

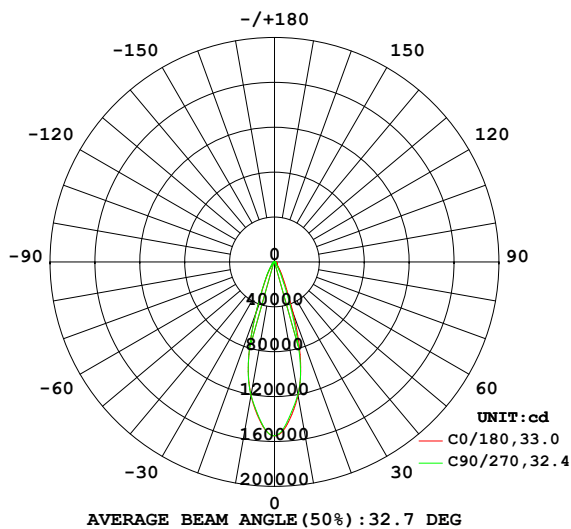
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.0V I:1.787A P:400.0W PF:0.973 Freq:50.01Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:56002.8x1 lm		
NAME: SP04-400-5770-F04003Z+L130	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

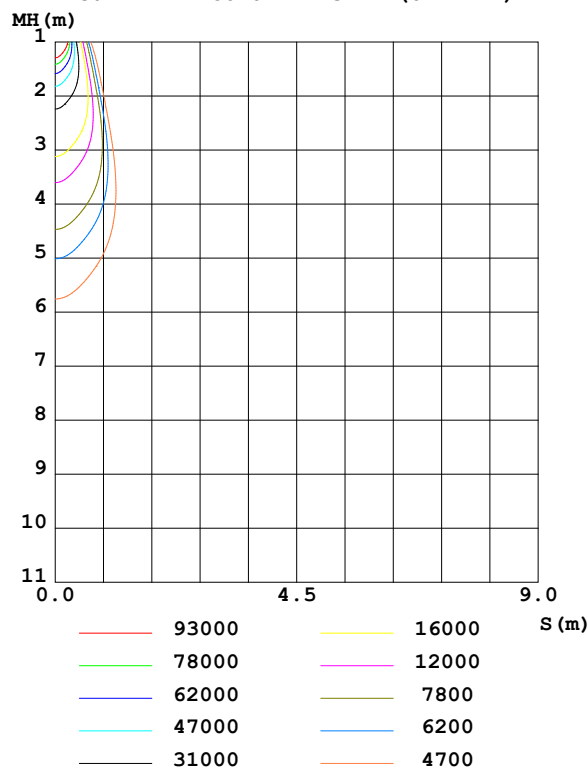
DATA OF LAMP		PHOTOMETRIC DATA Eff: 140.01 lm/W			
MODEL	/	I _{max} (cd)	154930	S/MH (C0/180)	0.52
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	0.52
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	56003	η UP,DN (C0-180)	0.0,46.8
NOMINAL FLUX (lm)	56002.8	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,53.2
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	/	η down (%)	100.0	CIBSE SHR MAX	0.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



AVERAGE BEAM ANGLE (50%) : 32.7 DEG

C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:LYJ
Test Date:2023-03-07

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4556]
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	1206	1207	1201	1207	1206	1204	1206	1204	0- 10	12874	12874	23,23
20	487.9	477.7	409.2	477.7	487.9	491.6	485.6	491.6	10- 20	23512	36386	65,65
30	124.6	112.9	76.80	112.9	124.6	146.6	133.9	146.6	20- 30	10881	47267	84.4,84.4
40	40.62	29.88	16.35	29.88	40.62	51.84	44.75	51.84	30- 40	4373	51640	92.2,92.2
50	24.19	11.00	2.691	11.00	24.19	28.41	24.95	28.41	40- 50	2071	53711	95.9,95.9
60	15.37	1.690	0.1360	1.690	15.37	16.37	14.70	16.37	50- 60	1287	54998	98.2,98.2
70	7.164	0.1749	0.0732	0.1749	7.164	7.483	5.824	7.483	60- 70	697.2	55695	99.5,99.5
80	1.521	0.0474	0.0101	0.0474	1.521	1.962	1.852	1.962	70- 80	264.4	55960	99.9,99.9
90	0	0	0	0	0	0	0	0	80- 90	43.14	56003	100,100
100	0	0	0	0	0	0	0	0	90-100	0	56003	100,100
110	0	0	0	0	0	0	0	0	100-110	0	56003	100,100
120	0	0	0	0	0	0	0	0	110-120	0	56003	100,100
130	0	0	0	0	0	0	0	0	120-130	0	56003	100,100
140	0	0	0	0	0	0	0	0	130-140	0	56003	100,100
150	0	0	0	0	0	0	0	0	140-150	0	56003	100,100
160	0	0	0	0	0	0	0	0	150-160	0	56003	100,100
170	0	0	0	0	0	0	0	0	160-170	0	56003	100,100
180	0	0	0	0	0	0	0	0	170-180	0	56003	100,100
DEG	LUMINOUS INTENSITY:X100cd									UNIT:lm		

Conical surface Flux(90deg): 52803 lm

%lum = 94.3%

%lamp = 94.3%

Conical surface Flux(120deg): 54998 lm

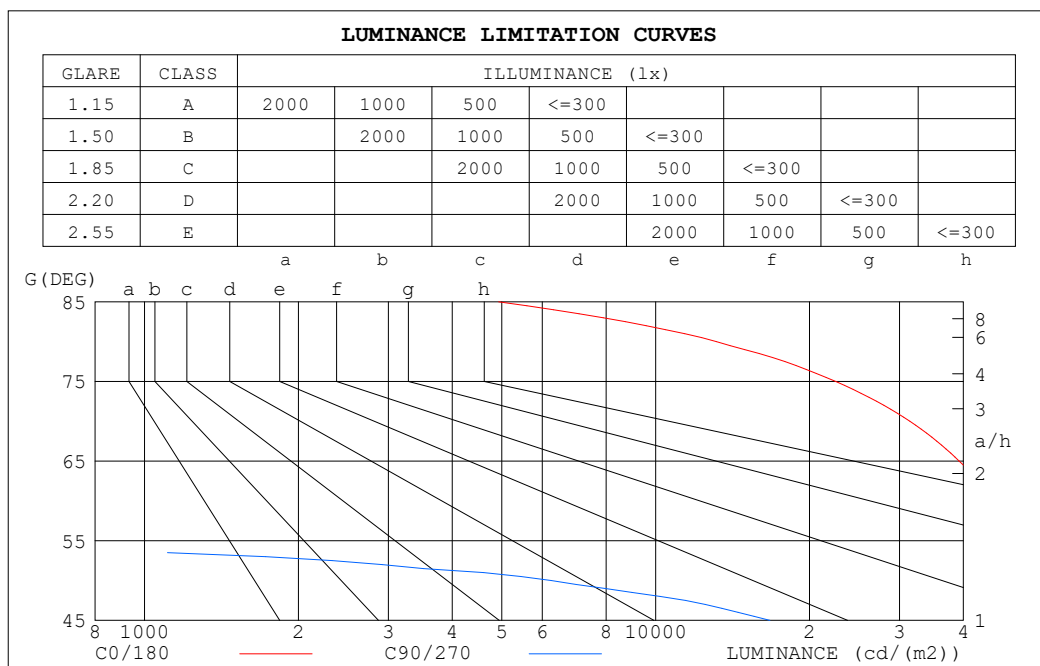
%lum = 98.2%

%lamp = 98.2%

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3°C
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γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4556]
Remarks:

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	4929	177
80	13146	87
75	22508	103
70	31430	319
65	39253	460
60	46125	406
55	51816	395
50	56466	6245
45	62884	16731

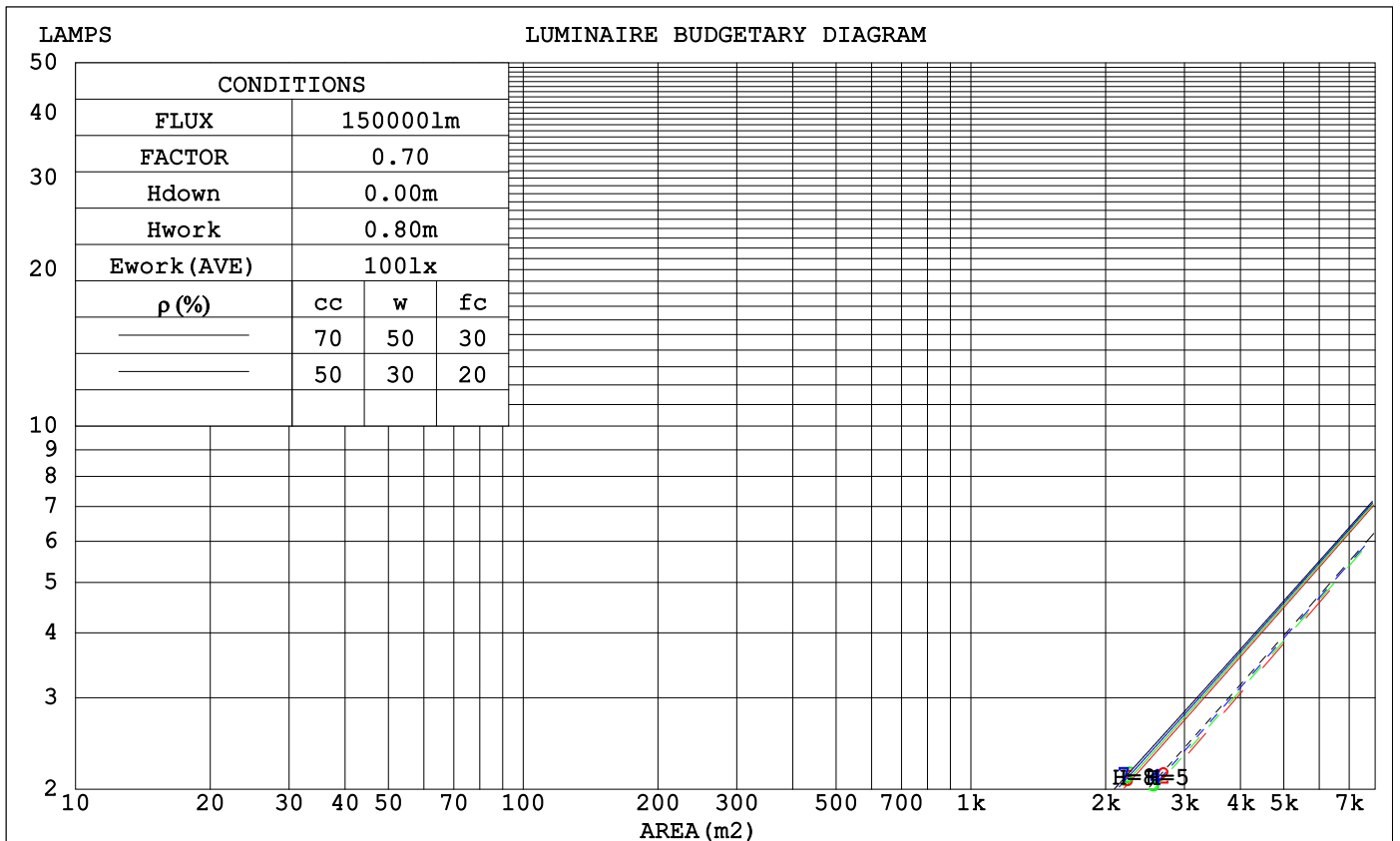
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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	1.12	1.09	1.07	1.09	1.07	1.06	1.05	1.04	1.02	1.02	1.01	.99	.98	.97	.97	.95
2.0	1.05	1.01	.98	1.03	1.00	.97	1.00	.97	.95	.97	.95	.93	.94	.93	.91	.90
3.0	.99	.95	.91	.98	.94	.91	.95	.92	.89	.93	.90	.88	.91	.88	.87	.85
4.0	.94	.89	.86	.93	.89	.85	.91	.87	.84	.89	.86	.83	.87	.85	.82	.81
5.0	.90	.85	.81	.89	.84	.81	.87	.83	.80	.85	.82	.79	.84	.81	.78	.77
6.0	.85	.80	.77	.85	.80	.77	.83	.79	.76	.82	.78	.76	.81	.78	.75	.74
7.0	.82	.77	.73	.81	.76	.73	.80	.76	.73	.79	.75	.72	.78	.74	.72	.71
8.0	.78	.73	.70	.78	.73	.70	.77	.73	.70	.76	.72	.69	.75	.72	.69	.68
9.0	.75	.70	.67	.75	.70	.67	.74	.70	.67	.73	.69	.67	.73	.69	.66	.65
10.0	.73	.68	.65	.72	.68	.64	.71	.67	.64	.71	.67	.64	.70	.67	.64	.63



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γ Range: 0 - 180DEG
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Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
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WEC AND CCEC

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.161	.092	.029	.155	.088	.028	.142	.082	.026	.131	.075	.024	.120	.070	.022	
2.0	.152	.083	.026	.146	.081	.025	.136	.076	.023	.126	.071	.022	.118	.066	.021	
3.0	.143	.076	.023	.138	.074	.022	.129	.070	.021	.121	.066	.020	.114	.063	.019	
4.0	.134	.070	.021	.131	.068	.020	.123	.065	.019	.116	.062	.019	.109	.059	.018	
5.0	.127	.065	.019	.124	.063	.018	.117	.061	.018	.111	.059	.017	.105	.056	.017	
6.0	.120	.060	.017	.117	.059	.017	.112	.057	.017	.106	.055	.016	.101	.053	.016	
7.0	.114	.056	.016	.112	.056	.016	.107	.054	.016	.102	.052	.015	.098	.051	.015	
8.0	.109	.053	.015	.106	.052	.015	.102	.051	.015	.098	.050	.014	.094	.048	.014	
9.0	.104	.050	.014	.102	.050	.014	.098	.048	.014	.094	.047	.014	.091	.046	.013	
10.0	.099	.048	.013	.098	.047	.013	.094	.046	.013	.091	.045	.013	.088	.044	.013	

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	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	.170	.157	.146	.145	.135	.126	.100	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.154	.133	.115	.132	.114	.099	.090	.079	.069	.052	.046	.041	.017	.015	.013	
3.0	.140	.113	.092	.120	.098	.080	.082	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.129	.098	.075	.110	.085	.065	.076	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.119	.086	.063	.102	.075	.054	.070	.052	.038	.041	.031	.023	.013	.010	.008	
6.0	.111	.077	.053	.095	.067	.046	.066	.047	.032	.038	.027	.019	.012	.009	.006	
7.0	.103	.069	.045	.089	.060	.039	.061	.042	.028	.036	.025	.016	.012	.008	.005	
8.0	.097	.062	.039	.084	.054	.034	.058	.038	.024	.034	.022	.014	.011	.007	.005	
9.0	.092	.057	.033	.079	.049	.029	.055	.035	.021	.032	.021	.012	.010	.007	.004	
10.0	.087	.052	.029	.075	.045	.026	.052	.032	.018	.030	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
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 Operators:LYJ
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γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
 Humidity:65.0%
 Test Distance:26.000m [K=0.4556]
 Remarks:

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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	18.4	19.4	18.8	19.7	20.0	14.0	14.0	14.0	14.0	14.0
3H	19.3	20.2	19.7	20.5	20.9	14.0	14.0	14.0	14.0	14.0
4H	19.5	20.3	19.9	20.6	21.0	14.0	14.0	14.0	14.0	14.0
6H	19.5	20.2	19.9	20.6	21.0	14.0	14.0	14.0	14.0	14.0
8H	19.5	20.2	19.9	20.6	21.0	14.0	14.0	14.0	14.0	14.0
12H	19.4	20.1	19.9	20.5	20.9	14.0	14.0	14.0	14.0	14.0
4H 2H	18.1	18.9	18.5	19.3	19.7	14.0	14.0	14.0	14.0	14.0
3H	19.0	19.7	19.4	20.1	20.5	14.0	14.0	14.0	14.0	14.0
4H	19.2	19.7	19.6	20.2	20.6	14.0	14.0	14.0	14.0	14.0
6H	19.2	19.7	19.7	20.1	20.6	14.0	14.0	14.0	14.0	14.0
8H	19.1	19.6	19.6	20.1	20.5	14.0	14.0	14.0	14.0	14.0
12H	19.1	19.5	19.6	20.0	20.5	14.0	14.0	14.0	14.0	14.0
8H 4H	19.0	19.4	19.4	19.9	20.4	14.0	14.0	14.0	14.0	14.0
6H	19.0	19.4	19.5	19.9	20.4	14.0	14.0	14.0	14.0	14.0
8H	18.9	19.3	19.5	19.8	20.3	14.0	14.0	14.0	14.0	14.0
12H	18.9	19.2	19.4	19.7	20.3	14.0	14.0	14.0	14.0	14.0
12H 4H	18.9	19.3	19.4	19.8	20.3	14.0	14.0	14.0	14.0	14.0
6H	18.9	19.3	19.5	19.7	20.3	14.0	14.0	14.0	14.0	14.0
8H	18.9	19.2	19.4	19.7	20.3	14.0	14.0	14.0	14.0	14.0
CIE190: 2010										

CIE190: 2010
Area: 0.067 m2

C Range: 0 - 360DEG
C Interval: 15.0DEG
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Temperature:25.3℃
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γ Range: 0 - 180DEG
γ Interval: 0.5DEG
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Humidity:65.0%
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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

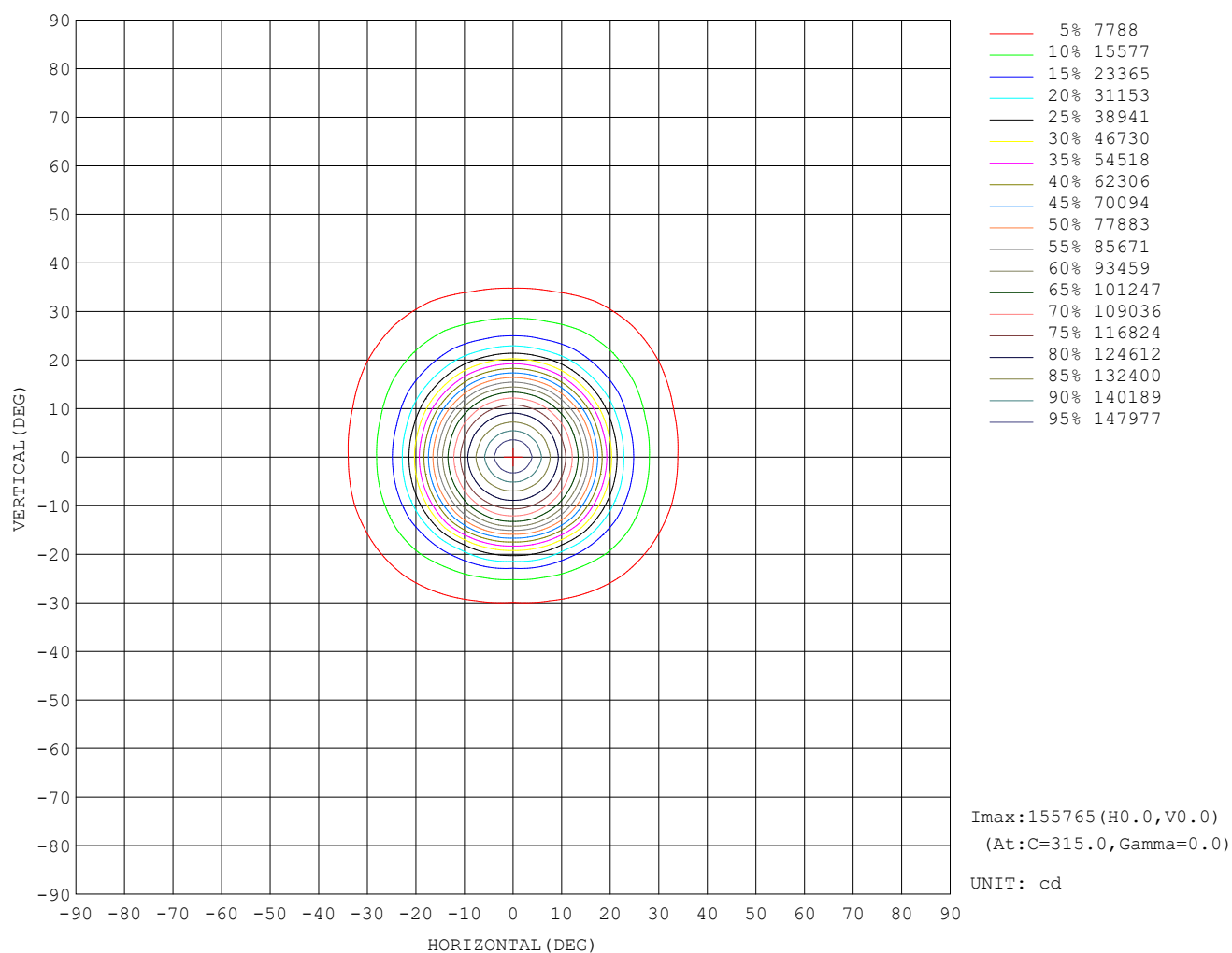
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	87	80	76	86	80	76	85	80	76	72
0.80	94	88	84	93	88	84	92	87	84	80
1.00	99	93	89	98	92	89	96	92	88	84
1.25	103	97	94	102	97	93	100	96	93	88
1.50	105	101	97	104	100	97	102	98	96	91
2.00	108	104	101	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	112	108	105	110	107	104	106	104	102	96
4.00	114	111	109	112	109	107	108	106	104	97
5.00	115	113	111	113	111	109	109	107	106	98
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004						Suspended			SHRNOM = 1.25	

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 Humidity: 65.0%
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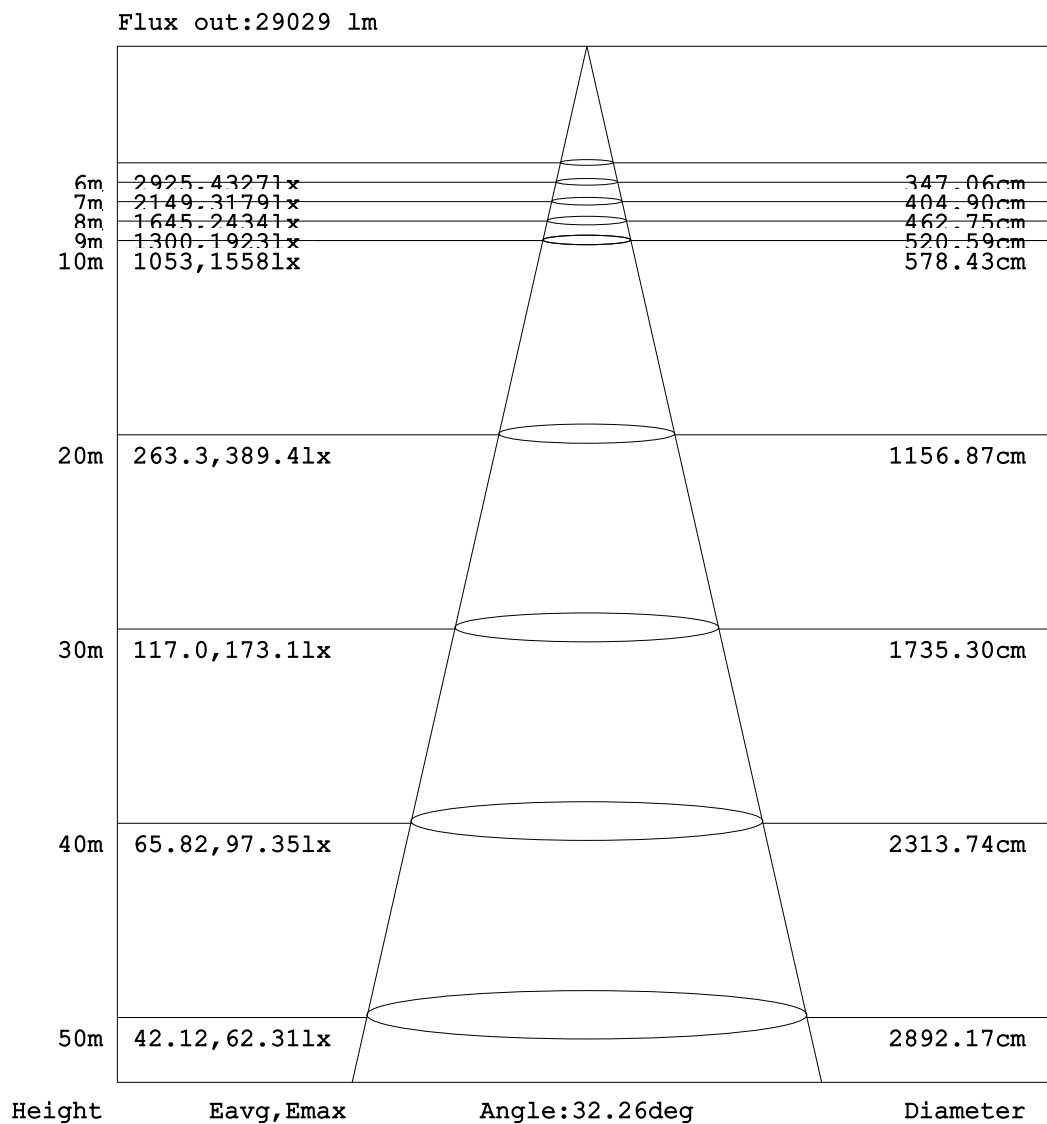
ISOCANDELA DIAGRAM



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Remarks:

AAI Figure



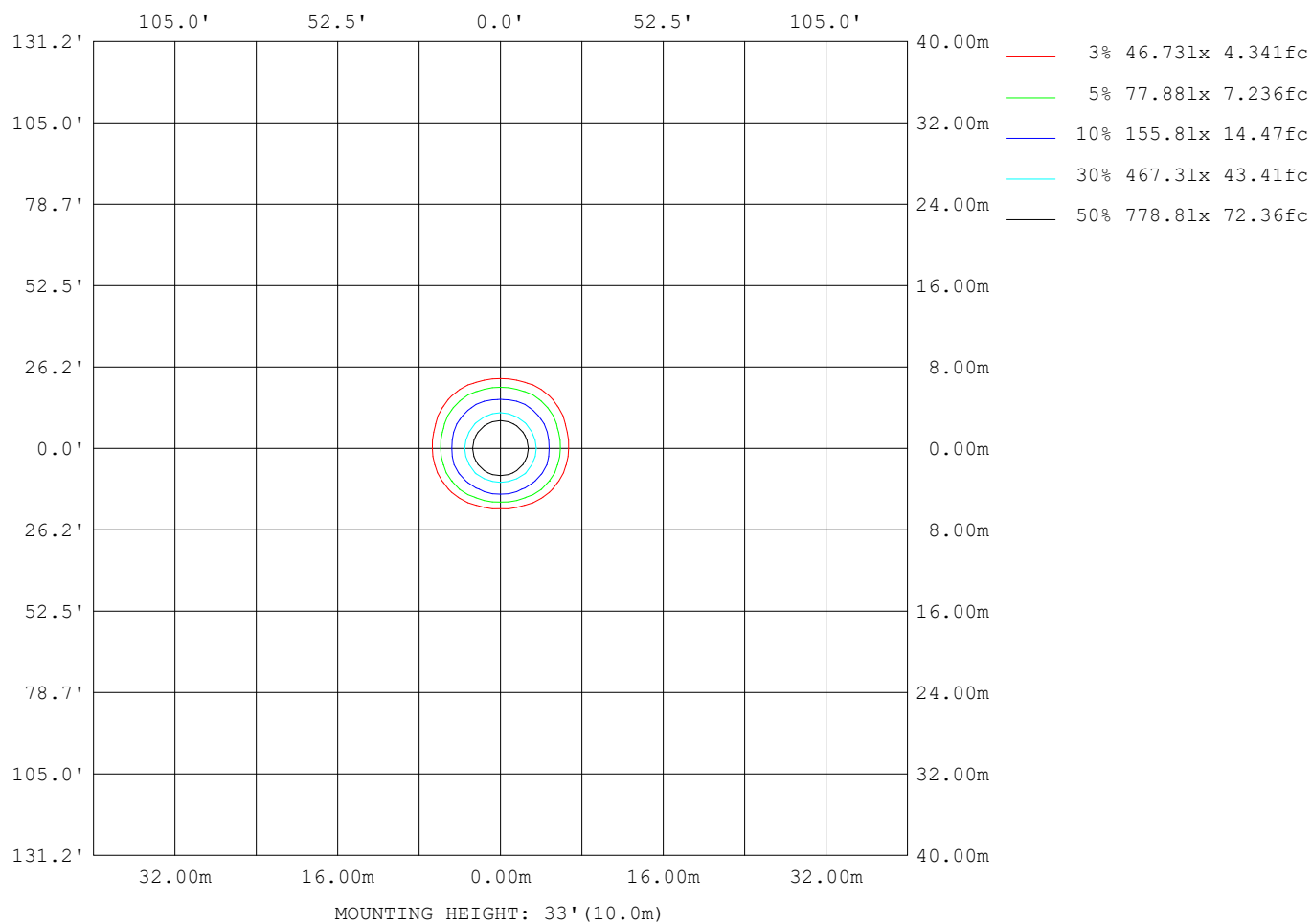
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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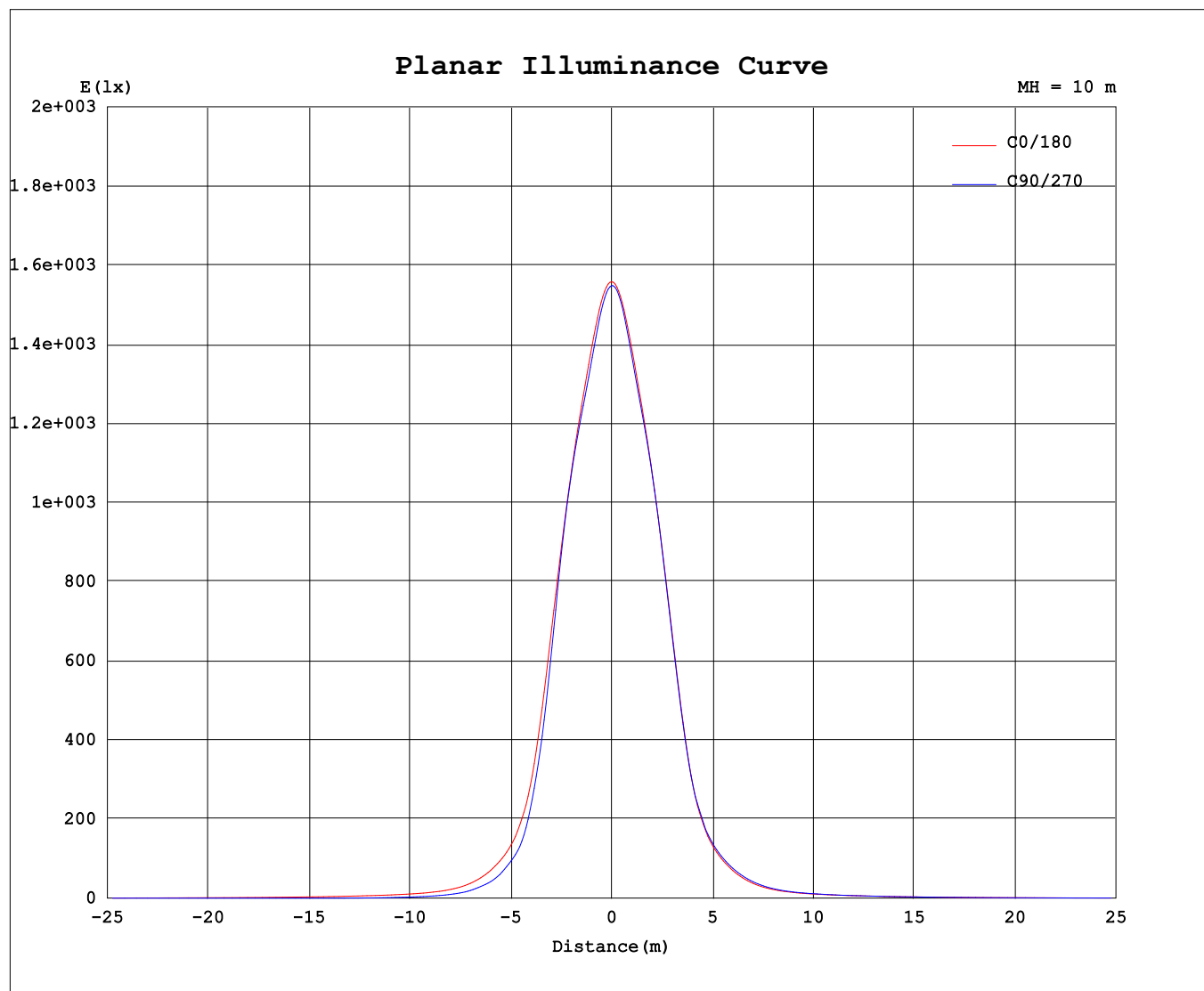
ISOLUX DIAGRAM



C Range: 0 - 360DEG
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Test Date: 2023-03-07

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Remarks:

Planar Illuminance Curve



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