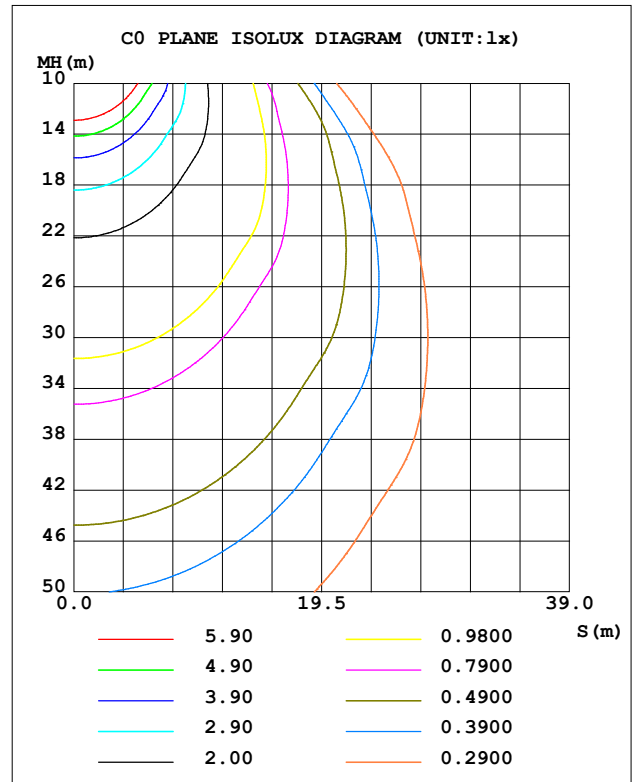
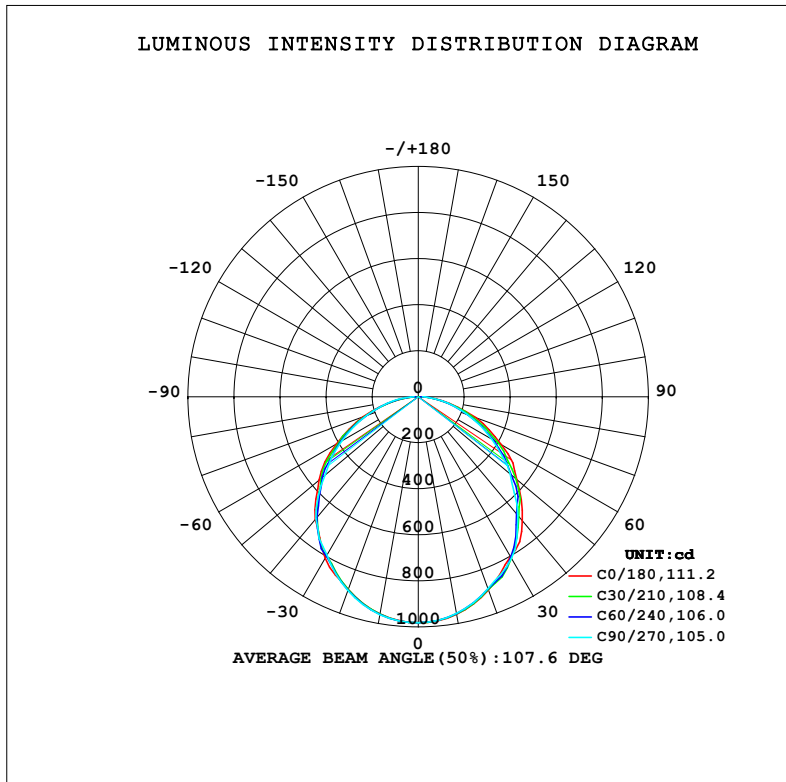


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 99PFMX40/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 334	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cross	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	99PFMX40/WH	Imax (cd)	981.8	S/MH (C0/180)	1.23
NOMINAL POWER (W)	20	LOR (%)	133.2	S/MH (C90/270)	1.21
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	2664.2	η UP, DN (C0-180)	0.0, 66.2
NOMINAL FLUX (lm)	2000	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 67.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	133.2	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 15 November 2022

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 6.265m [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	959.4	956.9	956.0	956.7	957.6	959.3	960.8	961.3	0- 10	92.60	92.60	3.48,4.63
20	892.7	889.9	886.5	908.1	890.4	892.7	895.4	897.0	10- 20	262.3	354.9	13.3,17.7
30	801.9	806.0	810.2	804.9	808.9	803.5	794.3	817.8	20- 30	393.5	748.4	28.1,37.4
40	703.7	674.6	672.9	682.2	695.9	684.2	692.4	689.0	30- 40	467.8	1216	45.6,60.8
50	560.0	543.6	520.6	539.9	563.6	551.0	528.8	557.3	40- 50	476.1	1692	63.5,84.6
60	416.1	387.9	369.7	385.0	412.0	399.9	383.8	403.2	50- 60	421.6	2114	79.3,106
70	267.1	238.2	226.5	236.3	254.8	245.2	239.3	248.8	60- 70	314.6	2428	91.1,121
80	109.1	100.3	105.8	98.24	106.4	105.5	111.5	108.4	70- 80	180.7	2609	97.9,130
90	9.084	2.423	18.27	2.448	9.130	3.081	18.38	3.141	80- 90	55.14	2664	100,133
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): 1457 lm

%lum = 54.7%

%lamp = 72.9%

Conical surface Flux(130deg): 2286.7 lm

%lum = 85.8%

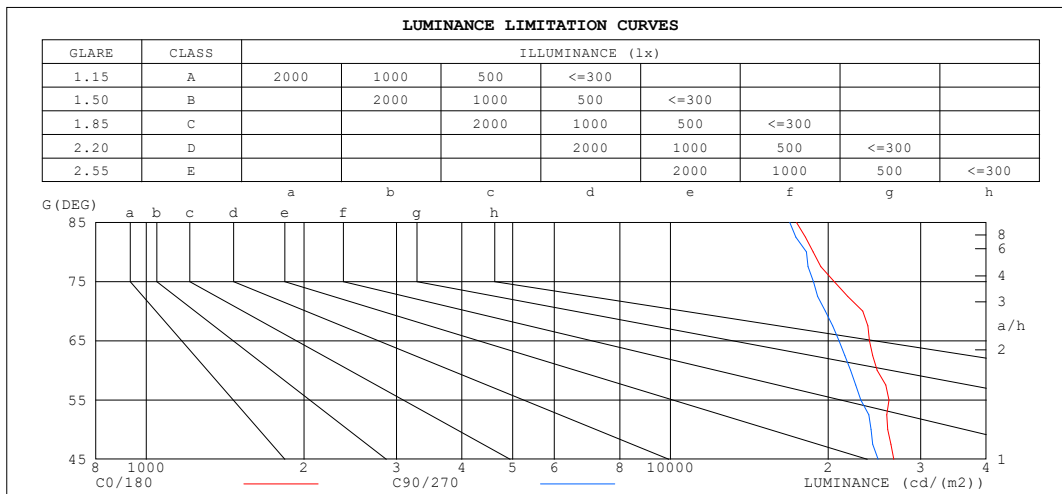
%lamp = 114.3%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:15 November 2022

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

NAME: 99PFMX40/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 334	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cross	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	17392	16875
80	18717	18164
75	20544	18728
70	23268	19741
65	23964	20974
60	24798	22041
55	26102	23062
50	25957	24145
45	26675	24905

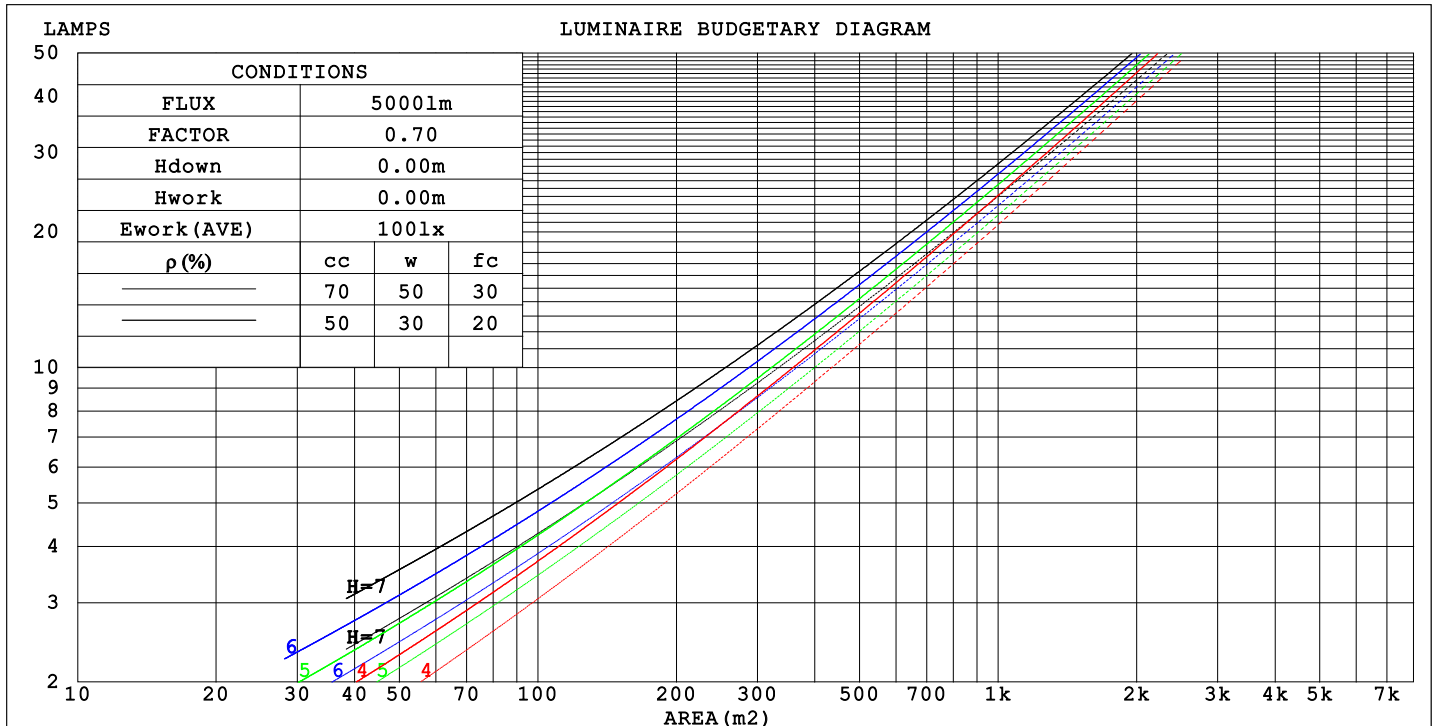
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 15 November 2022

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 6.265m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: 99PFMX40/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 334	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cross	Shielding Angle:

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															



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:15 November 2022

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: 99PFMX40/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 334	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cross	Shielding Angle:

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	.411	.234	.074	.401	.229	.073	.384	.220	.070	.367	.212	.068	.353	.204	.066	
2.0	.386	.211	.065	.377	.208	.064	.362	.201	.062	.347	.195	.061	.334	.189	.060	
3.0	.357	.190	.057	.349	.187	.056	.336	.182	.055	.323	.177	.054	.311	.172	.053	
4.0	.329	.171	.050	.323	.169	.050	.311	.165	.049	.299	.161	.048	.289	.157	.048	
5.0	.305	.155	.045	.299	.153	.045	.288	.150	.044	.278	.147	.044	.269	.143	.043	
6.0	.283	.142	.041	.277	.140	.040	.268	.137	.040	.259	.135	.040	.250	.132	.039	
7.0	.263	.130	.037	.259	.129	.037	.250	.126	.036	.242	.124	.036	.234	.122	.036	
8.0	.246	.120	.034	.242	.119	.034	.234	.117	.033	.227	.115	.033	.220	.113	.033	
9.0	.230	.111	.031	.227	.111	.031	.220	.109	.031	.213	.107	.031	.207	.105	.030	
10.0	.217	.104	.029	.214	.103	.029	.207	.102	.029	.201	.100	.028	.196	.099	.028	

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	.254	.254	.254	.217	.217	.217	.148	.148	.148	.085	.085	.085	.027	.027	.027	
1.0	.240	.208	.179	.205	.179	.154	.140	.123	.107	.081	.071	.062	.026	.023	.020	
2.0	.229	.176	.131	.196	.151	.113	.134	.105	.079	.078	.061	.046	.025	.020	.015	
3.0	.219	.152	.099	.187	.131	.086	.129	.091	.060	.074	.053	.036	.024	.017	.012	
4.0	.208	.134	.078	.179	.116	.068	.123	.081	.048	.071	.047	.028	.023	.015	.009	
5.0	.198	.121	.063	.170	.104	.055	.117	.073	.039	.068	.043	.023	.022	.014	.008	
6.0	.189	.109	.052	.162	.095	.046	.112	.066	.032	.065	.039	.019	.021	.013	.006	
7.0	.180	.100	.044	.155	.087	.039	.107	.061	.027	.062	.036	.016	.020	.012	.005	
8.0	.171	.092	.038	.147	.080	.034	.102	.056	.024	.059	.033	.014	.019	.011	.005	
9.0	.163	.086	.034	.140	.075	.029	.097	.052	.021	.057	.031	.012	.018	.010	.004	
10.0	.156	.080	.030	.134	.070	.026	.093	.049	.019	.054	.029	.011	.018	.010	.004	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:15 November 2022

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

NAME: 99PFMX40/WH					TYPE:			WEIGHT: 1			
SPEC.:					DIM.: 35 x 75 x 334			SERIAL No.: 0			
MFR.: Elmark Industries JSC					SUR.: cross			Shielding Angle:			
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	21.7	23.2	22.0	23.4	23.6	21.2	22.7	21.5	22.9	23.1
	3H	23.3	24.7	23.6	24.9	25.1	22.6	24.0	22.9	24.2	24.5
	4H	23.9	25.2	24.2	25.4	25.7	23.2	24.5	23.5	24.7	25.0
	6H	24.3	25.5	24.6	25.8	26.1	23.6	24.9	24.0	25.1	25.4
	8H	24.4	25.6	24.8	25.9	26.2	23.8	25.0	24.1	25.3	25.6
	12H	24.5	25.7	24.9	26.0	26.3	23.9	25.0	24.2	25.3	25.6
4H	2H	22.2	23.6	22.6	23.8	24.1	21.8	23.2	22.1	23.4	23.7
	3H	24.0	25.1	24.3	25.4	25.7	23.4	24.6	23.8	24.9	25.2
	4H	24.7	25.7	25.1	26.1	26.4	24.1	25.1	24.5	25.5	25.8
	6H	25.2	26.2	25.6	26.5	26.9	24.7	25.6	25.1	26.0	26.3
	8H	25.4	26.3	25.9	26.7	27.1	24.9	25.8	25.3	26.2	26.5
	12H	25.6	26.4	26.0	26.8	27.2	25.1	25.9	25.5	26.2	26.7
8H	4H	24.9	25.8	25.3	26.1	26.5	24.4	25.2	24.8	25.6	26.0
	6H	25.6	26.3	26.0	26.7	27.2	25.1	25.9	25.6	26.3	26.7
	8H	25.9	26.5	26.3	27.0	27.4	25.4	26.1	25.9	26.5	27.0
	12H	26.1	26.7	26.6	27.1	27.6	25.7	26.2	26.1	26.7	27.1
12H	4H	24.9	25.7	25.3	26.1	26.5	24.4	25.2	24.8	25.6	26.0
	6H	25.6	26.3	26.1	26.7	27.2	25.2	25.8	25.6	26.3	26.7
	8H	26.0	26.5	26.4	27.0	27.4	25.5	26.1	26.0	26.5	27.0
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 2000 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.4)
Area: 0.03355 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:15 November 2022

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: 99PFMX40/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 334	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cross	Shielding Angle:

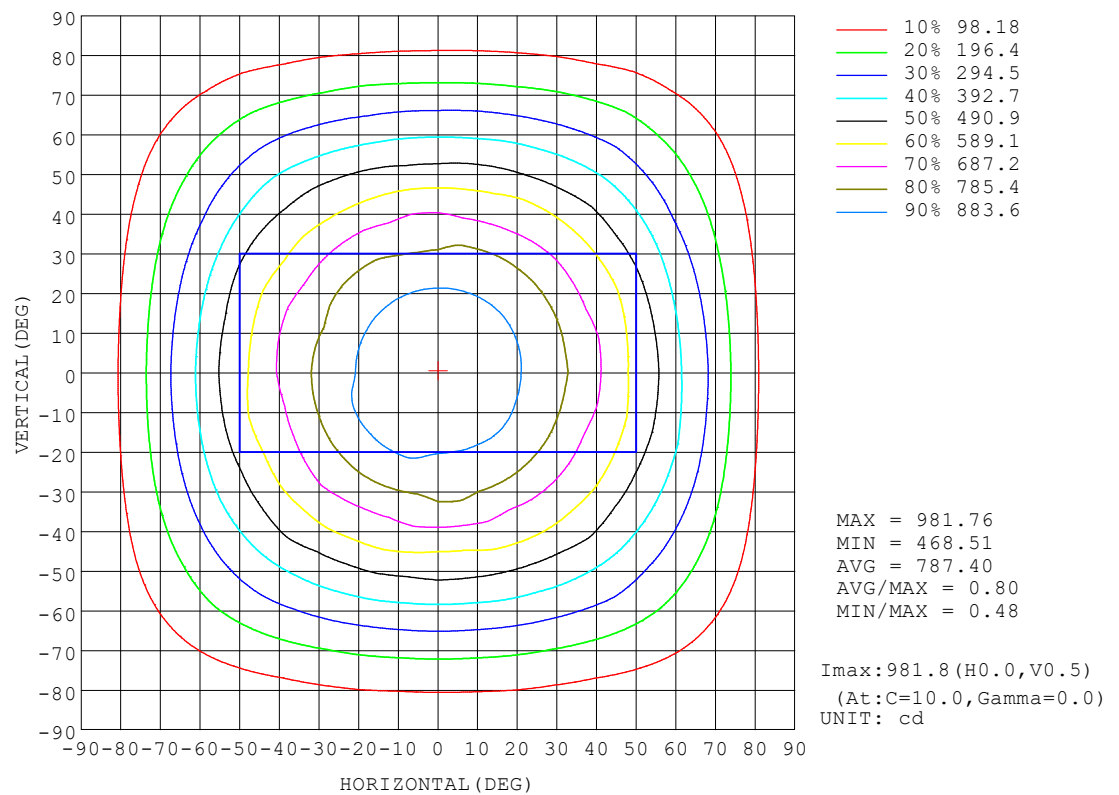
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	77	62	53	76	62	53	75	61	52	44
0.80	91	75	66	89	75	65	87	74	65	56
1.00	102	87	78	100	86	77	97	88	77	67
1.25	111	97	88	109	96	87	106	95	86	77
1.50	118	105	96	116	104	95	112	101	93	84
2.00	127	116	107	124	114	106	120	111	104	94
2.50	132	122	114	129	120	113	124	116	110	99
3.00	136	127	120	134	125	119	128	121	116	104
4.00	142	134	128	138	132	126	133	127	123	111
5.00	145	138	133	142	136	131	136	131	127	115
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: 25.3°C
Operators:
Test Date: 15 November 2022

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 6.265m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: 99PFMX40/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 334	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cross	Shielding Angle:

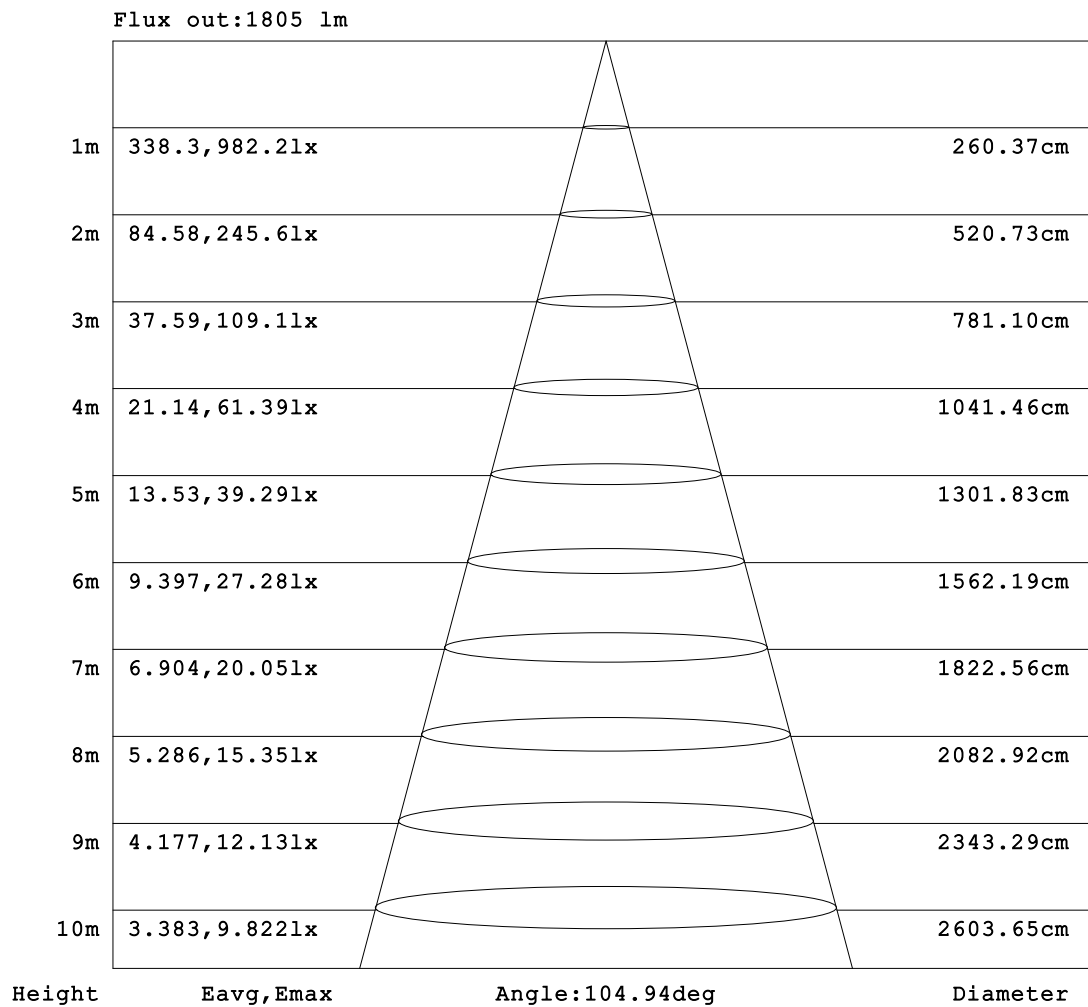


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:15 November 2022

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity:65.0%
 Test Distance:6.265m [K=1.0000]
 Remarks:

AAI Figure

NAME: 99PFMX40/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 334	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cross	Shielding Angle:



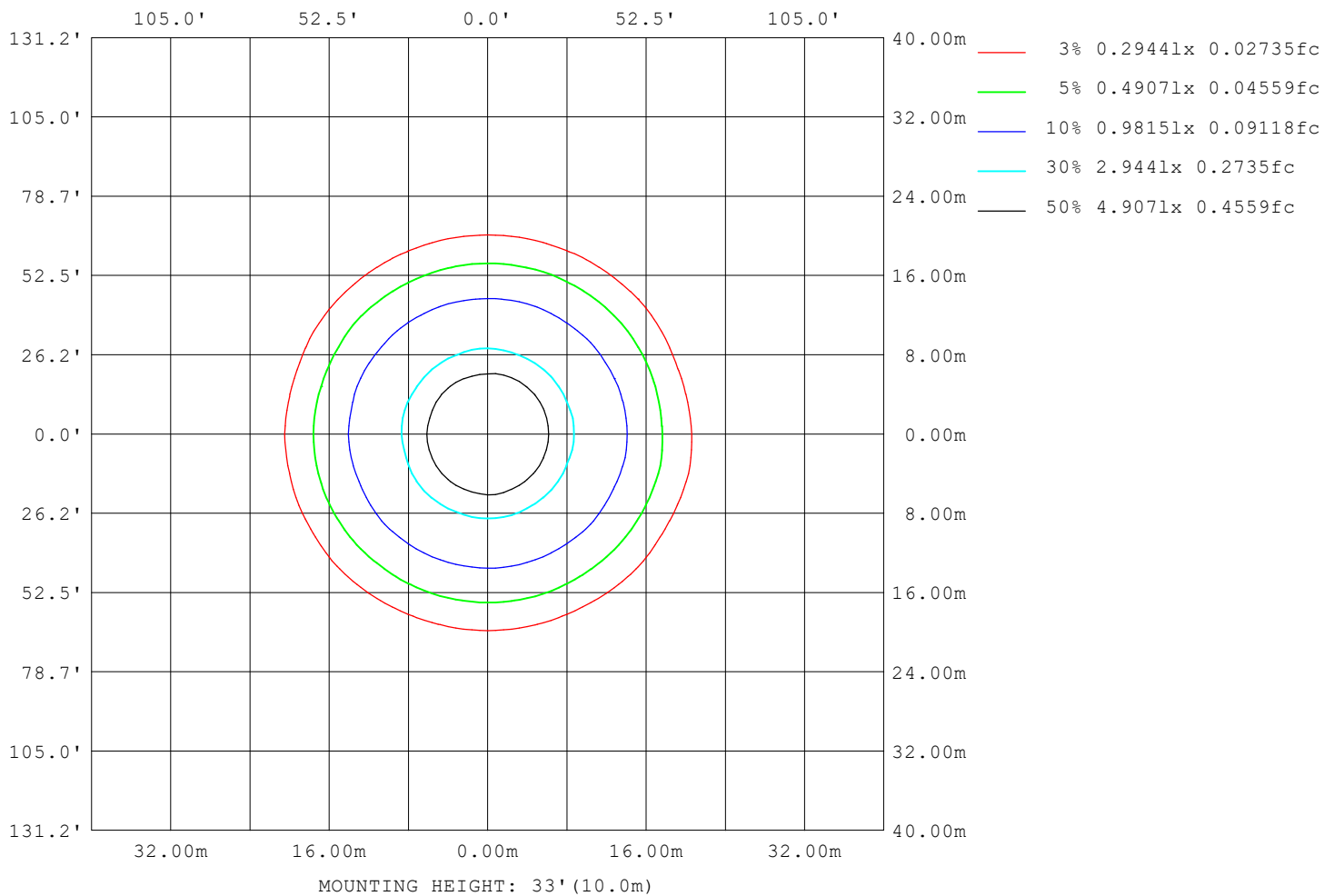
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 15 November 2022

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 6.265m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

NAME: 99PFMX40/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 334	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cross	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 15 November 2022

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 6.265m [K=1.0000]
 Remarks:

LED Avg.L Report

NAME: 99PFMX40/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 334	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cross	Shielding Angle:

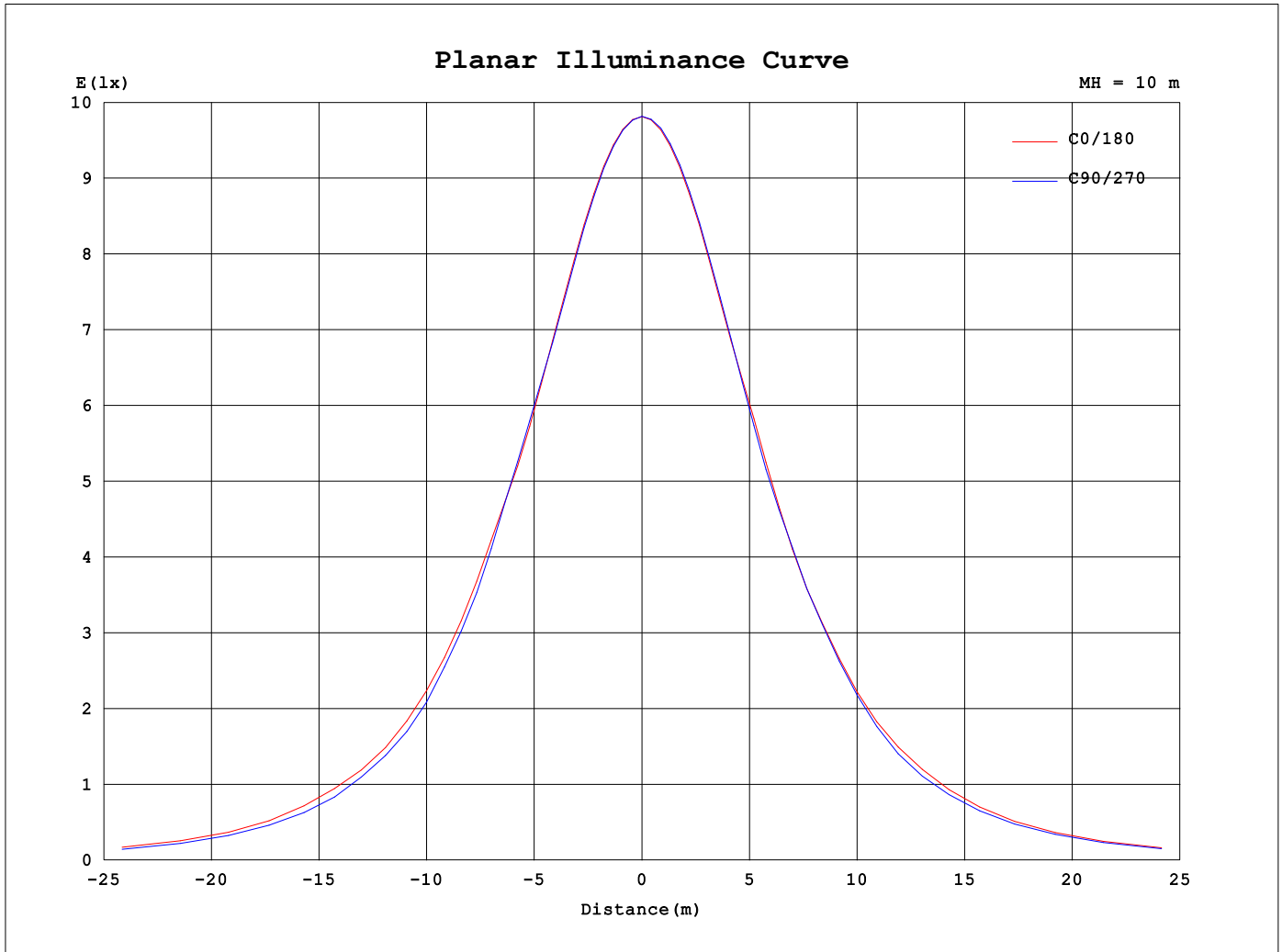
AvgL	cd/m2
L_0~180 (65) av	23709
L_0~180 (75) av	20340
L_0~180 (85) av	16934
L_90~270 (65) av	21428
L_90~270 (75) av	19186
L_90~270 (85) av	18154
L_45 (65) av	22393
L_45 (75) av	19651
L_45 (85) av	14535

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:15 November 2022

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 15 November 2022

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 6.265m [K=1.0000]
 Remarks:

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γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

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γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

```