



8165 E Kaiser Blvd. Anaheim, CA 92808
p. 714.282.2270
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Report No: L091403201

Date: 10/6/2014



NVLAP LAB CODE 200927-0

Report No: L091403201

Report Prepared For: Prudential Lighting
1737 East 22nd Street

Model Number: P43P-REG3-LED4LO-04-AWW-D1G-SC-LP-UNV

Test: Electrical and Photometric tests

Standards Used: Appropriate part or all test guidelines were used for test performed:
IESNA LM79: 2008 Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products
ANSI NEMA ANSLG C78.377: 2008 Specification of the Chromaticity of Solid State Lighting Products
ANSI C82.77:2002: Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

Description of Sample: Client submitted the sample. Catalog number is P43P-REG3-LED4LO-04-AWW-D1G-SC-LP-UNV. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 9/11/14

Date of Tests: 9/12/14 - 9/12/14

Seasoning of Sample: No seasoning was performed in accordance with IESNA LM-79.

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S1	01/04/15
Xitron Power Analysis System	2503AH	MT-EL01	01/09/15
BK Precision DC Power Supply	1747	PSDC-04	01/08/15
Fluke Digital Thermometer	52k/J	MT-TP02-GC	01/04/15
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

Test Summary

Manufacturer:	Prudential Lighting	
Model Number:	P43P-REG3-LED4LO-04-AWW-D1G-SC-LP-UNV	
Driver Model Number:	OSRAM OT50W/PRG1400C/UNV/DIM/L	
Total Lumens:	1508.24	
Input Voltage (VAC/60Hz):	120.00	
Input Current (Amp):	0.16	
Input Power (W):	19.31	
Input Power Factor:	0.98	
Current ATHD @ 120V(%):	8%	
Current ATHD @ 277V(%):	24% (0.09A, 21.3W, 0.81PF)	
Efficacy:	78	
Color Rendering Index (CRI):	84	
Correlated Color Temperature (K):	4161	
Chromaticity Coordinate x:	0.3726	
Chromaticity Coordinate y:	0.3683	
Ambient Temperature (°F):	77.0	
Stabilization Time (Hours):	0:40	
Total Operating Time (Hours):	2:20	
Off State Power(W):	0.00	

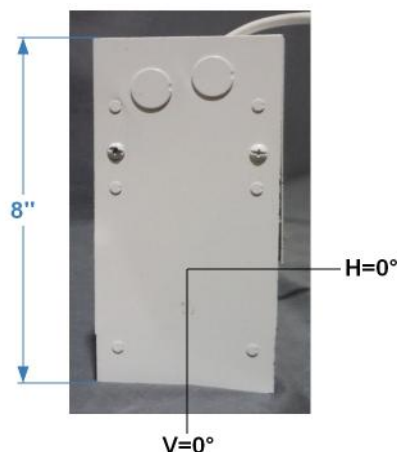
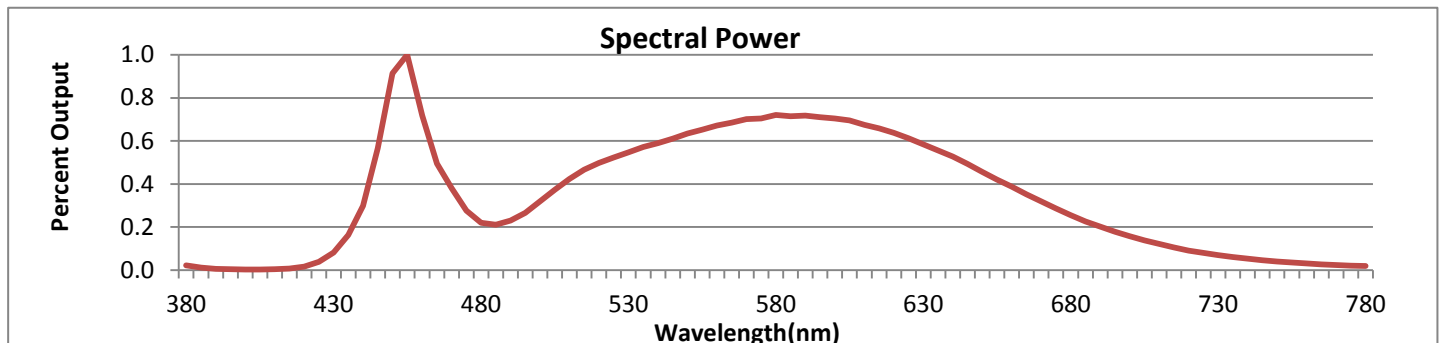


FIG. 1 LUMINAIRE



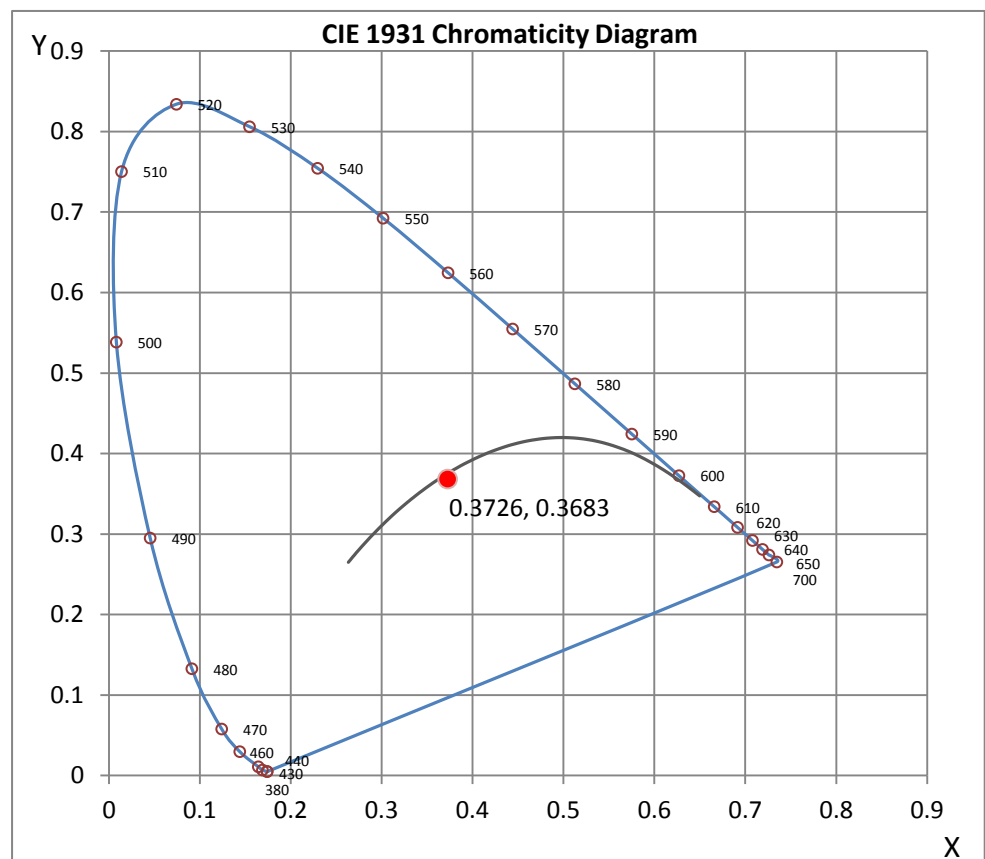
Wavelength	W/m ² nm	440	0.0386	510	0.0547	580	0.0930	650	0.0589	720	0.0118
380	0.0028	450	0.1181	520	0.0643	590	0.0926	660	0.0500	730	0.0090
390	0.0008	460	0.0927	530	0.0707	600	0.0909	670	0.0413	740	0.0068
400	0.0004	470	0.0491	540	0.0762	610	0.0872	680	0.0331	750	0.0052
410	0.0005	480	0.0283	550	0.0820	620	0.0823	690	0.0260	760	0.0039
420	0.0021	490	0.0297	560	0.0869	630	0.0755	700	0.0203	770	0.0030
430	0.0105	500	0.0413	570	0.0906	640	0.0681	710	0.0156	780	0.0024

CRI & CCT

x	0.3726
y	0.3683
u'	0.2233
v'	0.4966
CRI	84.30
CCT	4161
Duv	-0.00163

R Values

R1	83.36
R2	89.74
R3	92.54
R4	82.27
R5	82.01
R6	83.36
R7	88.84
R8	72.48
R9	28.91
R10	73.80
R11	79.63
R12	55.73
R13	85.30
R14	95.50





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Test Methods

Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Disclaimers:

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Government.

Report Prepared by : Wilson Khounlavong

Test Report Released by:

Jeff Ahn
Engineering Manager

Test Report Reviewed by:

Steve Kang
Quality Assurance

**Attached are photometric data reports. Total number of pages: 12*

**All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.*



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Photometric Test Report

IES INDOOR REPORT

PHOTOMETRIC FILENAME : L091403201.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L091403201
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUE DATE] 10/6/2014
[MANUFAC] PRUDENTIAL LIGHTING
[LUMCAT] P43P-REG3-LED4LO-04-AWW-D1G-SC-LP-UNV
[LUMINAIRE] 4-1/8"L X 48-1/8"W X 8"H. LED LUMINAIRE
[MORE] PRISMATIC LENS
[BALLASTCAT] OSRAM OT50W/PRG1400C/UNV/DIM/L
[BALLAST] INPUT: 120-277VAC, 0.52-0.24A, 50/60HZ. OUTPUT: 10-55VDC, 0.4-1.4A
[LAMPPOSITION] 0,0
[LAMPCAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120VAC, 19.31W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1508
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	78
Total Luminaire Watts	19.31
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.80
Spacing Criterion (90-270)	1.12
Spacing Criterion (Diagonal)	0.78
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.32 ft
Luminous Width (90-270)	4.00 ft
Luminous Height	0.00 ft

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L091403201.IES

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4669	4729	5810
55	4467	4336	4292
65	4711	4334	3181
75	5648	4772	2142
85	10989	8290	964

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L091403201.IES

CANDELA TABULATION

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
0	1127	1127	1127	1127	1127	1127	1127	1127	1127	1127
5	1038	1038	1039	1041	1043	1046	1051	1056	1061	1068
10	923	923	924	926	930	936	945	954	965	977
15	821	822	821	824	829	836	844	854	866	880
20	729	730	728	732	737	743	750	759	770	784
25	644	644	643	646	651	655	661	670	680	692
30	570	569	569	571	573	577	581	587	595	606
35	504	503	503	504	506	509	511	515	521	528
40	445	444	444	444	446	447	449	451	455	460
45	393	392	392	392	392	393	393	394	396	398
50	345	346	345	344	344	344	344	344	343	344
55	305	305	304	303	302	302	300	299	297	296
60	272	271	271	270	269	267	266	264	261	257
65	237	237	236	235	233	231	229	226	223	218
70	205	205	204	202	200	197	193	190	186	182
75	174	173	173	171	168	165	162	157	152	147
80	143	143	142	140	138	135	131	127	121	116
85	114	114	113	111	108	105	101	96	91	86
90	81	81	80	78	76	74	70	66	62	57
95	65	65	64	63	61	59	56	52	48	44
100	53	53	52	51	50	47	45	41	38	34
105	43	42	42	41	39	37	35	32	29	27
110	33	33	32	31	30	28	27	23	20	16
115	24	24	24	23	21	20	18	14	13	10
120	16	16	15	15	13	12	10	8	7	6
125	8	8	7	7	6	6	5	6	6	5
130	5	5	5	5	5	5	5	5	5	0
135	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0

Vert. Horizontal Angles
Angles

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>	<u>95</u>
0	1127	1127	1127	1127	1127	1127	1127	1127	1127	1127
5	1074	1081	1087	1092	1097	1100	1105	1109	1113	1116
10	990	1005	1020	1035	1049	1061	1072	1080	1087	1090
15	896	915	936	958	981	1003	1023	1035	1043	1041
20	801	821	845	872	901	932	959	976	984	974
25	708	727	751	780	814	849	882	902	908	890
30	619	636	658	686	720	758	792	813	816	791
35	538	551	570	594	626	662	695	711	711	683
40	467	476	489	509	535	567	593	603	600	569
45	403	409	418	432	452	476	493	496	489	457
50	345	348	354	364	377	391	398	394	384	354
55	295	295	297	302	310	316	315	306	293	266
60	255	253	253	254	257	257	252	239	224	196

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

65	213	209	206	205	203	198	183	175	160	134
70	176	170	164	160	155	147	136	123	108	84
75	141	135	127	120	113	104	92	80	66	46
80	109	102	95	87	78	68	57	45	39	20
85	79	73	65	57	49	41	35	21	10	8
90	52	46	40	34	30	21	13	10	5	5
95	39	34	31	23	18	11	9	6	0	0
100	29	27	20	14	11	8	6	5	0	0
105	21	17	11	9	7	6	5	0	0	0
110	14	10	8	6	6	5	0	0	0	0
115	8	6	6	6	5	0	0	0	0	0
120	6	6	5	5	0	0	0	0	0	0
125	5	5	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0

Vert. Horizontal Angles
Angles

	<u>100</u>	<u>105</u>	<u>110</u>	<u>115</u>	<u>120</u>	<u>125</u>	<u>130</u>	<u>135</u>	<u>140</u>	<u>145</u>
0	1127	1127	1127	1127	1127	1127	1127	1127	1127	1127
5	1116	1113	1109	1100	1091	1076	1064	1050	1035	1025
10	1082	1061	1032	999	964	930	894	858	823	789
15	1015	971	920	866	807	746	687	634	586	544
20	929	867	798	721	644	571	505	442	381	335
25	831	759	673	587	504	417	339	280	241	209
30	728	649	561	473	368	291	226	175	161	144
35	621	545	461	354	267	195	145	132	115	102
40	514	447	356	263	162	138	111	93	80	69
45	409	352	268	156	128	97	77	62	52	45
50	311	257	153	123	88	64	49	40	33	29
55	227	144	117	81	55	40	34	23	13	9
60	136	111	76	50	40	24	11	8	7	6
65	97	65	41	32	12	8	7	7	6	0
70	55	42	20	8	7	7	6	6	0	0
75	34	10	7	7	6	6	0	0	0	0
80	8	7	6	6	0	0	0	0	0	0
85	6	6	5	5	0	0	0	0	0	0
90	5	5	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

140	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0

Vert. Horizontal Angles
Angles

	<u>150</u>	<u>155</u>	<u>160</u>	<u>165</u>	<u>170</u>	<u>175</u>	<u>180</u>
0	1127	1127	1127	1127	1127	1127	1127
5	1013	1002	994	989	983	981	979
10	760	735	714	698	687	680	678
15	508	479	452	430	414	404	400
20	300	272	253	241	231	227	226
25	182	174	165	158	153	151	150
30	132	124	116	111	107	105	104
35	92	85	79	74	72	70	70
40	62	56	52	49	47	46	45
45	40	36	33	30	28	27	27
50	22	16	14	11	8	6	6
55	6	6	6	6	6	5	5
60	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L091403201.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	319.55	N.A.	21.20
0-30	581.32	N.A.	38.50
0-40	836.62	N.A.	55.50
0-60	1221.63	N.A.	81.00
0-80	1421.14	N.A.	94.20
0-90	1465.26	N.A.	97.20
10-90	1367.92	N.A.	90.70
20-40	517.07	N.A.	34.30
20-50	734.89	N.A.	48.70
40-70	505.86	N.A.	33.50
60-80	199.51	N.A.	13.20
70-80	78.67	N.A.	5.20
80-90	44.11	N.A.	2.90
90-110	34.83	N.A.	2.30
90-120	40.77	N.A.	2.70
90-130	42.75	N.A.	2.80
90-150	42.98	N.A.	2.80
90-180	42.98	N.A.	2.80
110-180	8.15	N.A.	0.50
0-180	1508.24	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	97.34
10-20	222.21
20-30	261.77
30-40	255.29
40-50	217.83
50-60	167.19
60-70	120.84
70-80	78.67
80-90	44.11
90-100	22.28
100-110	12.55
110-120	5.94
120-130	1.98
130-140	0.24
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

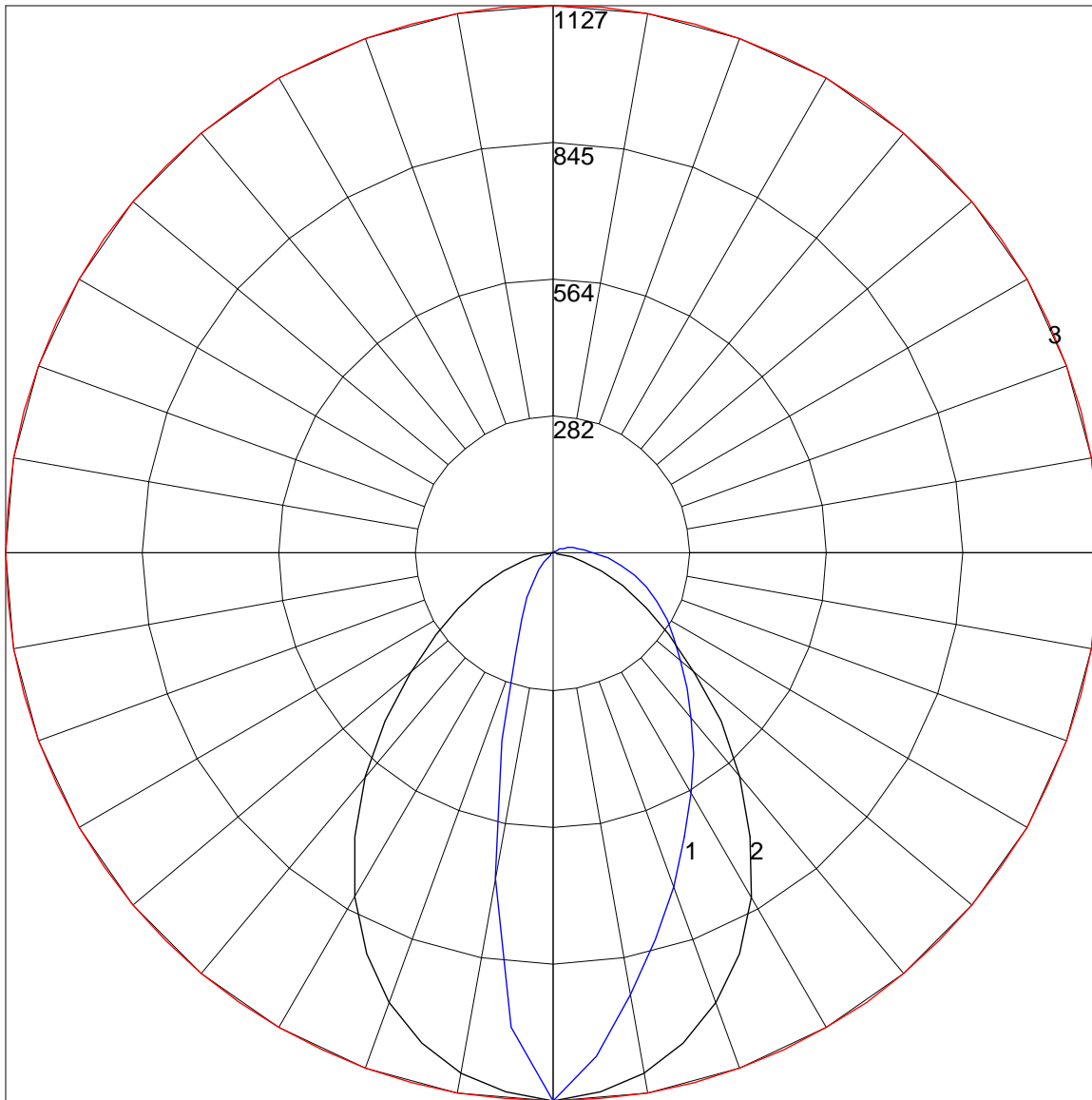
IES INDOOR REPORT
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	118	118	118	118	115	115	115	115	110	110	110	104	104	104	99	99	99	97
1	109	104	100	97	106	102	98	95	97	94	91	93	90	88	89	87	85	83
2	100	93	87	81	97	91	85	80	87	82	78	83	79	76	80	76	74	71
3	93	83	76	70	90	81	74	69	78	72	67	75	70	66	72	68	64	62
4	86	75	67	61	83	73	66	60	71	64	59	68	63	58	66	61	57	55
5	80	68	60	54	78	67	59	54	64	58	53	62	56	52	60	55	51	49
6	74	62	54	48	72	61	54	48	59	52	47	57	51	47	56	50	46	44
7	70	57	49	44	68	56	49	43	55	48	43	53	47	43	52	46	42	40
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	43	39	37
9	62	49	42	37	60	49	41	36	47	41	36	46	40	36	45	39	36	34
10	58	46	39	34	57	45	38	34	44	38	33	43	37	33	42	37	33	31

POLAR GRAPH



Maximum Candela = 1127 Located At Horizontal Angle = 0, Vertical Angle = 0

1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

2 - Vertical Plane Through Horizontal Angles (90 - 270)

3 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)