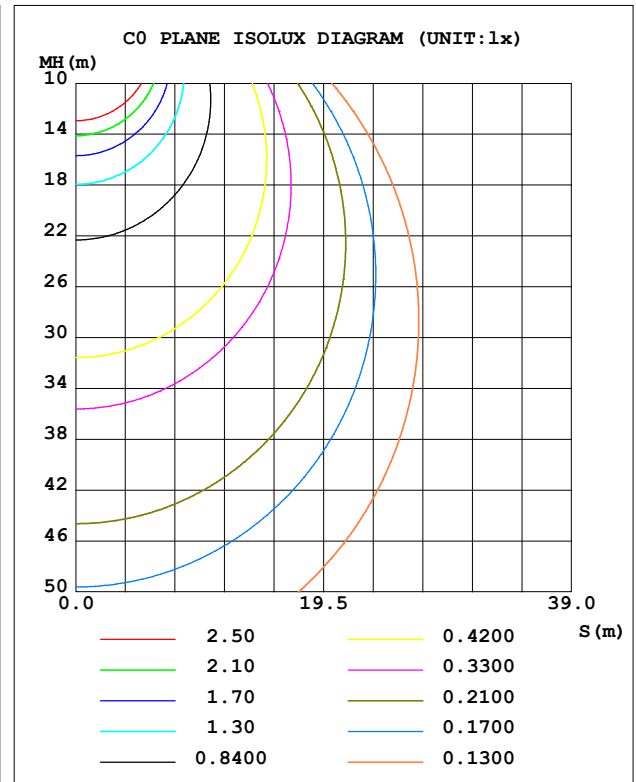
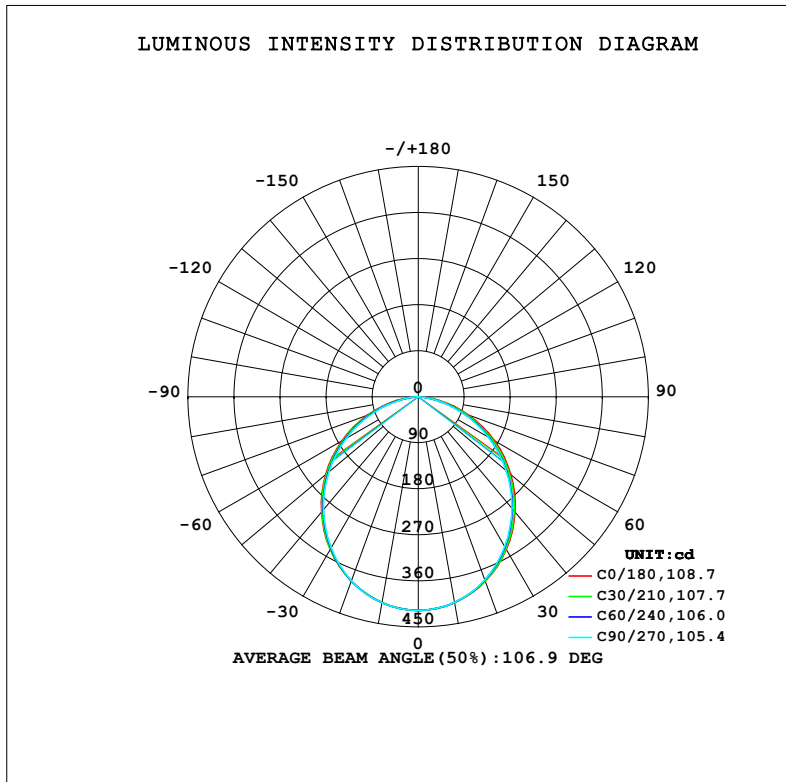


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 93PGNL2040/BL	TYPE: 93PGNL2040/BL	WEIGHT: 1
SPEC.:	DIM.: 140 x 138 x 36	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: 8 square	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	93PGNL2040/BL	Imax (cd)	417.6	S/MH (C0/180)	1.23
NOMINAL POWER (W)	20	LOR (%)	92.5	S/MH (C90/270)	1.22
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	1110.4	η UP, DN (C0-180)	0.0, 46.0
NOMINAL FLUX (lm)	1200	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 46.6
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	92.5	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 26 August 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	408.8	408.5	408.3	408.3	408.6	408.8	409.0	408.9	0- 10	39.43	39.43	3.55,3.29
20	383.6	382.6	380.9	382.3	383.3	383.4	382.8	383.7	10- 20	112.2	151.6	13.7,12.6
30	344.6	341.2	338.2	341.0	344.3	343.0	340.9	343.2	20- 30	167.7	319.3	28.8,26.6
40	294.5	289.0	285.0	288.9	294.4	291.3	288.3	291.4	30- 40	198.5	517.8	46.6,43.1
50	236.1	228.9	224.2	229.0	236.2	231.8	228.2	231.7	40- 50	201.6	719.4	64.8,59.9
60	171.8	163.4	158.6	163.7	172.3	166.9	162.8	166.5	50- 60	177.6	897.0	80.8,74.7
70	104.7	95.66	90.68	96.19	105.9	99.61	95.11	98.89	60- 70	130.7	1028	92.6,85.6
80	41.21	32.02	28.13	32.79	42.60	35.85	32.10	34.67	70- 80	69.42	1097	98.8,91.4
90	0.5813	0.5479	0.5170	0.5398	0.5052	0.4662	0.4353	0.4569	80- 90	13.30	1110	100,92.5
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): 619.93 lm

%lum = 55.8%

%lamp = 51.7%

Conical surface Flux(130deg): 969.38 lm

%lum = 87.3%

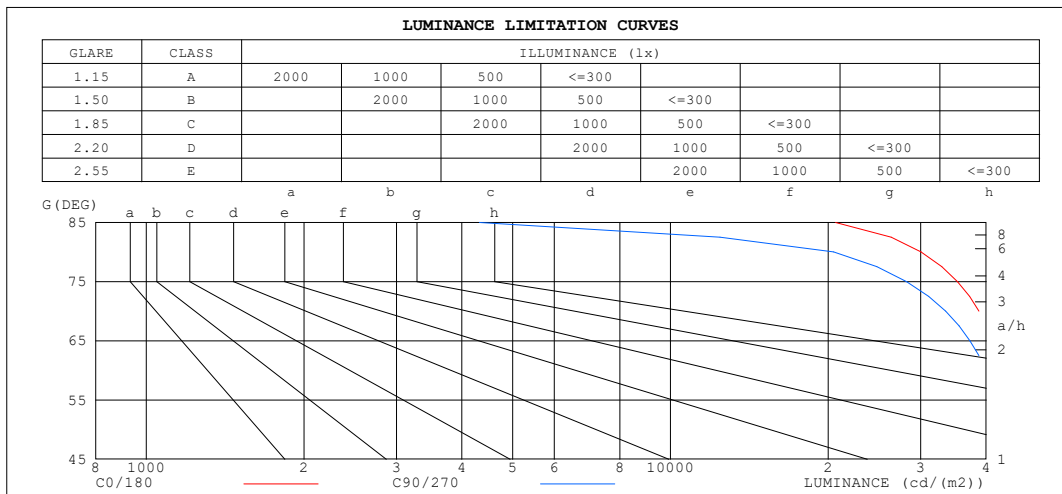
%lamp = 80.8%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:26 August 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: 93PGNL2040/BL	TYPE: 93PGNL2040/BL	WEIGHT: 1
SPEC.:	DIM.: 140 x 138 x 36	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: 8 square	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	20650	4316
80	30028	20462
75	35248	28214
70	38750	33492
65	41422	37251
60	43481	40077
55	45134	42233
50	46484	44061
45	47639	45611

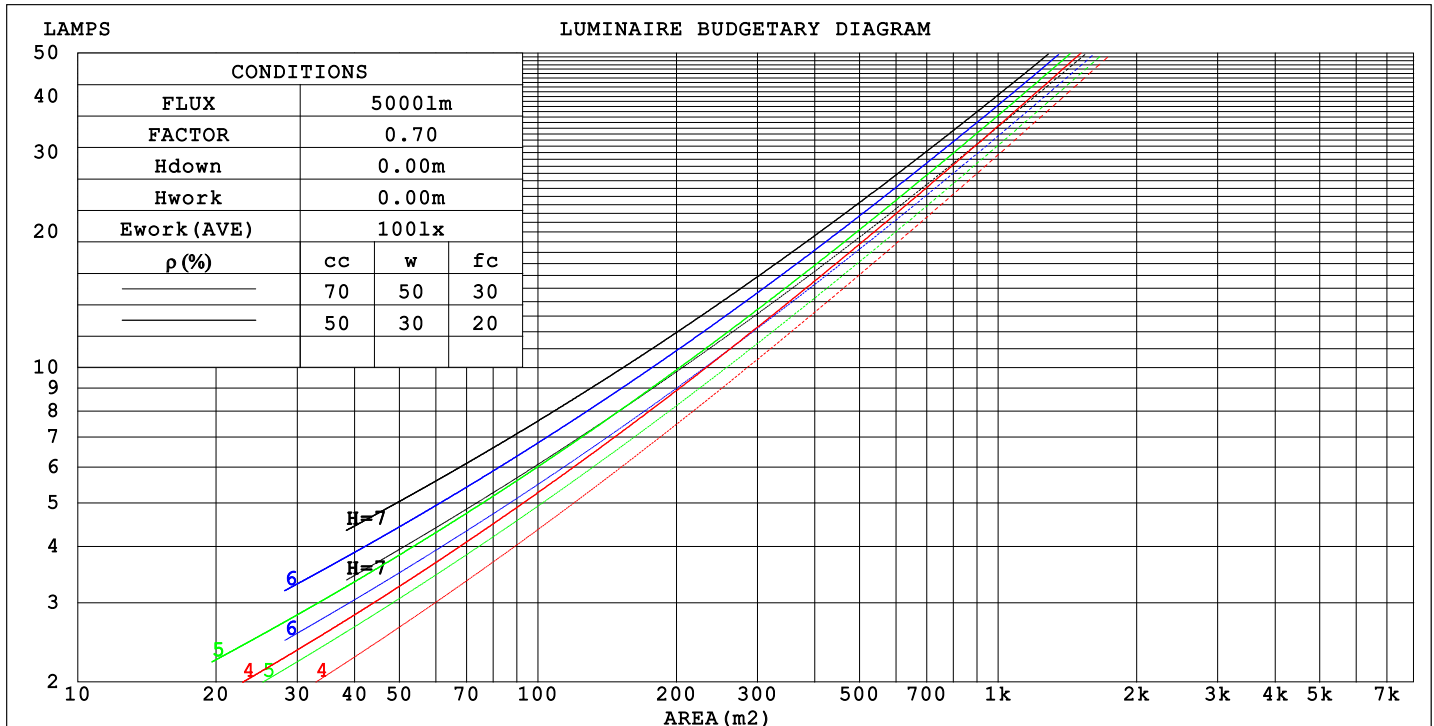
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 26 August 2022

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: 93PGNL2040/BL	TYPE: 93PGNL2040/BL	WEIGHT: 1
SPEC.:	DIM.: 140 x 138 x 36	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: 8 square	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: MEDIUM
Temperature:25.3°C
Operators:
Test Date:26 August 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: 93PGNL2040/BL	TYPE: 93PGNL2040/BL	WEIGHT: 1
SPEC.:	DIM.: 140 x 138 x 36	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: 8 square	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 Coeffcients(WEC)									
0.0																
1.0	.274	.156	.049	.268	.153	.049	.256	.147	.047	.244	.141	.045	.234	.136	.044	
2.0	.261	.143	.044	.256	.141	.043	.245	.136	.042	.235	.132	.041	.226	.128	.040	
3.0	.243	.130	.039	.238	.128	.038	.229	.124	.038	.220	.121	.037	.212	.117	.036	
4.0	.226	.117	.034	.221	.116	.034	.213	.113	.034	.205	.110	.033	.198	.107	.033	
5.0	.209	.107	.031	.205	.105	.031	.198	.103	.030	.191	.101	.030	.184	.098	.030	
6.0	.194	.097	.028	.191	.096	.028	.184	.094	.027	.178	.093	.027	.172	.091	.027	
7.0	.181	.090	.025	.178	.089	.025	.172	.087	.025	.167	.085	.025	.161	.084	.025	
8.0	.170	.083	.023	.167	.082	.023	.161	.081	.023	.156	.079	.023	.152	.078	.023	
9.0	.159	.077	.021	.157	.076	.021	.152	.075	.021	.147	.074	.021	.143	.073	.021	
10.0	.150	.072	.020	.148	.071	.020	.143	.070	.020	.139	.069	.020	.135	.068	.020	

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	.176	.176	.176	.151	.151	.151	.103	.103	.103	.059	.059	.059	.019	.019	.019	
1.0	.166	.145	.125	.142	.124	.108	.097	.085	.075	.056	.049	.043	.018	.016	.014	
2.0	.158	.122	.092	.136	.105	.079	.093	.073	.055	.054	.042	.032	.017	.014	.011	
3.0	.151	.106	.070	.129	.091	.060	.089	.063	.042	.051	.037	.025	.016	.012	.008	
4.0	.144	.093	.055	.123	.081	.048	.085	.056	.033	.049	.033	.020	.016	.011	.007	
5.0	.137	.084	.044	.118	.072	.038	.081	.051	.027	.047	.030	.016	.015	.010	.005	
6.0	.131	.076	.037	.112	.066	.032	.077	.046	.023	.045	.027	.013	.014	.009	.004	
7.0	.124	.069	.031	.107	.060	.027	.074	.042	.019	.043	.025	.011	.014	.008	.004	
8.0	.118	.064	.027	.102	.056	.023	.071	.039	.017	.041	.023	.010	.013	.008	.003	
9.0	.113	.060	.024	.097	.052	.021	.067	.036	.015	.039	.021	.009	.013	.007	.003	
10.0	.108	.056	.021	.093	.048	.018	.064	.034	.013	.038	.020	.008	.012	.007	.003	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:26 August 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: 93PGNL2040/BL						TYPE: 93PGNL2040/BL			WEIGHT: 1		
SPEC.:						DIM.: 140 x 138 x 36			SERIAL No.: 0		
MFR.: Elmark Industries JSC						SUR.: 8 square			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	25.5	26.9	25.7	27.1	27.3	25.1	26.6	25.4	26.8	27.0
	3H	26.9	28.3	27.2	28.5	28.8	26.4	27.8	26.7	28.0	28.2
	4H	27.5	28.8	27.8	29.0	29.3	26.8	28.1	27.1	28.4	28.6
	6H	27.8	29.1	28.2	29.3	29.6	27.0	28.3	27.4	28.5	28.8
	8H	27.9	29.1	28.3	29.4	29.7	27.0	28.2	27.4	28.5	28.8
	12H	28.0	29.1	28.3	29.4	29.7	27.0	28.1	27.3	28.4	28.7
4H	2H	26.0	27.3	26.3	27.5	27.8	25.7	27.0	26.0	27.2	27.5
	3H	27.6	28.7	27.9	29.0	29.3	27.1	28.3	27.5	28.6	28.9
	4H	28.3	29.3	28.6	29.6	30.0	27.7	28.7	28.0	29.0	29.4
	6H	28.7	29.7	29.1	30.0	30.4	28.0	28.9	28.4	29.2	29.6
	8H	28.9	29.7	29.3	30.1	30.5	28.0	28.8	28.4	29.2	29.6
	12H	28.9	29.7	29.4	30.1	30.5	28.0	28.7	28.4	29.1	29.5
8H	4H	28.4	29.3	28.8	29.7	30.0	27.9	28.7	28.3	29.1	29.5
	6H	29.0	29.7	29.5	30.1	30.6	28.3	29.0	28.7	29.4	29.8
	8H	29.2	29.8	29.7	30.3	30.7	28.3	29.0	28.8	29.4	29.8
	12H	29.3	29.8	29.8	30.3	30.8	28.3	28.8	28.8	29.3	29.8
12H	4H	28.4	29.2	28.8	29.6	30.0	27.9	28.7	28.3	29.1	29.5
	6H	29.0	29.6	29.5	30.1	30.5	28.3	28.9	28.8	29.4	29.8
	8H	29.2	29.8	29.7	30.2	30.7	28.4	28.9	28.8	29.4	29.8
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		+ 0.3 / - 0.3					+ 0.3 / - 0.4				

CIE Pub.117, 1200 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.6)
Area: 0.00792 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:26 August 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: 93PGNL2040/BL	TYPE: 93PGNL2040/BL	WEIGHT: 1
SPEC.:	DIM.: 140 x 138 x 36	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: 8 square	Shielding Angle:

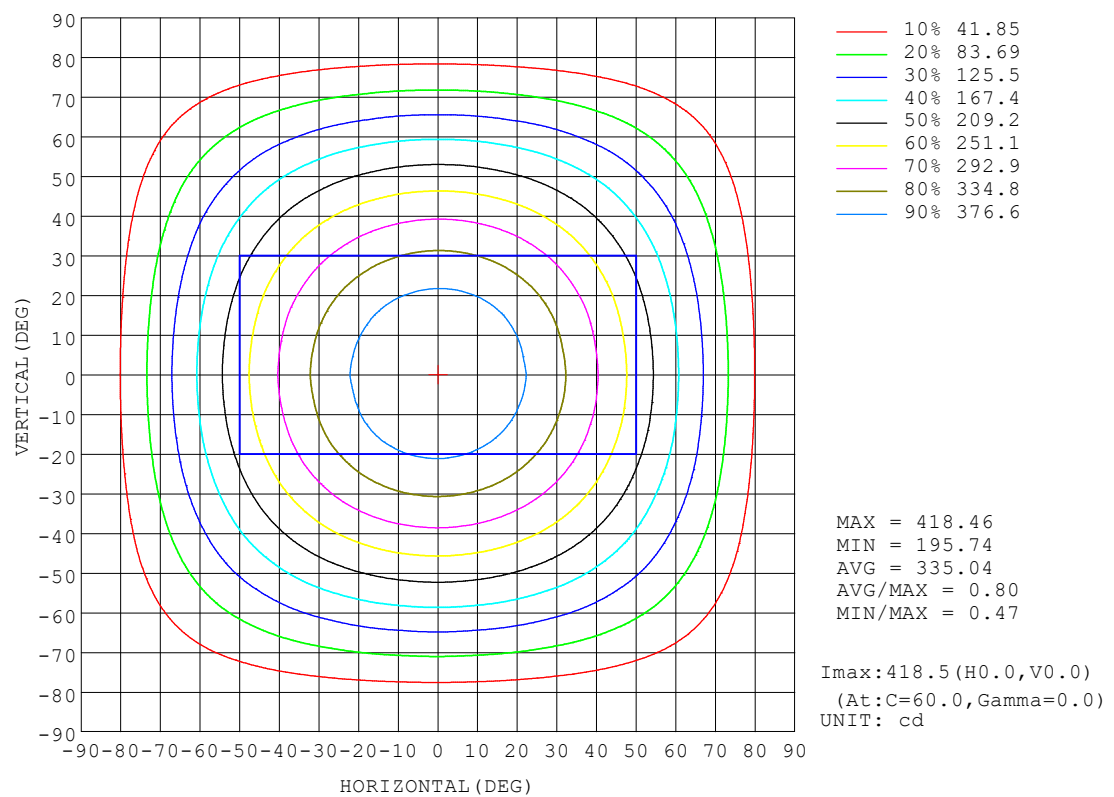
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	54	44	37	54	43	37	52	43	37	31
0.80	64	53	46	63	53	46	61	52	46	40
1.00	71	61	55	70	61	54	68	62	54	48
1.25	78	68	62	77	68	62	74	66	61	54
1.50	82	74	67	81	73	67	78	71	66	59
2.00	89	81	75	87	80	75	84	78	73	66
2.50	92	85	80	90	84	79	87	82	77	70
3.00	95	89	84	93	88	83	90	85	81	74
4.00	99	94	90	97	92	88	93	89	86	78
5.00	101	97	93	99	95	92	95	92	89	81
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: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 26 August 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: 93PGNL2040/BL	TYPE: 93PGNL2040/BL	WEIGHT: 1
SPEC.:	DIM.: 140 x 138 x 36	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: 8 square	Shielding Angle:

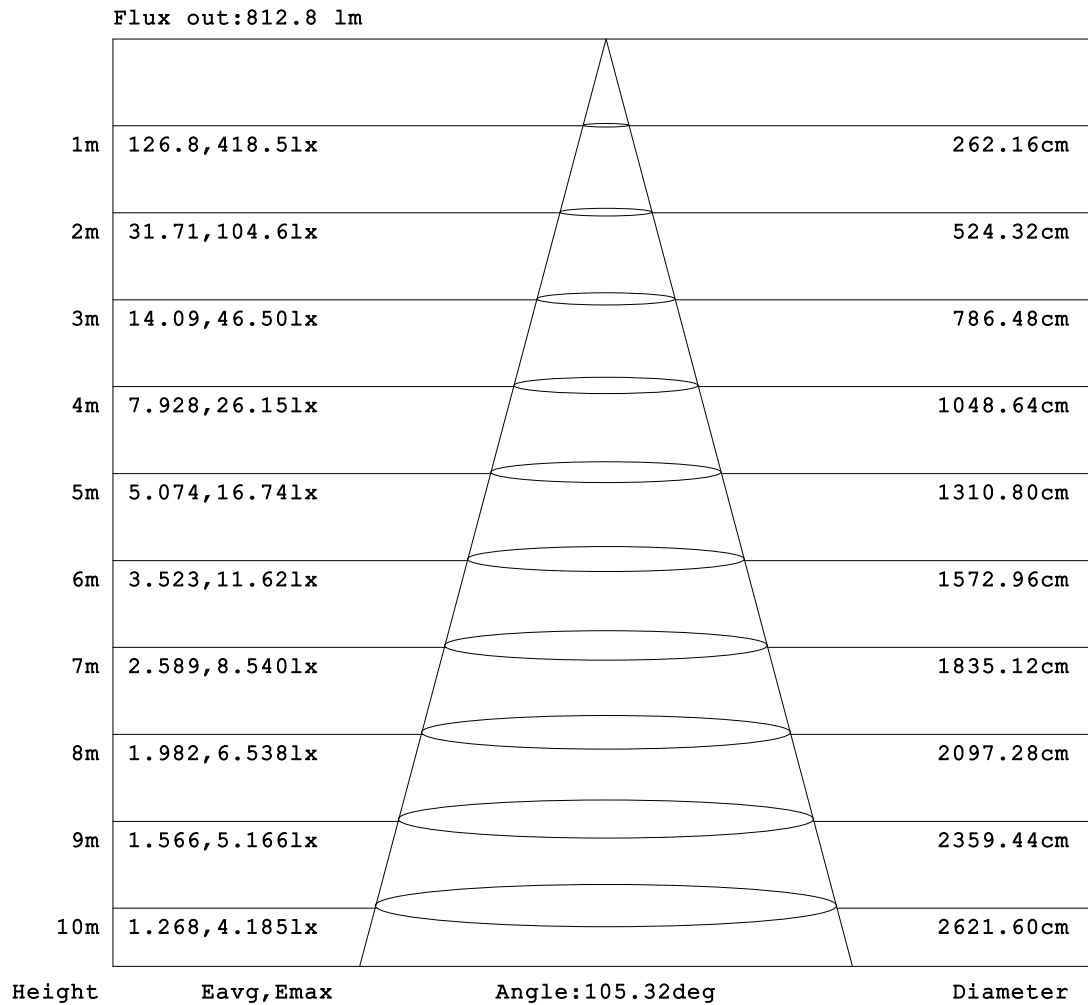


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 26 August 2022

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: 93PGNL2040/BL	TYPE: 93PGNL2040/BL	WEIGHT: 1
SPEC.:	DIM.: 140 x 138 x 36	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: 8 square	Shielding Angle:



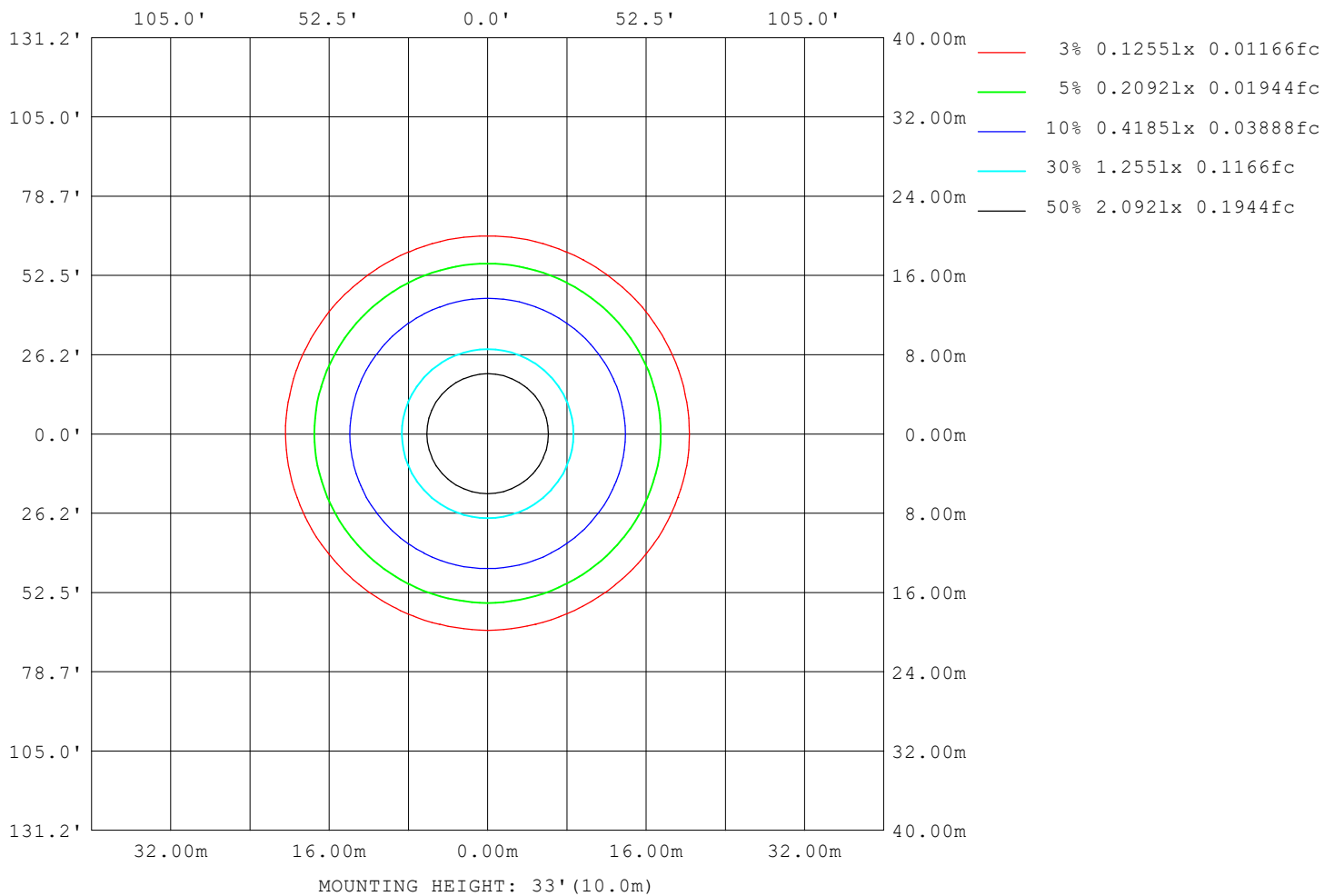
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 26 August 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: 93PGNL2040/BL	TYPE: 93PGNL2040/BL	WEIGHT: 1
SPEC.:	DIM.: 140 x 138 x 36	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: 8 square	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 26 August 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: 93PGNL2040/BL	TYPE: 93PGNL2040/BL	WEIGHT: 1
SPEC.:	DIM.: 140 x 138 x 36	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: 8 square	Shielding Angle:

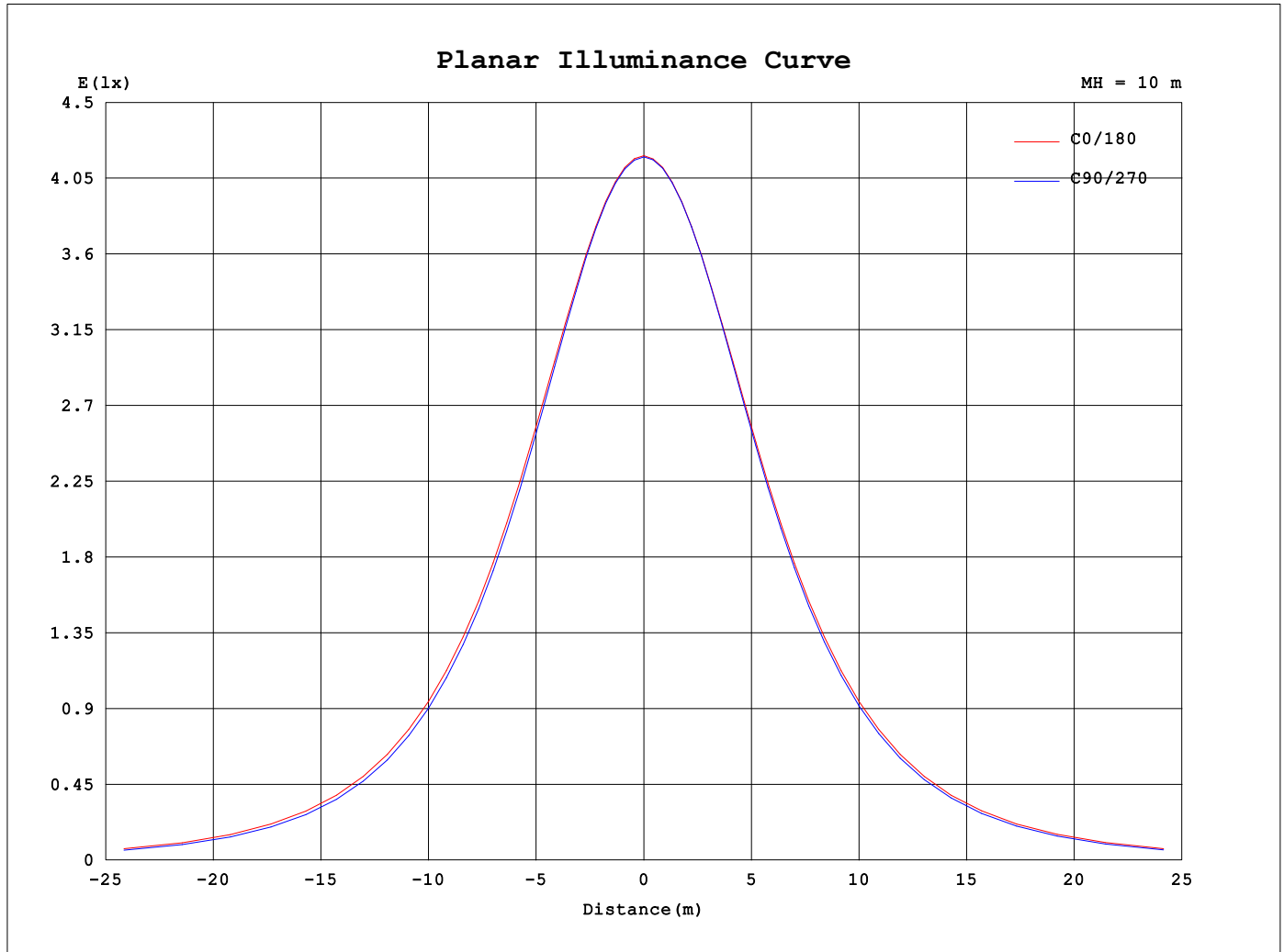
AvgL	cd/m2
L_0~180 (65) av	41490
L_0~180 (75) av	35451
L_0~180 (85) av	21756
L_90~270 (65) av	37887
L_90~270 (75) av	29336
L_90~270 (85) av	5834
L_45 (65) av	39265
L_45 (75) av	31546
L_45 (85) av	12304

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:26 August 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: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 26 August 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:

```

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:

```