021	.014	.010	.007		
6.0	.124	.079	.047	.106	.068	.041	.073	.048	.029	.043	.028	.017	.014	.009	.006		
7.0	.118	.072	.040	.101	.062	.035	.070	.044	.024	.041	.026	.015	.013	.008	.005		
8.0	.112	.066	.034	.097	.057	.030	.067	.040	.021	.039	.024	.012	.013	.008	.004		
9.0	.107	.061	.029	.092	.053	.026	.064	.037	.018	.037	.022	.011	.012	.007	.004		
10.0	.103	.056	.026	.089	.049	.022	.061	.035	.016	.036	.020	.010	.012	.007	.003		

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYJ
 Test Date:2021-03-01

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:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

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	8.9	9.9	9.2	10.2	10.5	8.9	10.0	9.3	10.3	10.6
3H	11.6	12.5	12.0	12.9	13.2	10.7	11.6	11.1	12.0	12.3
4H	13.0	13.9	13.4	14.2	14.6	11.5	12.4	11.9	12.7	13.1
6H	14.8	15.6	15.2	16.0	16.4	11.8	12.6	12.2	13.0	13.4
8H	15.8	16.5	16.2	16.9	17.3	11.9	12.7	12.4	13.0	13.5
12H	16.1	16.8	16.5	17.1	17.6	12.0	12.7	12.4	13.0	13.5
4H 2H	9.6	10.5	10.0	10.8	11.2	9.7	10.6	10.1	10.9	11.3
3H	12.3	13.0	12.8	13.4	13.8	11.6	12.3	12.0	12.7	13.1
4H	13.7	14.3	14.2	14.8	15.2	12.5	13.1	12.9	13.5	14.0
6H	15.3	15.9	15.8	16.3	16.8	12.9	13.4	13.4	13.9	14.4
8H	16.2	16.7	16.7	17.2	17.6	13.0	13.5	13.5	13.9	14.4
12H	16.5	17.0	17.0	17.5	17.9	13.0	13.5	13.5	14.0	14.4
8H 4H	14.0	14.5	14.5	14.9	15.4	13.0	13.5	13.5	13.9	14.4
6H	15.6	16.0	16.1	16.5	17.0	13.6	14.0	14.1	14.5	15.0
8H	16.5	16.8	17.0	17.4	17.8	13.7	14.1	14.3	14.6	15.1
12H	16.8	17.1	17.3	17.6	18.2	13.8	14.1	14.3	14.6	15.2
12H 4H	14.0	14.4	14.5	14.9	15.4	13.1	13.5	13.5	14.0	14.4
6H	15.6	16.0	16.2	16.5	17.0	13.7	14.1	14.3	14.6	15.1
8H	16.5	16.8	17.0	17.3	17.9	13.9	14.2	14.4	14.7	15.3
CIE190: 2010										

CIE190: 2010
Area: 0.1105 m2

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γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
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Remarks:

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UTILIZATION FACTORS TABLE

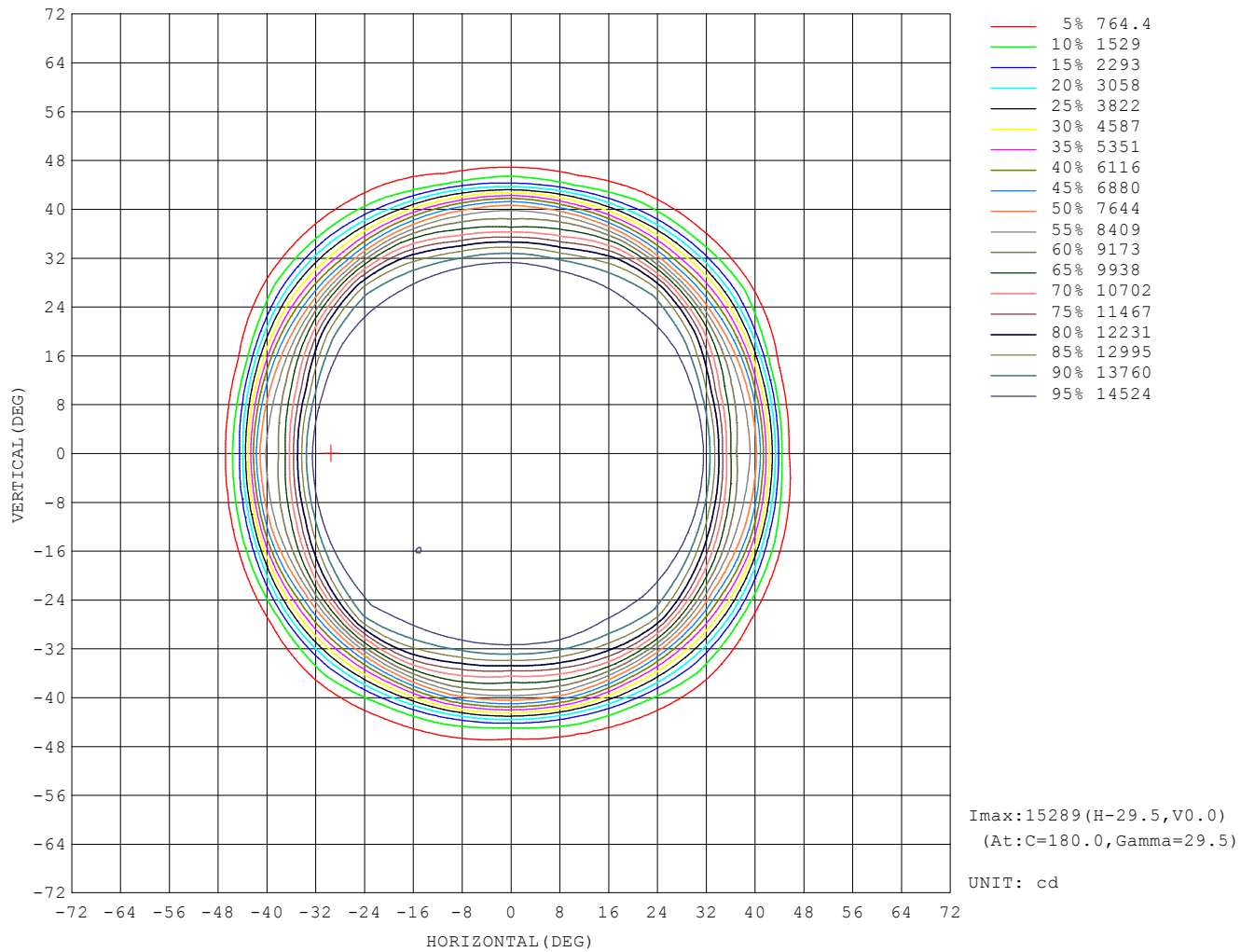
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	84	77	73	84	77	73	83	77	73	69
0.80	92	86	81	91	85	81	90	85	81	77
1.00	97	91	87	96	91	87	95	90	86	82
1.25	101	96	92	100	95	92	98	94	91	86
1.50	104	99	96	103	98	95	101	97	94	89
2.00	107	103	100	106	102	99	103	100	97	92
2.50	109	105	102	108	104	101	104	102	99	93
3.00	111	107	104	109	106	103	106	103	101	95
4.00	113	110	108	111	108	106	107	105	104	96
5.00	114	112	110	112	110	108	108	107	105	97
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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 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:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

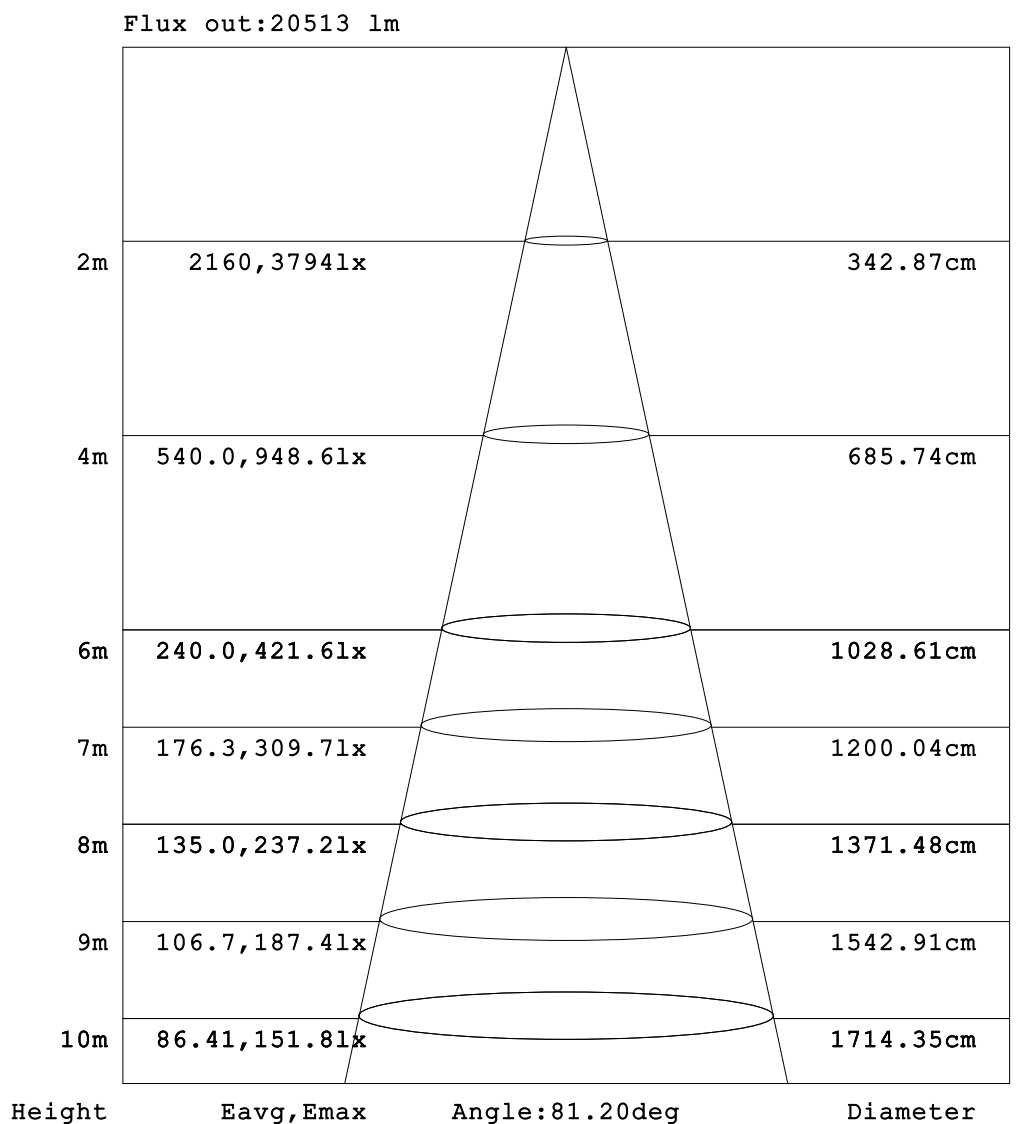
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
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Remarks:

AAI Figure



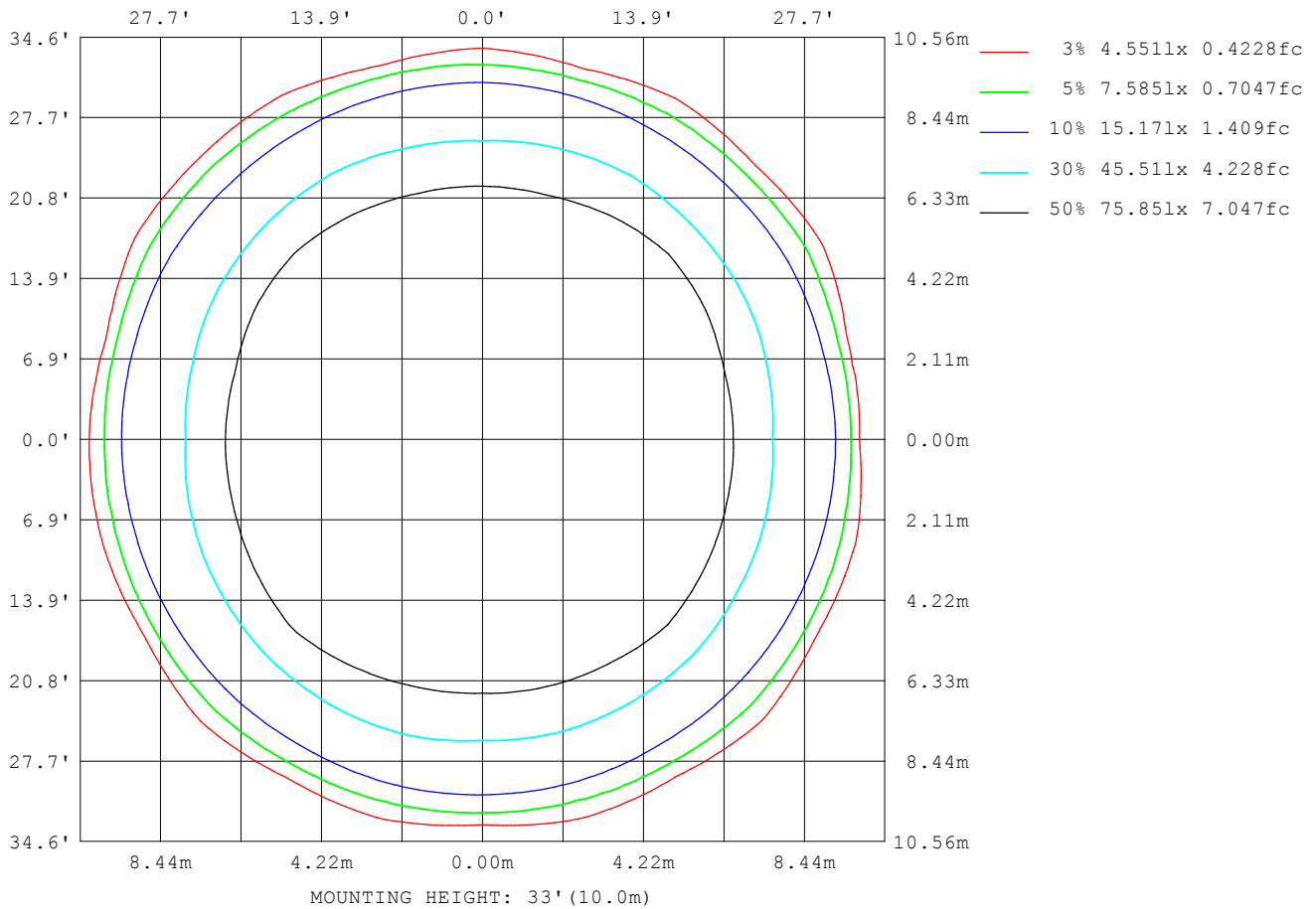
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

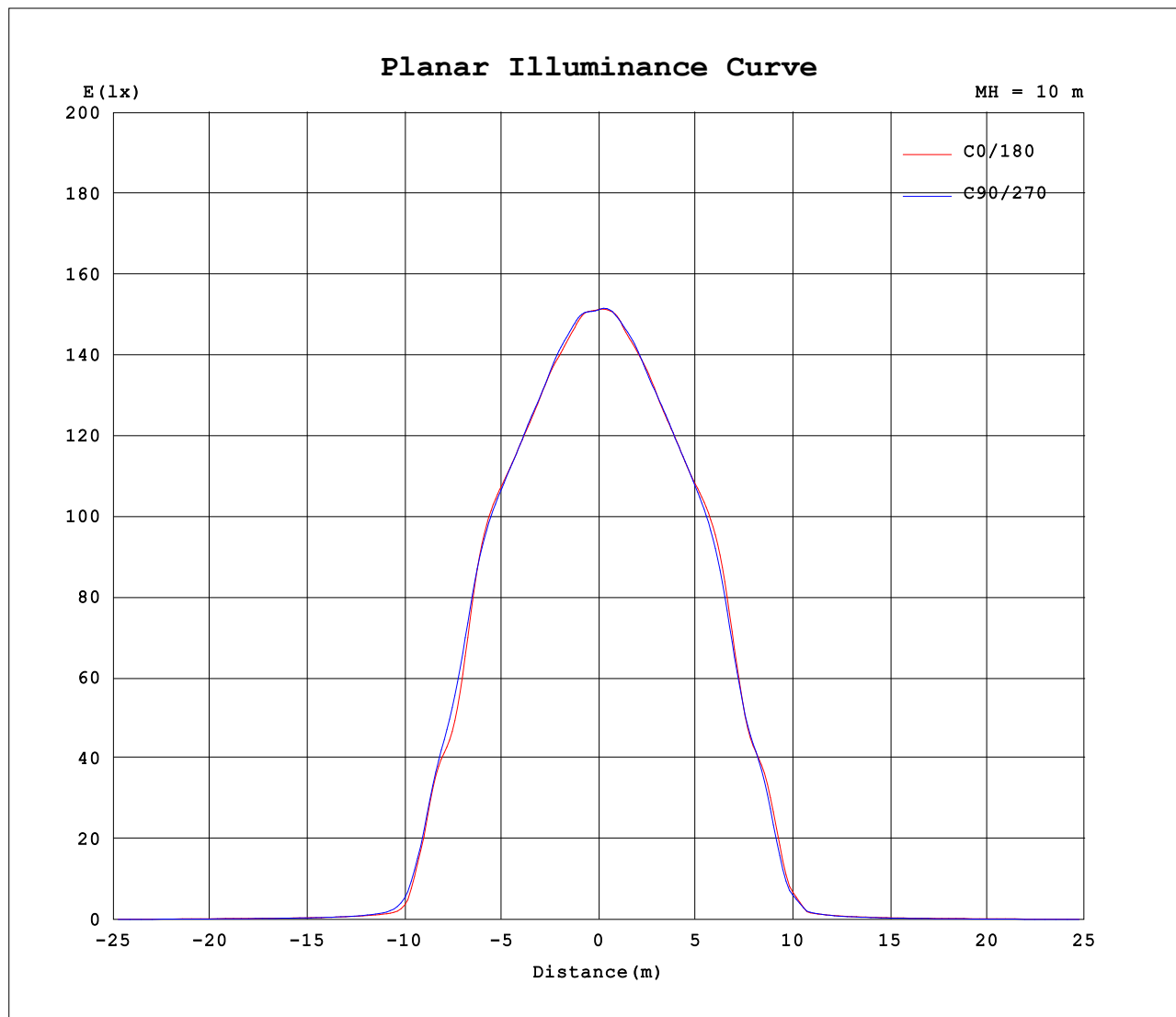
ISOLUX DIAGRAM



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Temperature: 25.3DEG
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Test Date: 2021-03-01

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 γ Interval: 0.5DEG
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Humidity: 65.0%
Test Distance: 26.000m [K=0.4574]
Remarks:

Planar Illuminance Curve



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γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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Humidity: 65.0%
Test Distance: 26.000m [K=0.4574]
Remarks: