

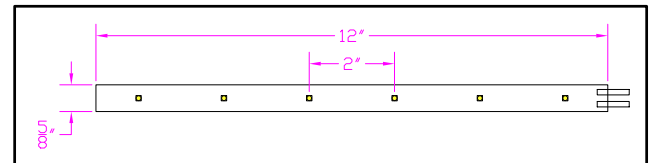
**IES INDOOR REPORT
PHOTOMETRIC FILENAME : LLI020910A.IES**

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] LLI 0209-10A
 [TESTLAB] LIGHT LABORATORY INC
 [ISSUEDATE] 3/2/2009
 [MANUFAC] J&J ELECTRONICS
 [LUMCAT] LLS-12-120-2800K
 [LUMINAIRE] 12"L. X 5/8"W. LED STRIP LIGHT
 [MORE] 2" SPACING, 6 WARM WHITE LEDS
 [LAMPPOSITION] 0,0
 [LAMPCAT] WARM WHITE LED
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [MORE] LM-79
 [_INPUT] 24VAC, 3.75W

CHARACTERISTICS

Total Rated Lamp Lumens	N.A. (absolute photometry)
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	N.A.
Total Luminaire Watts	4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criteria (0-180)	1.24
Spacing Criteria (90-270)	1.24
Spacing Criteria (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.84 ft
Luminous Width (90-270)	0.01 ft
Luminous Height	0.00 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	32499	32589	31955
55	29909	30355	30578
65	26355	26960	26960
75	20280	21269	20775
85	13220	11751	11751

IES INDOOR REPORT
PHOTOMETRIC FILENAME : LLI020910A.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0.0	28.1	28.1	28.1	28.1	28.1
1.0	28.1	28.2	28.1	27.7	28.1
3.0	28.1	28.2	28.0	27.7	28.1
5.0	28.2	28.3	27.8	27.9	28.2
7.0	27.8	28.1	27.5	27.7	28.1
9.0	27.7	27.8	27.3	27.4	27.5
11.0	27.5	27.3	27.3	27.5	27.1
13.0	27.3	27.0	26.9	27.4	26.7
15.0	26.7	26.5	26.7	26.9	26.4
17.0	25.9	26.2	26.5	26.2	26.0
19.5	25.5	25.8	26.3	25.6	25.8
22.5	25.0	25.3	25.4	25.0	25.2
25.5	24.1	24.2	24.4	24.6	24.3
29.0	23.4	23.4	23.3	23.8	23.5
33.0	22.1	22.3	22.3	22.1	22.2
37.5	20.6	20.6	20.9	20.8	20.5
42.5	18.9	18.8	19.1	19.0	18.7
47.5	17.0	17.0	16.9	16.8	16.6
55.0	13.4	13.5	13.6	13.6	13.7
65.0	8.7	8.8	8.9	8.8	8.9
75.0	4.1	4.2	4.3	4.3	4.2
85.0	0.9	1.0	0.8	0.8	0.8
90.0	0.3	0.3	0.3	0.3	0.3

IES INDOOR REPORT
PHOTOMETRIC FILENAME : LLI020910A.IES

ZONAL LUMEN SUMMARY

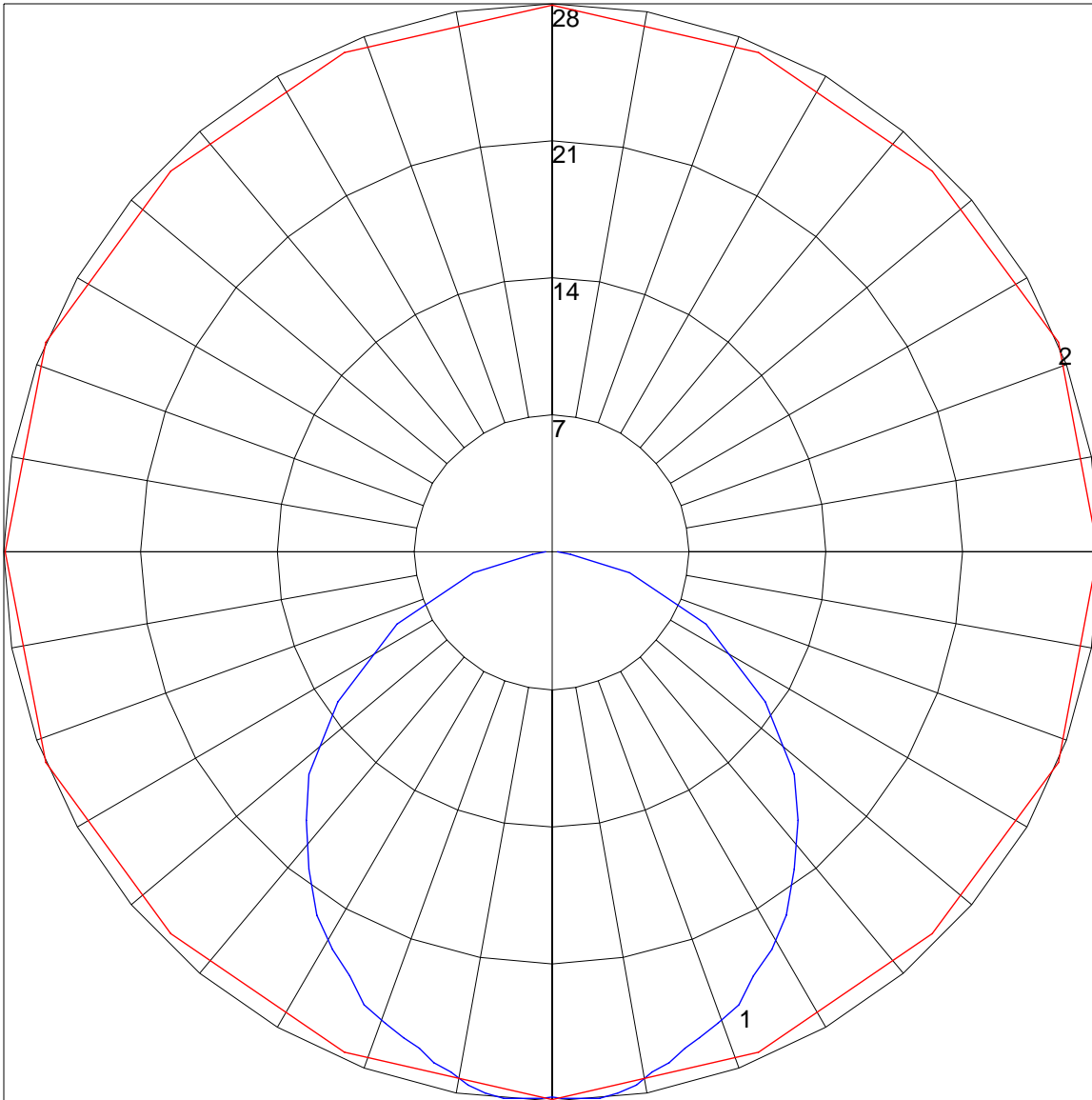
Zone	Lumens	%Lamp	%Fixt
0-30	20.22	N.A.	26.8
0-40	31.5	N.A.	41.7
0-60	55.17	N.A.	73
0-90	75.58	N.A.	100
90-120	0	N.A.	0
90-130	0	N.A.	0
90-150	0	N.A.	0
90-180	0	N.A.	0
0-180	75.58	N.A.	100

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	2.15
10-20	7.54
20-30	10.53
30-40	11.27
40-50	13.92
50-60	9.75
60-70	10.62
70-80	6.72
80-90	3.07
90-100	0
100-110	0
110-120	0
120-130	0
130-140	0
140-150	0
150-160	0
160-170	0
170-180	0

POLAR GRAPH



Maximum Candela = 28.3 Located At Horizontal Angle = 22.5, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (22.5 - 202.5) (Through Max. Cd.) : BLUE
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.) : RED

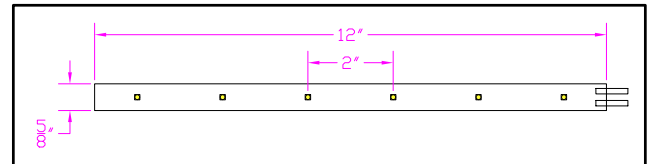
**IES INDOOR REPORT
PHOTOMETRIC FILENAME : L02101602.IES**

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] LLI 0210-1602
 [TESTLAB] LIGHT LABORATORY INC
 [ISSUEDATE] 2/11/10
 [MANUFAC] J&J ELECTRONICS
 [LUMCAT] LLS-12-120-CW
 [LUMINAIRE] 12"L. X 5/8"W. LED STRIP LIGHT
 [MORE] 2" SPACING, 6 COOL WHITE LEDS
 [LAMPPOSITION] 0,0
 [LAMPCAT] COOL WHITE LED
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [_INPUT] 24VAC, 3.77W
 [_TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lumens	N.A. (absolute)
Luminaire Lumens	113
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	30
Total Luminaire Watts	3.77
Ballast Factor	1.00
CIE Type	Direct
Spacing Criteria (0-180)	1.26
Spacing Criteria (90-270)	1.26
Spacing Criteria (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.84 ft
Luminous Width (90-270)	0.01 ft
Luminous Height	0.00 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	47707	48340	48250
55	44640	45309	45756
65	40592	40895	40895
75	32646	34130	32646
85	27909	24971	22033

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L02101602.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0.0	40.4	40.4	40.4	40.4	40.4
1.0	40.6	40.7	40.6	40.3	40.7
3.0	40.6	40.8	40.2	40.5	40.7
5.0	39.9	40.8	39.8	40.2	40.6
7.0	39.9	40.1	39.7	40.0	40.0
9.0	40.5	39.9	39.5	39.9	39.5
11.0	39.5	39.3	39.4	39.9	39.1
13.0	38.9	38.7	39.3	39.5	38.7
15.0	38.0	38.4	39.1	38.7	38.4
17.0	37.6	38.5	38.9	38.1	38.1
19.5	37.7	37.8	38.2	37.6	37.7
22.5	36.5	36.7	36.7	37.0	36.6
25.5	35.4	35.7	35.7	35.9	35.9
29.0	34.0	34.6	34.6	34.5	34.4
33.0	32.7	32.9	33.1	32.8	32.5
37.5	30.4	30.6	30.7	30.8	30.4
42.5	27.7	28.1	28.1	27.9	27.6
47.5	25.0	25.0	25.3	25.2	25.7
55.0	20.0	20.4	20.3	20.4	20.5
65.0	13.4	13.4	13.5	13.7	13.5
75.0	6.6	6.7	6.9	6.8	6.6
85.0	1.9	2.1	1.7	1.7	1.5
90.0	0.8	0.8	0.8	0.8	0.8

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L02101602.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	29.47	N.A.	26
0-40	46.11	N.A.	40.8
0-60	81.33	N.A.	71.9
0-90	113.13	N.A.	100
90-120	0	N.A.	0
90-130	0	N.A.	0
90-150	0	N.A.	0
90-180	0	N.A.	0
0-180	113.13	N.A.	100

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	3.1
10-20	10.96
20-30	15.41
30-40	16.64
40-50	20.62
50-60	14.6
60-70	16.05
70-80	10.43
80-90	5.32
90-100	0
100-110	0
110-120	0
120-130	0
130-140	0
140-150	0
150-160	0
160-170	0
170-180	0

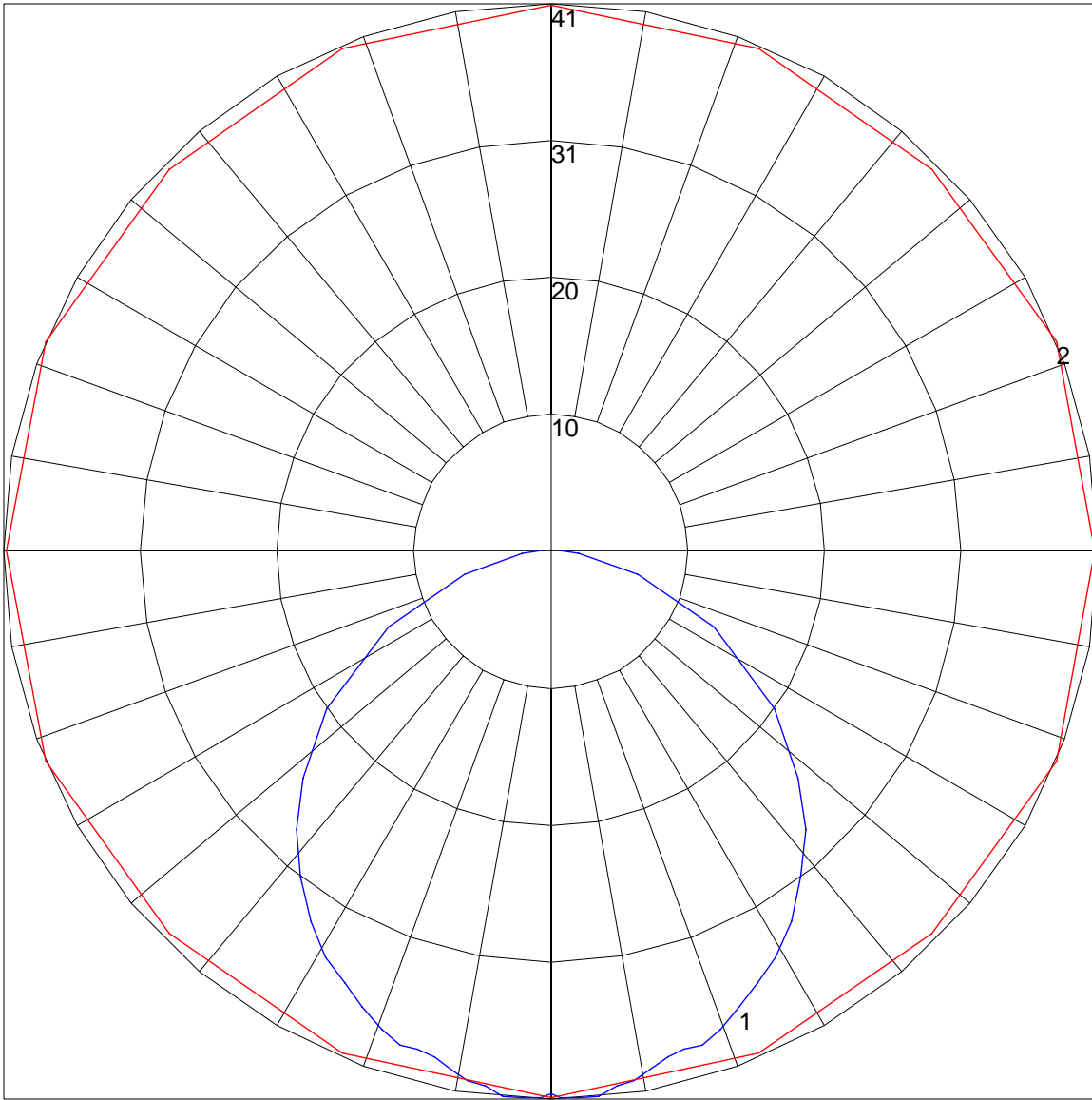
IES INDOOR REPORT
PHOTOMETRIC FILENAME : L02101602.IES

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	111	111	111	107	107	107	102	102	102	100
1	107	102	97	92	104	99	95	91	95	91	88	91	88	85	87	85	83	81
2	97	88	80	74	94	86	79	73	82	76	71	79	74	70	76	72	68	66
3	88	77	68	61	85	75	67	60	72	65	59	69	63	58	67	62	57	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	61	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	38	30	25	37	29	25	36	29	24	35	29	24	23

POLAR GRAPH



Maximum Candela = 40.8 Located At Horizontal Angle = 22.5, Vertical Angle = 3
1 - Vertical Plane Through Horizontal Angles (22.5 - 202.5) (Through Max. Cd.) : BLUE
2 - Horizontal Cone Through Vertical Angle (3) (Through Max. Cd.) : RED

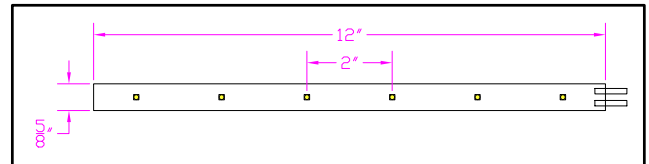
**IES INDOOR REPORT
PHOTOMETRIC FILENAME : L02101601.IES**

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] LLI 0210-1601
 [TESTLAB] LIGHT LABORATORY INC
 [ISSUEDATE] 2/11/10
 [MANUFAC] J&J ELECTRONICS
 [LUMCAT] LLS-12-120-WW
 [LUMINAIRE] 12"L. X 5/8"W. LED STRIP LIGHT
 [MORE] 2" SPACING, 6 WARM WHITE LEDS
 [LAMPPOSITION] 0,0
 [LAMPCAT] WARM WHITE LED
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [_INPUT] 24VAC, 3.79W
 [_TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lumens	N.A. (absolute)
Luminaire Lumens	82
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	22
Total Luminaire Watts	3.79
Ballast Factor	1.00
CIE Type	Direct
Spacing Criteria (0-180)	1.24
Spacing Criteria (90-270)	1.24
Spacing Criteria (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.84 ft
Luminous Width (90-270)	0.01 ft
Luminous Height	0.00 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	34581	35124	35033
55	32141	32587	33033
65	29081	29081	29384
75	22753	24237	23248
85	19096	14689	14689

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L02101601.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0.0	30.1	30.1	30.1	30.1	30.1
1.0	30.1	30.2	30.1	29.9	30.2
3.0	30.1	30.2	29.8	29.9	30.1
5.0	29.6	30.2	29.5	29.8	30.2
7.0	29.5	29.8	29.4	29.6	29.6
9.0	29.7	29.4	29.3	29.6	29.2
11.0	29.3	29.0	29.0	29.4	28.8
13.0	28.7	28.6	29.0	29.2	28.6
15.0	28.0	28.4	28.9	28.5	28.3
17.0	27.7	28.3	28.6	28.0	28.1
19.5	27.7	27.8	28.1	27.7	27.6
22.5	26.8	27.0	27.0	27.1	27.0
25.5	26.1	26.2	26.3	26.4	26.4
29.0	25.0	25.3	25.4	25.2	25.1
33.0	24.0	23.9	24.2	24.0	23.7
37.5	22.1	22.3	22.3	22.5	22.0
42.5	20.1	20.4	20.5	20.3	20.0
47.5	18.1	18.2	18.3	18.2	18.7
55.0	14.4	14.7	14.6	14.8	14.8
65.0	9.6	9.6	9.6	9.8	9.7
75.0	4.6	4.7	4.9	4.8	4.7
85.0	1.3	1.3	1.0	1.1	1.0
90.0	0.5	0.5	0.5	0.5	0.5

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L02101601.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	21.7	N.A.	26.5
0-40	33.84	N.A.	41.3
0-60	59.39	N.A.	72.4
0-90	81.98	N.A.	100
90-120	0	N.A.	0
90-130	0	N.A.	0
90-150	0	N.A.	0
90-180	0	N.A.	0
0-180	81.98	N.A.	100

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	2.3
10-20	8.08
20-30	11.32
30-40	12.15
40-50	14.98
50-60	10.56
60-70	11.54
70-80	7.42
80-90	3.63
90-100	0
100-110	0
110-120	0
120-130	0
130-140	0
140-150	0
150-160	0
160-170	0
170-180	0

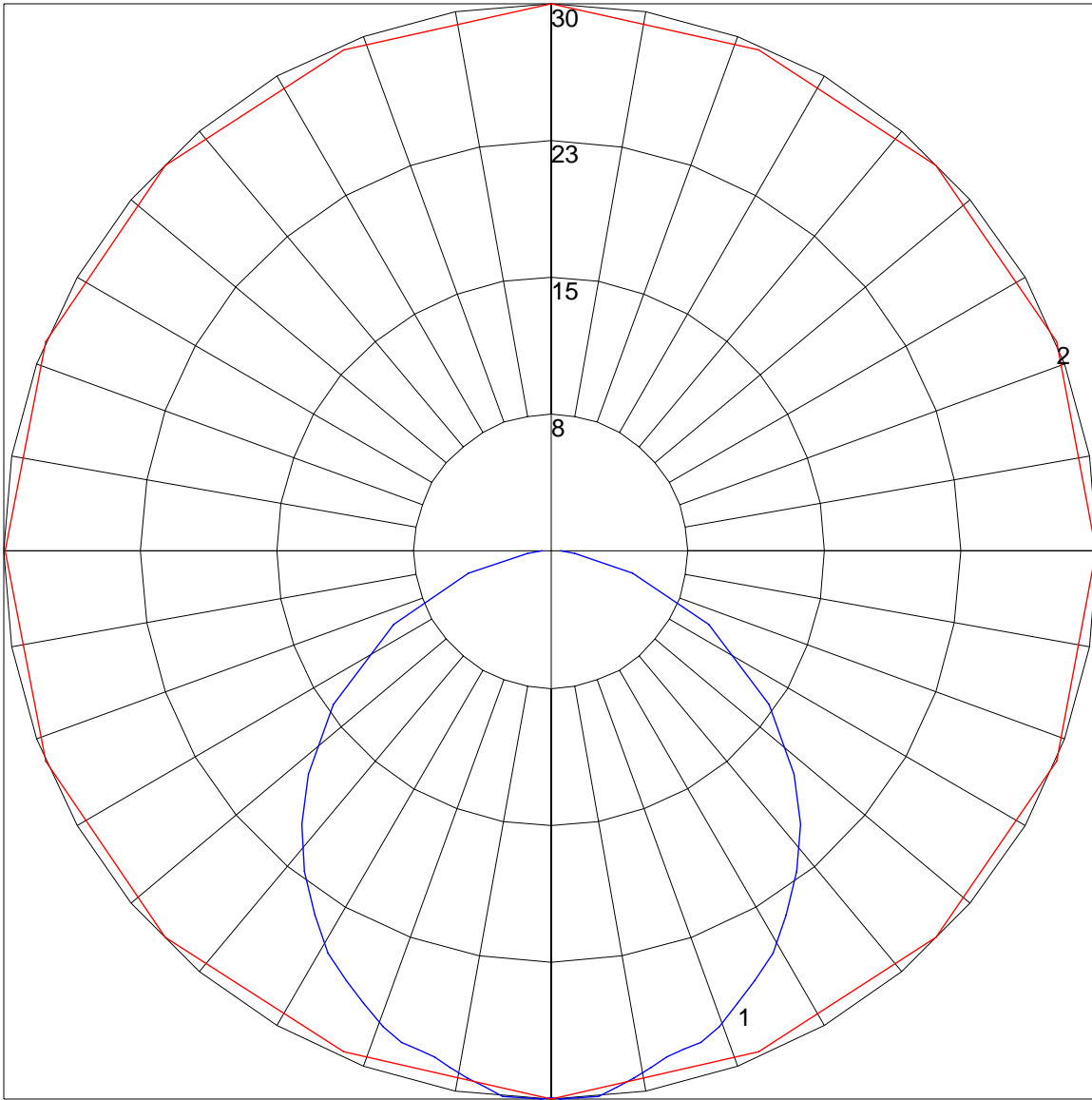
IES INDOOR REPORT
PHOTOMETRIC FILENAME : L02101601.IES

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	111	111	111	106	106	106	102	102	102	100
1	107	102	97	93	104	100	95	91	95	92	88	91	88	85	88	85	83	81
2	97	88	81	74	94	86	79	73	82	77	72	79	74	70	76	72	68	66
3	88	77	68	61	86	75	67	61	72	65	60	69	64	59	67	62	58	55
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	39	52	44	38	50	43	38	49	42	38	35
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	30	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

POLAR GRAPH



Maximum Candela = 30.2 Located At Horizontal Angle = 22.5, Vertical Angle = 1
1 - Vertical Plane Through Horizontal Angles (22.5 - 202.5) (Through Max. Cd.) : BLUE
2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.) : RED