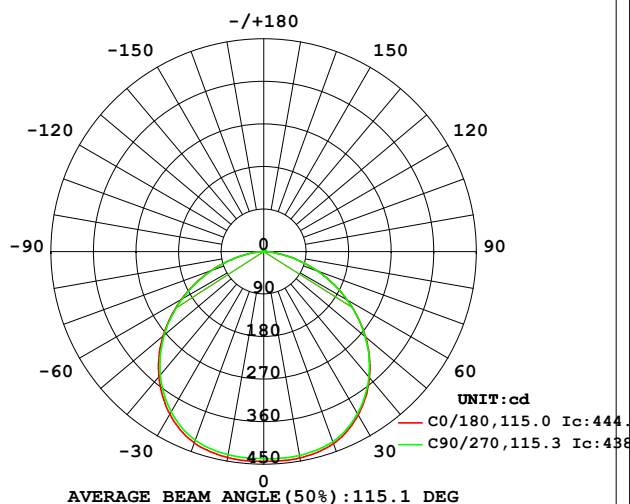


LUMINAIRE PHOTOMETRIC TEST REPORT

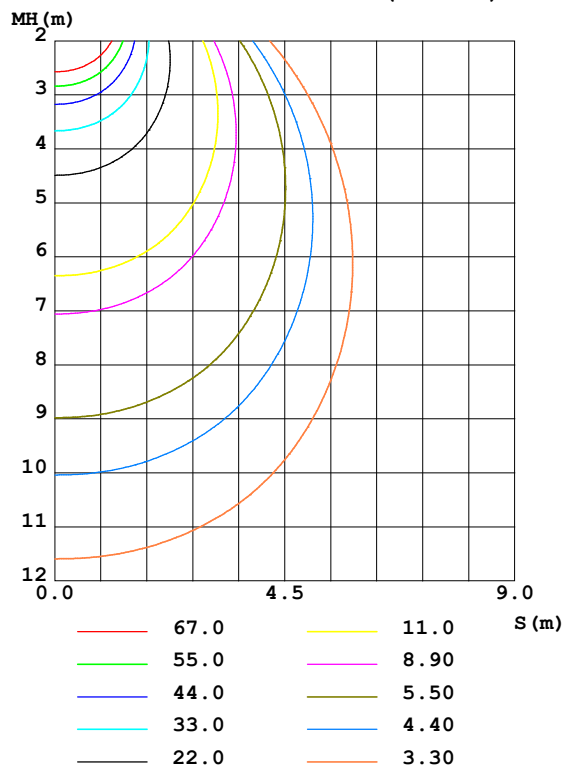
Test:U:120.1V I:0.2851A P:30.38W PF:0.8871 Freq:60.00Hz Lamp Flux:1313.13x1 lm		
NAME: Ezra	TYPE:--	SERIAL No.:FTS23091803L-05
SPEC.:M16616	DIM.: --	
MFR.: Matteo Lighting	SUR.:385mm	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 43.22 lm/W
MODEL	--	I _{max} (cd)	444.0	S/MH (C0/180)	1.32	
NOMINAL POWER (W)	--	LOR (%)	100.0	S/MH (C90/270)	1.32	
RATED VOLTAGE (V)	--	TOTAL FLUX (lm)	1313.1	η UP, DN (C0-180)	0.5, 49.9	
NOMINAL FLUX (lm)	1313.13	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.4, 49.1	
LAMPS INSIDE	1	η up (%)	1.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE (V)	--	η down (%)	99.0	CIBSE SHR MAX	1.35	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT: lx)



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jason Huang
Test Date: 2023-09-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
Humidity: 65.0%
Test Distance: 13.486m [K=1.0000]
Remarks: ---

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

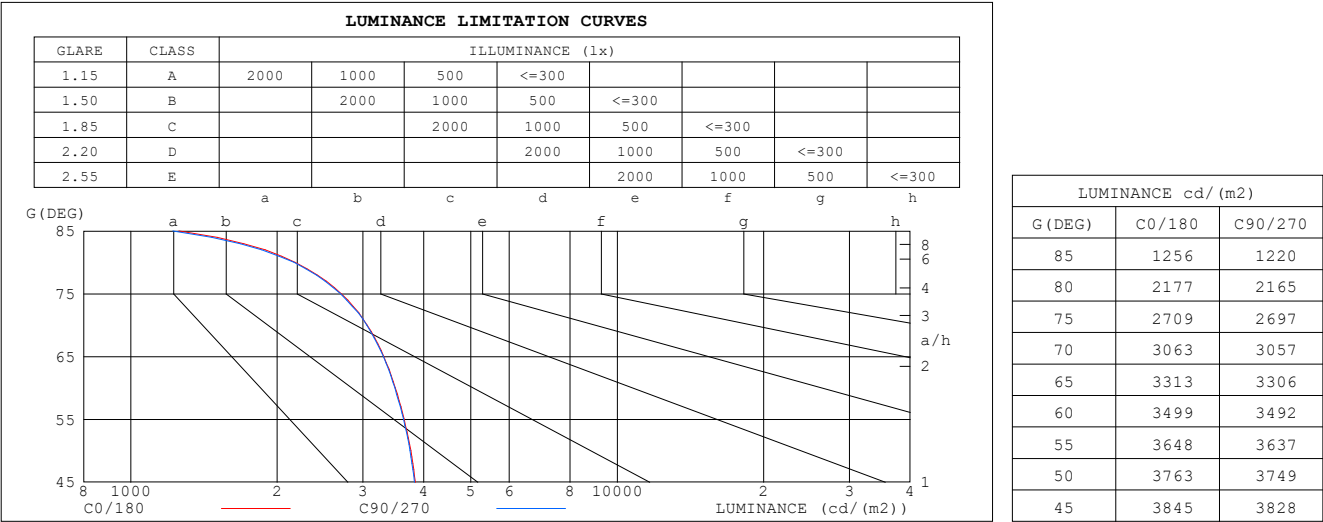
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	443.2	439.8	437.8	436.3	442.3	438.2	436.2	435.7	0- 10	41.87	41.87	3.19,3.19
20	432.2	429.9	427.8	425.5	430.5	426.9	424.3	423.7	10- 20	122.7	164.6	12.5,12.5
30	399.5	398.4	396.5	394.0	397.5	394.4	391.7	390.3	20- 30	190.4	355.0	27,27
40	348.0	347.7	346.0	343.6	345.4	342.9	340.7	339.2	30- 40	232.0	587.0	44.7,44.7
50	281.6	282.0	280.5	277.9	278.3	276.4	275.0	273.5	40- 50	240.7	827.7	63,63
60	203.6	204.1	203.2	201.0	200.1	198.6	198.1	197.0	50- 60	214.3	1042	79.4,79.4
70	121.9	122.4	121.7	120.2	118.2	117.5	117.5	116.8	60- 70	158.2	1200	91.4,91.4
80	44.00	44.37	43.77	42.98	40.73	40.64	40.94	40.71	70- 80	84.15	1284	97.8,97.8
90	0.7888	0.7708	0.7564	0.7292	0.4571	0.4784	0.4861	0.4576	80- 90	16.06	1300	99,99
100	1.127	1.107	1.100	1.086	0.8144	0.8133	0.8270	0.8067	90-100	0.8308	1301	99.1,99.1
110	1.626	1.619	1.628	1.598	1.271	1.284	1.270	1.270	100-110	1.265	1303	99.2,99.2
120	2.139	2.141	2.156	2.112	1.785	1.749	1.755	1.749	110-120	1.681	1304	99.3,99.3
130	2.625	2.669	2.643	2.597	2.227	2.205	2.239	2.226	120-130	1.953	1306	99.5,99.5
140	3.025	2.998	3.140	2.976	2.769	2.697	2.780	2.647	130-140	2.049	1308	99.6,99.6
150	3.325	3.332	3.283	3.289	3.083	3.061	3.082	3.054	140-150	1.913	1310	99.8,99.8
160	3.696	3.789	3.783	3.789	3.611	3.632	3.567	3.575	150-160	1.566	1312	99.9,99.9
170	3.839	3.875	3.839	3.825	3.768	3.746	3.725	3.732	160-170	1.046	1313	100,100
180	3.910	3.917	3.882	3.889	3.925	3.910	3.867	3.882	170-180	0.3668	1313	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jason Huang
 Test Date:2023-09-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:13.486m [K=1.0000]
 Remarks: ---

LUMINANCE LIMITATION CURVES

Test:U:120.1V I:0.2851A P:30.38W PF:0.8871 Freq:60.00Hz Lamp Flux:1313.13x1 lm		
NAME: Ezra	TYPE:--	SERIAL No.:FTS23091803L-05
SPEC.:M16616	DIM.: --	
MFR.: Matteo Lighting	SUR.:385mm	



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason Huang
Test Date:2023-09-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:13.486m [K=1.0000]
Remarks: ---

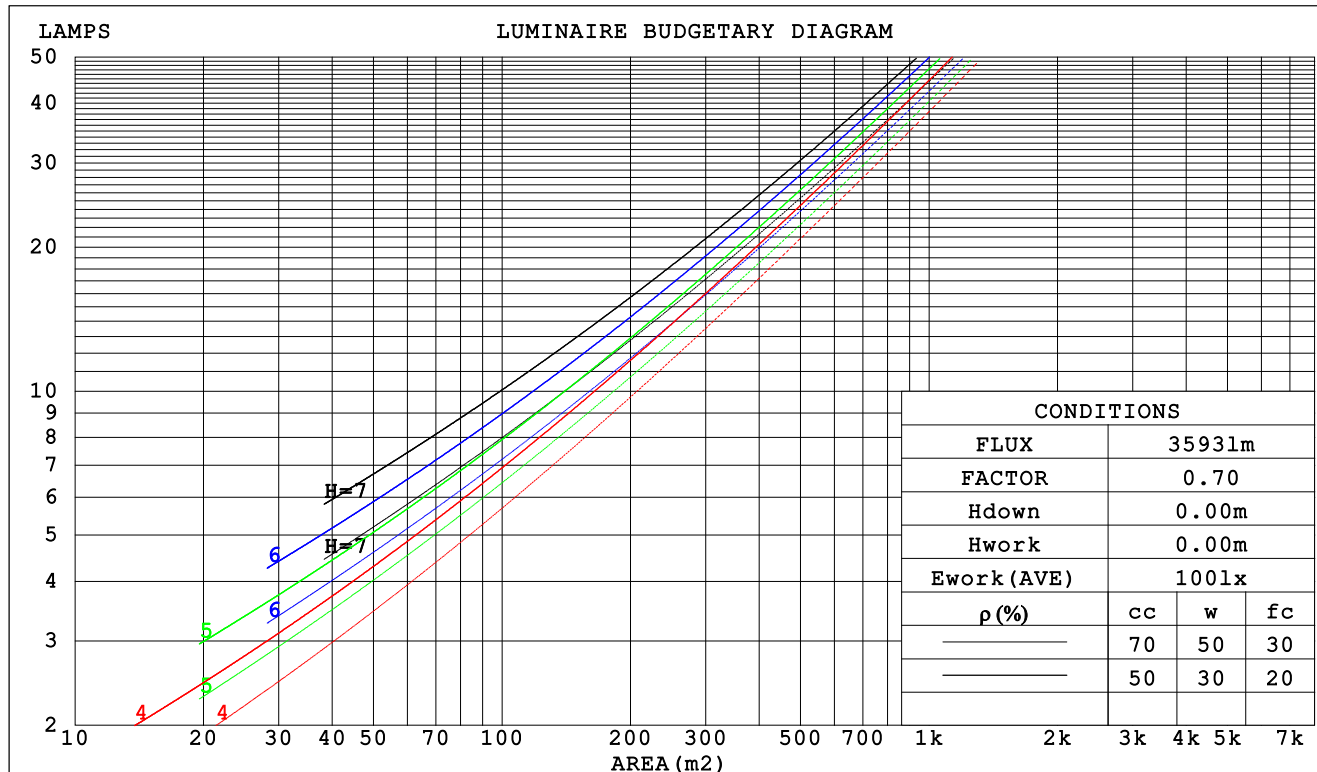
GONIOPHOTOMETERS SYSTEM TEST REPORT

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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.1V I:0.2851A P:30.38W PF:0.8871 Freq:60.00Hz Lamp Flux:1313.13x1 lm		
NAME: Ezra	TYPE:--	SERIAL No.:FTS23091803L-05
SPEC.:M16616	DIM.: --	
MFR.: Matteo Lighting	SUR.:385mm	

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						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	1.01	1.01	1.01	.99
1.0	1.04	.00	.96	1.02	.98	.95	.97	.94	.91	.93	.91	.88	.90	.88	.86	.83
2.0	.91	.84	.78	.89	.83	.77	.85	.80	.75	.82	.77	.74	.79	.75	.72	.70
3.0	.80	.72	.65	.78	.71	.65	.75	.69	.63	.72	.67	.62	.69	.65	.61	.59
4.0	.71	.62	.55	.69	.61	.55	.67	.59	.54	.64	.58	.53	.62	.57	.52	.50
5.0	.63	.54	.47	.62	.53	.47	.60	.52	.46	.58	.51	.46	.56	.50	.45	.43
6.0	.57	.48	.41	.56	.47	.41	.54	.46	.41	.52	.45	.40	.50	.44	.40	.38
7.0	.51	.43	.36	.50	.42	.36	.49	.41	.36	.47	.41	.36	.46	.40	.35	.33
8.0	.47	.38	.32	.46	.38	.32	.45	.37	.32	.43	.37	.32	.42	.36	.32	.30
9.0	.43	.35	.29	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.28	.27
10.0	.40	.32	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason Huang
Test Date:2023-09-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:13.486m [K=1.0000]
Remarks: ---

GONIOPHOTOMETERS SYSTEM TEST REPORT

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WEC AND CCEC

Test:U:120.1V I:0.2851A P:30.38W PF:0.8871 Freq:60.00Hz Lamp Flux:1313.13x1 lm		
NAME: Ezra	TYPE:--	SERIAL No.:FTS23091803L-05
SPEC.:M16616	DIM.: --	
MFR.: Matteo Lighting	SUR.:385mm	

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	.300	.171	.054	.293	.167	.053	.279	.160	.051	.266	.154	.049	.255	.148	.048		
2.0	.286	.157	.048	.279	.154	.047	.267	.149	.046	.256	.144	.045	.246	.139	.044		
3.0	.266	.142	.042	.260	.139	.042	.250	.135	.041	.240	.131	.040	.230	.128	.039		
4.0	.246	.128	.038	.241	.126	.037	.232	.123	.037	.223	.120	.036	.215	.117	.036		
5.0	.228	.116	.034	.224	.115	.033	.215	.112	.033	.207	.109	.033	.200	.107	.032		
6.0	.212	.106	.030	.208	.105	.030	.201	.103	.030	.193	.101	.030	.187	.098	.029		
7.0	.198	.098	.028	.194	.097	.028	.187	.095	.027	.181	.093	.027	.175	.091	.027		
8.0	.185	.090	.025	.182	.089	.025	.176	.088	.025	.170	.086	.025	.164	.084	.025		
9.0	.173	.084	.023	.171	.083	.023	.165	.082	.023	.160	.080	.023	.155	.079	.023		
10.0	.163	.078	.022	.161	.078	.022	.156	.076	.021	.151	.075	.021	.146	.074	.021		

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	.198	.198	.198	.169	.169	.169	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.187	.164	.143	.160	.140	.123	.109	.097	.085	.063	.056	.049	.020	.018	.016	
2.0	.179	.139	.106	.153	.120	.092	.105	.083	.064	.061	.048	.038	.019	.016	.012	
3.0	.171	.122	.082	.147	.105	.071	.101	.073	.050	.058	.043	.030	.019	.014	.010	
4.0	.164	.108	.066	.140	.094	.058	.097	.065	.041	.056	.038	.024	.018	.012	.008	
5.0	.156	.098	.055	.134	.085	.048	.093	.059	.034	.054	.035	.020	.017	.011	.007	
6.0	.149	.090	.047	.128	.078	.041	.089	.054	.029	.051	.032	.017	.017	.010	.006	
7.0	.143	.083	.041	.123	.072	.036	.085	.050	.025	.049	.030	.015	.016	.010	.005	
8.0	.136	.077	.036	.117	.067	.032	.081	.047	.023	.047	.028	.013	.015	.009	.004	
9.0	.130	.072	.033	.112	.063	.029	.078	.044	.020	.045	.026	.012	.015	.009	.004	
10.0	.125	.068	.030	.107	.059	.026	.075	.041	.019	.043	.025	.011	.014	.008	.004	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason Huang
Test Date:2023-09-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:13.486m [K=1.0000]
Remarks: ---

GONIOPHOTOMETERS SYSTEM TEST REPORT

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UGR(Unified Glare Rating) Table

Test:U:120.1V I:0.2851A P:30.38W PF:0.8871 Freq:60.00Hz Lamp Flux:1313.13x1 lm										
NAME: Ezra					TYPE:--			SERIAL No.:FTS23091803L-05		
SPEC.:M16616					DIM.: --					
MFR.: Matteo Lighting					SUR.:385mm					
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	17.4	18.9	17.7	19.1	19.4	17.4	18.9	17.7	19.1	19.3
3H	18.8	20.2	19.2	20.5	20.7	18.8	20.2	19.1	20.4	20.7
4H	19.4	20.7	19.7	20.9	21.2	19.3	20.6	19.7	20.9	21.2
6H	19.7	20.9	20.0	21.2	21.5	19.6	20.9	20.0	21.2	21.5
8H	19.7	20.9	20.1	21.2	21.5	19.7	20.9	20.0	21.2	21.5
12H	19.7	20.9	20.1	21.2	21.5	19.7	20.8	20.1	21.2	21.5
4H 2H	18.0	19.3	18.3	19.6	19.9	18.0	19.3	18.3	19.6	19.8
3H	19.6	20.7	20.0	21.1	21.4	19.6	20.7	19.9	21.0	21.3
4H	20.2	21.3	20.6	21.6	22.0	20.2	21.2	20.6	21.6	21.9
6H	20.6	21.6	21.1	21.9	22.3	20.6	21.5	21.0	21.9	22.3
8H	20.8	21.6	21.2	22.0	22.4	20.7	21.6	21.1	22.0	22.4
12H	20.8	21.6	21.2	22.0	22.4	20.7	21.5	21.2	21.9	22.4
8H 4H	20.4	21.3	20.9	21.7	22.1	20.4	21.3	20.8	21.7	22.1
6H	21.0	21.7	21.4	22.1	22.6	20.9	21.7	21.4	22.1	22.5
8H	21.1	21.8	21.6	22.2	22.7	21.1	21.7	21.6	22.2	22.6
12H	21.2	21.8	21.7	22.2	22.7	21.2	21.7	21.7	22.2	22.7
12H 4H	20.4	21.2	20.9	21.6	22.1	20.4	21.2	20.9	21.6	22.0
6H	21.0	21.6	21.5	22.1	22.6	21.0	21.6	21.4	22.0	22.5
8H	21.2	21.7	21.7	22.2	22.7	21.2	21.7	21.6	22.2	22.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 1313 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 0.9$)

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jason Huang
 Test Date:2023-09-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:13.486m [K=1.0000]
 Remarks: ---

UTILIZATION FACTORS TABLE

Test:U:120.1V I:0.2851A P:30.38W PF:0.8871 Freq:60.00Hz Lamp Flux:1313.13x1 lm		
NAME: Ezra	TYPE:--	SERIAL No.:FTS23091803L-05
SPEC.:M16616	DIM.: --	
MFR.: Matteo Lighting	SUR.:385mm	

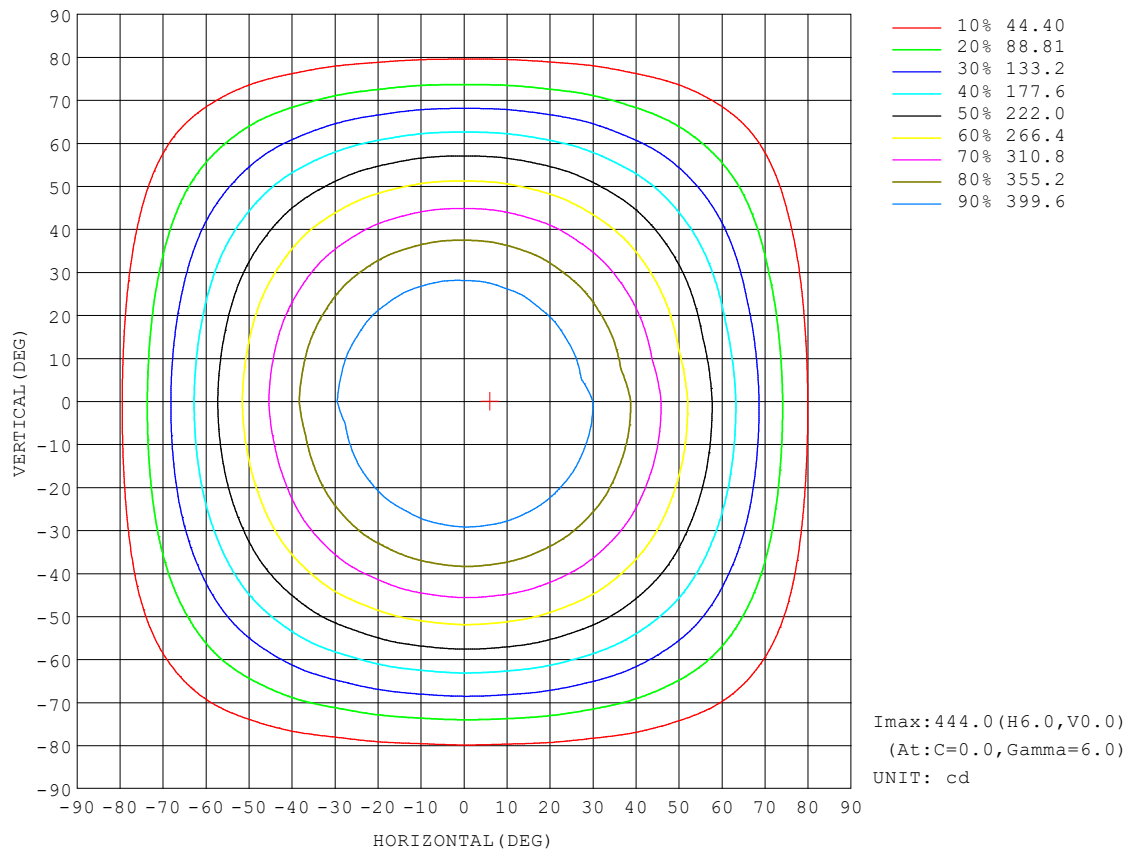
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	46	39	57	46	39	55	45	39	32
0.80	68	56	49	67	56	49	65	55	48	41
1.00	76	65	58	75	64	58	73	66	57	50
1.25	83	73	66	82	72	65	79	71	64	57
1.50	88	79	72	87	78	71	83	76	70	62
2.00	95	87	80	93	85	80	90	83	78	70
2.50	99	91	85	97	90	85	93	87	83	74
3.00	102	96	90	100	94	89	96	91	87	78
4.00	106	101	96	104	99	95	100	95	92	83
5.00	109	104	100	106	102	98	102	98	95	86
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:Jason Huang
 Test Date:2023-09-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:13.486m [K=1.0000]
 Remarks: ---

ISOCANDELA DIAGRAM

Test:U:120.1V I:0.2851A P:30.38W PF:0.8871 Freq:60.00Hz Lamp Flux:1313.13x1 lm		
NAME: Ezra	TYPE:--	SERIAL No.:FTS23091803L-05
SPEC.:M16616	DIM.: --	
MFR.: Matteo Lighting	SUR.:385mm	

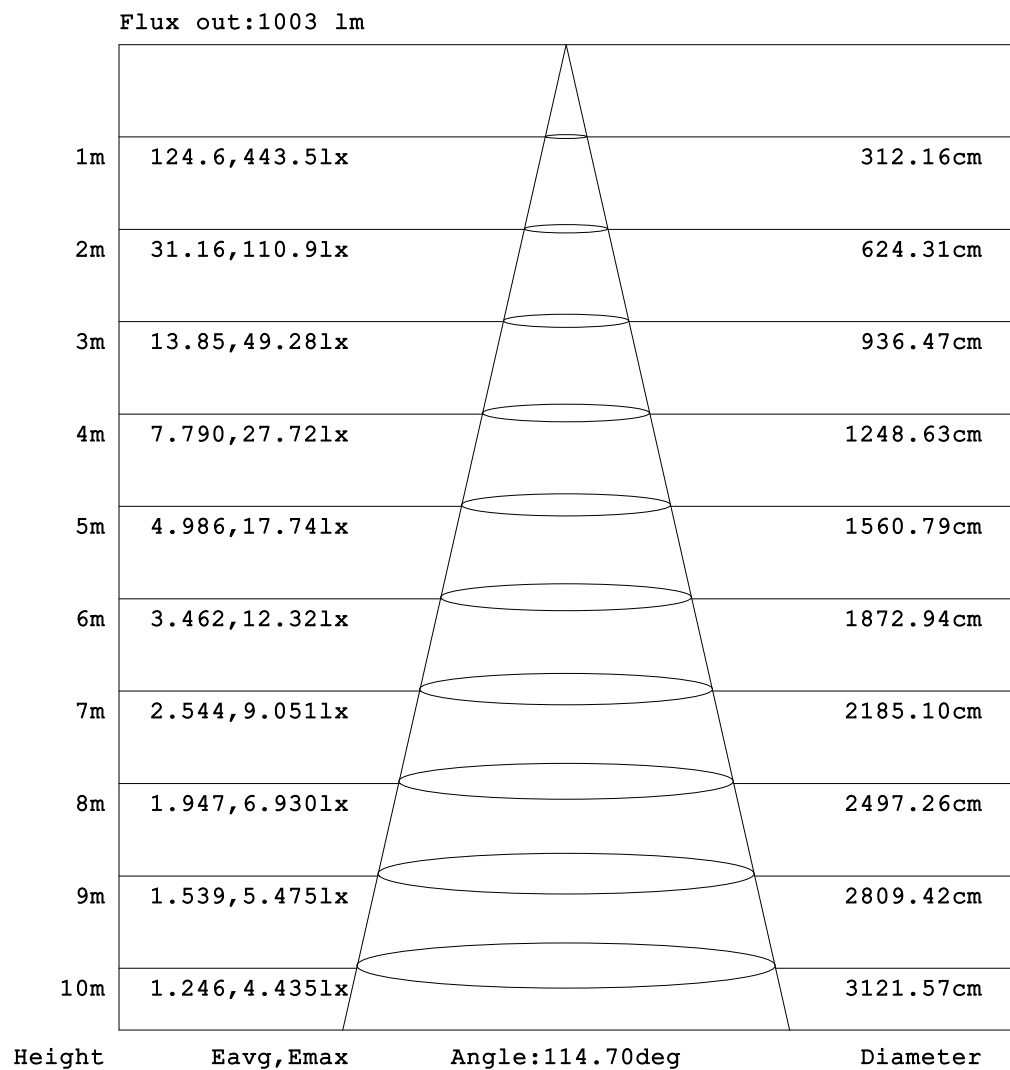


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason Huang
Test Date:2023-09-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:13.486m [K=1.0000]
Remarks: ---

AAI Figure

Test:U:120.1V I:0.2851A P:30.38W PF:0.8871 Freq:60.00Hz Lamp Flux:1313.13x1 lm		
NAME: Ezra	TYPE:--	SERIAL No.:FTS23091803L-05
SPEC.:M16616	DIM.: --	
MFR.: Matteo Lighting	SUR.:385mm	



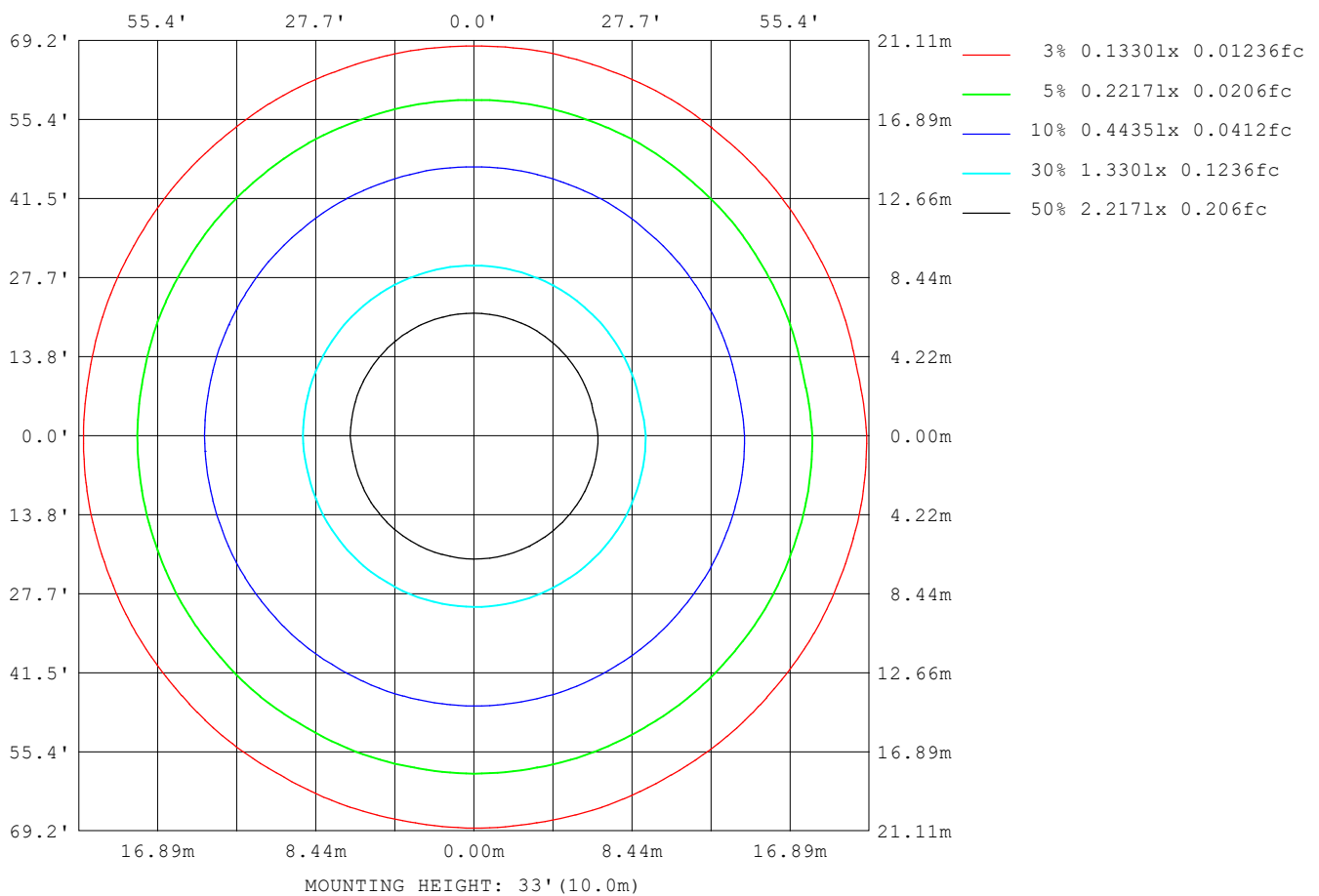
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jason Huang
 Test Date:2023-09-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:13.486m [K=1.0000]
 Remarks: ---

ISOLUX DIAGRAM

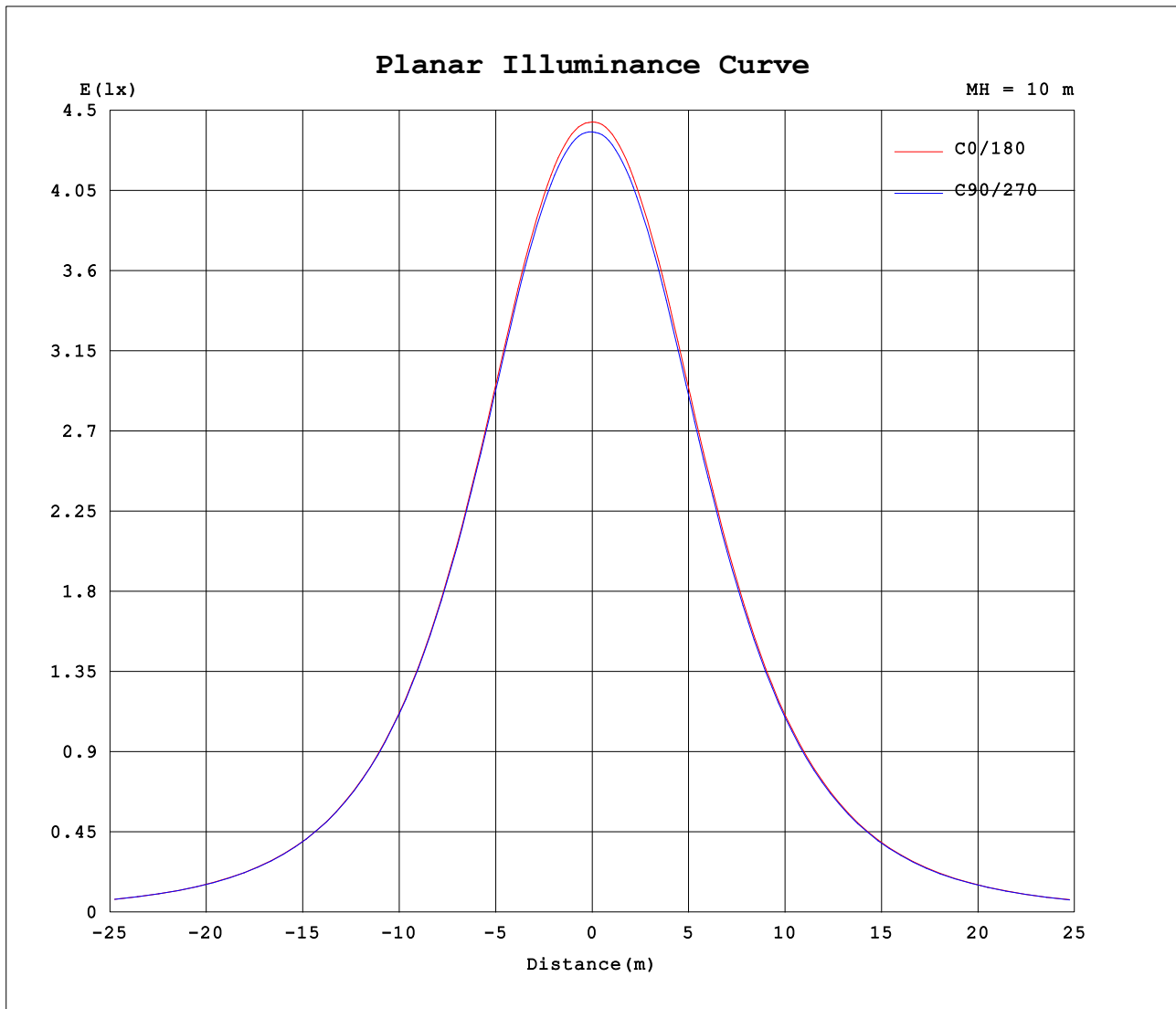
Test:U:120.1V I:0.2851A P:30.38W PF:0.8871 Freq:60.00Hz Lamp Flux:1313.13x1 lm		
NAME: Ezra	TYPE:--	SERIAL No.:FTS23091803L-05
SPEC.:M16616	DIM.: --	
MFR.: Matteo Lighting	SUR.:385mm	



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason Huang
Test Date:2023-09-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:13.486m [K=1.0000]
Remarks: ---

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jason Huang
Test Date: 2023-09-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
Humidity: 65.0%
Test Distance: 13.486m [K=1.0000]
Remarks: ---