LIGHT LABORATORY INC.
8165 E Kaiser Blvd. Anaheim, CA 92808
www.lightlaboratory.com

Report No: L101605134
Date: 12/13/2016

NVLAP LAB CODE 200927-0

Report No: L101605134

Prepared For: Number Eight Lighting Company
526 Portal Street, Cotati, CA 94931

Model Number: 803/M2-S-HI-25-XX/DIM1-8-1000/FS-P-1-WH

Test: Photometric/Electrical Test

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 803/M2-S-HI-25-XX/DIM1-8-1000/FS-P-1-WH. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 10/31/16

Date of Tests: 12/31/16 - 12/31/16

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-GB	2/10/17
Xitron Power Analyzer	2802	MT-EL02-2	12/22/16
ITECH	IT6122	PS-DC03-S1	11/28/17
Fluke Digital Thermometer	52k/J	MT-TP02-GC	11/28/17
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.

LIGHT LABORATORY INC.
8165 E Kaiser Blvd. Anaheim, CA 92808
www.lightlaboratory.com

Report No: L101605134
Date: 12/13/2016
NVLAP LAB CODE 200927-0

Test Summary	
Manufacturer:	Number Eight Lighting Company
Model Number:	803/M2-S-HI-25-XX/DIM1-8-1000/FS-P-1-WH
Driver Model Number:	INTUITIVE SYSTEMS ISD-601-1050-15D
Total Lumens:	602.11
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.13
Input Power (W):	15.13
Input Power Factor:	0.98
Current ATHD @ 120V(%):	8%
Current ATHD @ 277V(%):	N/A
Efficacy:	40
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	1:15
Total Operating Time (Hours):	2:20
Off State Power(W):	0.00

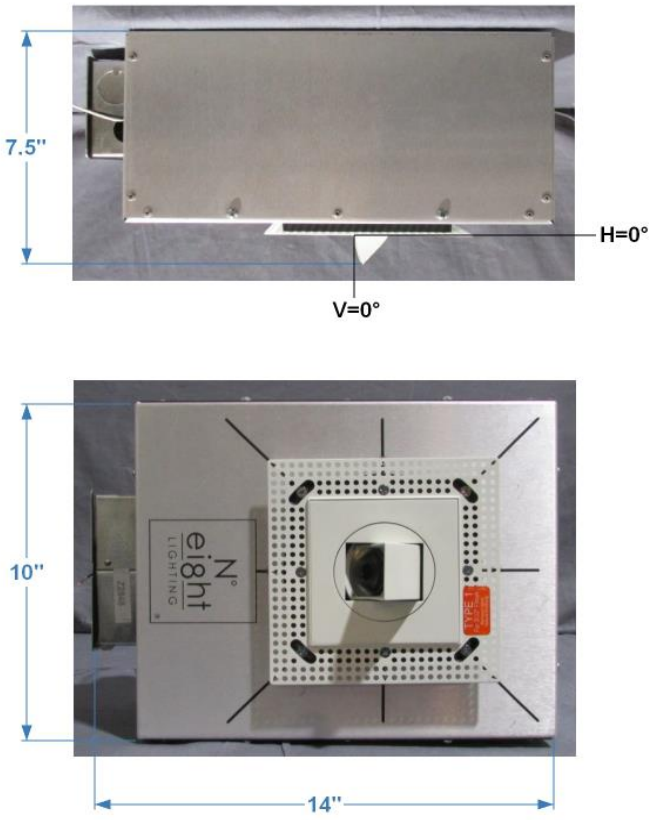


FIG.1 LUMINAIRE

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

LIGHT LABORATORY INC.
8165 E Kaiser Blvd. Anaheim, CA 92808
www.lightlaboratory.com

Report No: L101605134
Date: 12/13/2016

NVLAP LAB CODE 200927-0

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 : Keyur Patel

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: 11*

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

LIGHT LABORATORY INC.
8165 E. Kaiser Blvd. Anaheim, CA 92808
p. 714.282.2270
f. 714.676.5558

Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L101605134.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L101605134
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 12/13/2016
[MANUFAC] Number Eight Lighting Company
[LUMCAT] 803/M2-S-HI-25-XX/DIM1-8-1000/FS-P-1-WH
[LUMINAIRE] LED Recessed Adjustable Mirror-Reflector Downlight,
[MORE] 90+ CRI, 25° Beam Spread, 45° Aiming Angle
[BALLASTCAT] INTUITIVE SYSTEMS ISD-601-1050-15D
[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,15.13W
[_TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	602
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	40
Total Luminaire Watts	15.13
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.70
Spacing Criterion (90-270)	1.00
Spacing Criterion (Diagonal)	1.20
Basic Luminous Shape	Unknown
Luminous Length (0-180)	0.00 ft
Luminous Width (90-270)	0.15 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	0	0	0
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L101605134.IES

CANDELA TABULATION

	0	5	10	15	20	25	30	35	40	45
0.0	48	48	48	48	48	48	48	48	48	48
5.0	57	57	57	57	56	56	56	55	55	55
10.0	69	69	68	68	68	67	66	64	63	61
15.0	61	61	63	65	67	68	69	68	67	65
20.0	20	20	20	21	22	24	29	37	47	55
25.0	12	12	13	13	13	14	15	17	19	24
30.0	6	6	6	7	7	8	10	12	13	16
35.0	5	5	5	5	6	6	7	9	10	11
37.5	5	5	5	5	5	6	6	8	8	10
40.0	2	2	3	3	4	5	6	7	8	9
42.5	2	2	2	3	3	4	5	6	7	8
45.0	2	2	2	2	3	3	4	5	6	7
47.5	2	2	2	2	3	3	3	4	5	6
50.0	2	2	2	2	2	3	3	4	5	6
52.5	2	2	2	2	2	3	3	4	4	5
55.0	1	1	2	2	2	2	3	3	4	5
57.5	1	1	2	2	2	2	3	3	4	5
60.0	1	1	2	2	2	2	3	3	4	4
62.5	1	1	1	2	2	2	2	3	3	4
65.0	1	1	1	2	2	2	2	3	3	4
67.5	1	1	1	1	2	2	2	3	3	4
70.0	1	1	1	1	2	2	2	3	3	3
72.5	1	1	1	1	2	2	2	2	3	3
75.0	1	1	1	1	1	2	2	2	3	3
77.5	1	1	1	1	1	2	2	2	3	3
80.0	1	1	1	1	1	1	2	2	2	3
85.0	1	1	1	1	1	1	1	2	2	2
90.0	0	0	0	1	1	1	1	1	1	2
95.0	0	0	0	1	1	1	1	1	1	2
100.0	0	0	1	1	1	1	1	1	1	2
105.0	1	1	1	1	1	1	1	1	1	2
110.0	1	1	1	1	1	1	1	1	1	2
115.0	1	1	1	1	1	1	1	1	1	2
120.0	1	1	2	2	2	2	2	2	2	2
125.0	2	2	2	3	3	3	3	3	3	3
130.0	3	3	3	4	4	5	5	5	4	4
135.0	3	3	4	5	5	6	7	7	6	6
140.0	0	0	0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0	0	0	0
150.0	0	0	0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0	0	0	0
160.0	0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	**Horizontal Angles**									
	50	**55**	**60**	**65**	**70**	**75**	**80**	**85**	**90**	**95**
0.0	48	48	48	48	48	48	48	48	48	48
5.0	54	53	53	52	51	50	49	49	48	47
10.0	60	58	56	54	52	51	49	47	46	44
15.0	63	60	57	54	52	49	47	45	43	41

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L101605134.IES

CANDELA TABULATION - (Cont.)

20.0	58	57	54	51	49	46	44	42	40	38
25.0	35	42	45	44	42	40	38	36	35	34
30.0	19	25	30	32	31	29	28	27	27	27
35.0	12	15	17	19	19	18	18	19	20	21
37.5	11	12	14	15	15	15	16	16	18	19
40.0	10	11	11	12	13	13	14	15	17	18
42.5	9	9	10	10	11	11	12	14	16	18
45.0	8	9	9	9	10	10	11	13	15	17
47.5	7	8	8	9	9	9	10	12	15	17
50.0	7	7	8	8	8	9	10	11	15	16
52.5	6	7	7	8	8	8	9	11	13	16
55.0	6	6	7	7	7	7	8	10	12	15
57.5	5	6	6	7	7	7	8	9	12	15
60.0	5	6	6	6	6	7	7	9	11	14
62.5	5	5	6	6	6	6	7	8	10	13
65.0	4	5	6	6	6	6	6	7	9	12
67.5	4	5	5	6	6	5	5	6	8	10
70.0	4	5	5	5	5	5	5	6	7	9
72.5	4	4	5	5	5	5	5	5	6	9
75.0	4	4	5	5	5	4	4	5	6	8
77.5	4	4	4	5	5	4	4	4	5	7
80.0	3	4	4	5	4	4	4	4	5	7
85.0	3	3	3	4	4	4	3	3	4	6
90.0	2	2	2	2	2	2	2	2	3	4
95.0	2	2	2	2	2	2	2	2	3	3
100.0	2	2	2	2	2	2	2	2	3	3
105.0	2	2	2	2	2	2	2	2	3	3
110.0	2	2	2	2	2	2	2	3	3	3
115.0	2	2	2	2	2	2	2	3	3	3
120.0	2	2	2	2	2	3	3	3	3	3
125.0	3	2	2	3	3	3	3	3	3	3
130.0	3	3	3	3	3	3	3	3	3	3
135.0	5	4	3	3	3	3	3	3	3	3
140.0	0	0	0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0	0	0	0
150.0	0	0	0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0	0	0	0
160.0	0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	**Horizontal Angles**									
	100	**105**	**110**	**115**	**120**	**125**	**130**	**135**	**140**	**145**
0.0	48	48	48	48	48	48	48	48	48	48
5.0	46	46	45	44	43	43	42	42	41	41
10.0	43	42	41	40	40	39	38	37	36	36
15.0	40	39	38	37	36	35	34	33	32	32
20.0	37	36	35	34	33	32	32	31	32	34
25.0	33	33	32	31	31	30	31	34	42	60
30.0	28	28	29	29	29	30	32	38	59	133
35.0	23	24	26	27	29	29	32	43	117	158
37.5	21	23	25	27	28	29	33	44	122	179
40.0	21	23	25	27	28	30	34	45	121	180

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L101605134.IES

CANDELA TABULATION - (Cont.)

42.5	20	23	25	27	29	32	36	44	120	170
45.0	20	22	25	27	30	33	36	43	84	153
47.5	20	22	25	27	30	33	36	42	62	130
50.0	19	22	24	27	30	33	36	40	54	120
52.5	19	22	24	27	30	33	35	38	47	120
55.0	18	21	24	26	29	32	34	37	42	62
57.5	17	20	23	25	28	30	33	35	38	49
60.0	17	20	22	24	26	29	31	33	35	41
62.5	16	18	21	23	25	28	30	31	32	34
65.0	15	17	20	22	24	26	28	29	29	30
67.5	14	16	18	20	23	24	26	27	27	27
70.0	12	15	17	19	21	23	24	25	26	25
72.5	11	14	16	18	20	22	23	24	24	24
75.0	10	13	15	17	19	21	22	23	23	23
77.5	9	12	14	16	18	19	21	22	22	21
80.0	9	11	13	15	16	18	20	20	20	20
85.0	7	9	11	13	14	16	17	18	18	18
90.0	6	7	9	10	12	13	14	15	15	15
95.0	5	6	7	8	9	10	10	11	12	12
100.0	4	4	5	5	4	3	3	3	2	2
105.0	3	3	3	2	2	1	1	1	1	1
110.0	3	2	2	2	2	1	1	1	1	1
115.0	3	3	2	2	2	1	1	1	1	1
120.0	3	3	2	2	2	1	1	1	1	1
125.0	3	3	2	2	2	1	1	1	1	1
130.0	3	3	2	2	2	1	1	1	1	1
135.0	3	3	2	2	2	1	1	1	1	1
140.0	0	0	0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0	0	0	0
150.0	0	0	0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0	0	0	0
160.0	0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	**Horizontal Angles**						
	150	**155**	**160**	**165**	**170**	**175**	**180**
0.0	48	48	48	48	48	48	48
5.0	41	41	40	40	40	40	40
10.0	35	35	35	34	34	34	34
15.0	32	31	31	31	30	30	30
20.0	37	44	52	63	73	81	83
25.0	96	151	213	286	354	402	420
30.0	204	358	531	748	879	1081	1132
35.0	351	644	910	1274	1574	1816	1919
37.5	396	719	1039	1465	1846	2143	2276
40.0	412	758	1105	1601	2045	2397	2557
42.5	399	754	1129	1663	2150	2535	2709
45.0	359	703	1100	1617	2105	2486	2660
47.5	308	620	990	1428	1910	2255	2418
50.0	224	517	846	1136	1641	1938	2075
52.5	176	404	698	981	1358	1612	1728
55.0	132	271	528	788	1061	1280	1371

CANDELA TABULATION - (Cont.)

57.5	124	152	350	531	746	824	962
60.0	60	102	205	328	468	573	616
62.5	43	67	117	198	272	332	351
65.0	34	45	72	105	142	166	174
67.5	29	33	41	51	60	65	67
70.0	26	27	29	32	35	36	37
72.5	24	25	25	27	28	29	29
75.0	23	23	24	25	26	27	27
77.5	21	22	22	23	24	24	24
80.0	20	20	21	22	22	21	21
85.0	18	18	18	18	18	18	18
90.0	14	14	14	14	13	13	13
95.0	13	13	13	13	13	13	13
100.0	6	8	9	11	12	12	12
105.0	0	0	0	0	0	0	0
110.0	0	0	0	0	0	0	0
115.0	0	0	0	0	0	0	0
120.0	0	0	0	0	0	0	0
125.0	0	0	0	0	0	0	0
130.0	0	0	0	0	0	0	0
135.0	0	0	0	0	0	0	0
140.0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0
150.0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0
160.0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L101605134.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	17.60	N.A.	2.90
0-30	56.85	N.A.	9.40
0-40	199.04	N.A.	33.10
0-60	536.69	N.A.	89.10
0-80	580.24	N.A.	96.40
0-90	589.38	N.A.	97.90
10-90	584.76	N.A.	97.10
20-40	181.45	N.A.	30.10
20-50	392.41	N.A.	65.20
40-70	369.02	N.A.	61.30
60-80	43.55	N.A.	7.20
70-80	12.17	N.A.	2.00
80-90	9.15	N.A.	1.50
90-110	7.94	N.A.	1.30
90-120	9.39	N.A.	1.60
90-130	11.17	N.A.	1.90
90-150	12.73	N.A.	2.10
90-180	12.73	N.A.	2.10
110-180	4.79	N.A.	0.80
0-180	602.11	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	4.62
10-20	12.97
20-30	39.25
30-40	142.19
40-50	210.96
50-60	126.68
60-70	31.38
70-80	12.17
80-90	9.15
90-100	5.87
100-110	2.07
110-120	1.45
120-130	1.78
130-140	1.56
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L101605134.IES

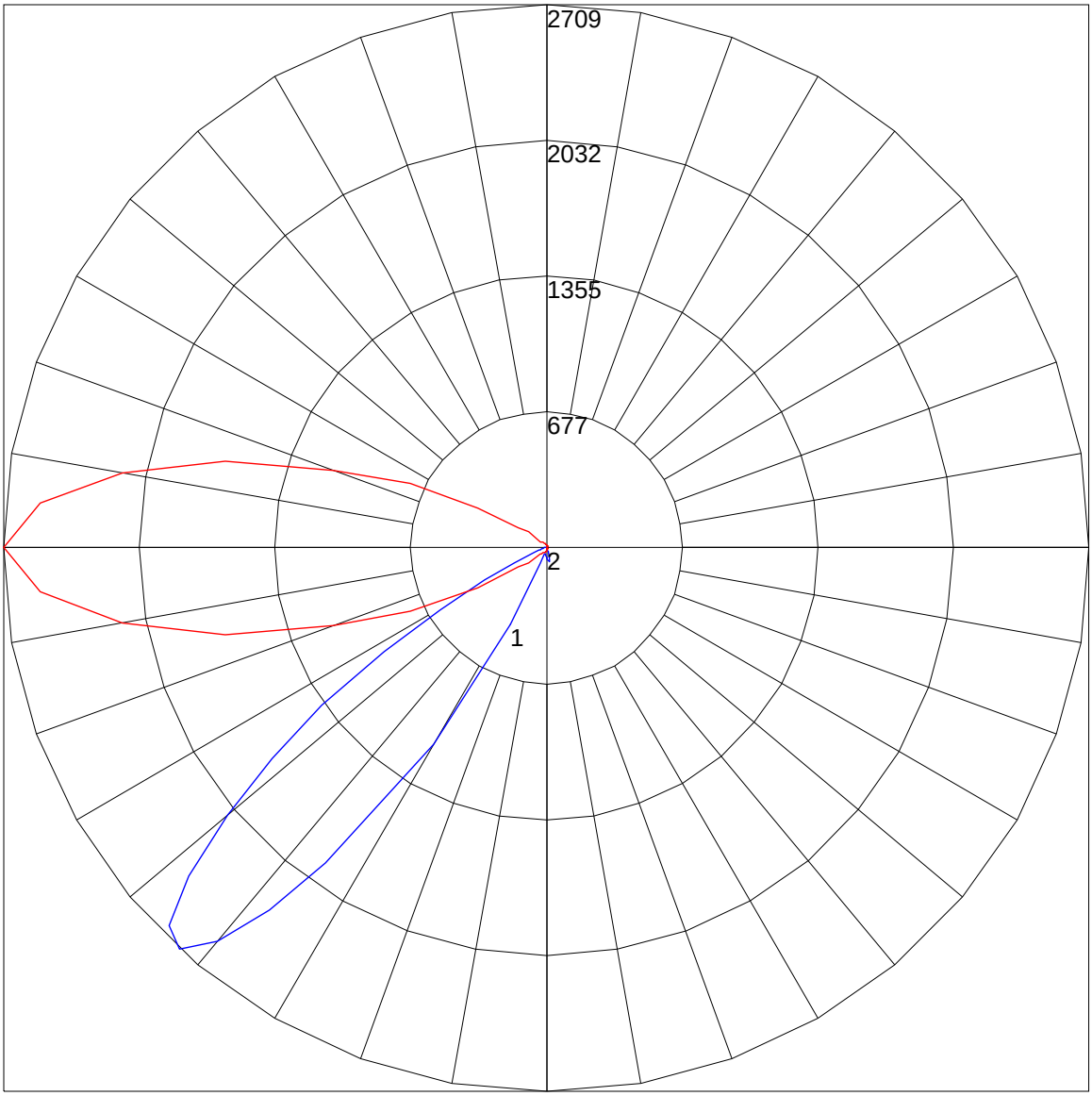
COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	98
1	109	104	100	97	106	102	98	95	97	94	92	93	91	89	89	87	86	83
2	99	91	85	79	96	89	83	78	85	80	76	82	77	74	78	75	72	70
3	90	79	71	65	87	78	70	64	74	68	63	71	66	61	69	64	60	58
4	82	69	60	54	79	68	60	53	65	58	52	63	56	51	60	55	50	48
5	74	61	52	45	72	60	51	44	57	49	44	55	48	43	53	47	42	40
6	67	53	44	37	65	52	44	37	50	42	37	48	41	36	47	40	36	33
7	62	47	38	32	60	46	38	31	45	37	31	43	36	31	41	35	30	28
8	56	42	33	27	55	41	33	27	40	32	26	38	31	26	37	30	26	24
9	52	38	29	23	50	37	29	23	36	28	23	34	27	22	33	27	22	20
10	48	34	25	20	46	33	25	20	32	25	19	31	24	19	30	24	19	17

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L101605134.IES

POLAR GRAPH



Maximum Candela = 2709 Located At Horizontal Angle = 180, Vertical Angle = 42.5
1 - Vertical Plane Through Horizontal Angles (180 - 0) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (42.5) (Through Max. Cd.)