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IES INDOOR REPORT PHOTOMETRIC FILENAME : FSN-8993-OPAL.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 13498111.13
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 9/28/2020
 [MANUFAC] Justice Design Group L L C
 [LUMCAT] FSN-8993-OPAL
 [LUMINAIRE] Formed black metal frame housing with three (3) glass diff
 [MORE] use lens
 [LAMP] White LED array
 [BALLAST] Internal
 [OTHER] 24.6 C, 120.048 V, 0.209296 A, 24.3204 W, 0.967953 PF, 59.9996
 [MORE] Hz
 [OTHER] This test was performed using the calibrated photodetector met
 [MORE] hod of absolute photometry.

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	824
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	34
Total Luminaire Watts	24.3204
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.82
Spacing Criterion (90-270)	1.44
Spacing Criterion (Diagonal)	1.24
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.42 ft
Luminous Width (90-270)	2.00 ft
Luminous Height	0.08 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3712	3564	3040
55	4012	3851	3309
65	4416	4270	3749
75	5128	5004	4668
85	6604	6558	7108

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0.0	201.50	201.50	201.50	201.50	201.50	201.50	201.50	201.50	201.50
0.5	202.20	203.90	202.50	201.20	199.70	200.20	201.20	201.70	200.90
1.0	204.10	205.80	203.80	202.00	199.80	200.00	200.60	200.90	201.20
1.5	206.00	207.30	205.60	202.40	200.00	200.00	200.50	200.60	200.90
2.0	207.60	208.90	206.40	203.50	200.00	200.00	200.20	200.60	200.50
2.5	208.90	210.40	207.60	204.10	200.20	200.00	200.30	200.10	199.20
3.0	210.90	212.20	209.10	205.00	200.00	199.80	199.90	198.30	195.60
3.5	212.10	213.40	210.00	205.80	200.20	200.00	199.50	195.10	187.80
4.0	214.10	214.90	211.20	206.40	200.40	200.10	198.30	190.20	177.60
4.5	215.50	216.50	212.50	207.40	200.40	200.30	195.50	182.60	162.40
5.0	217.00	217.60	213.80	207.90	200.70	200.50	192.00	172.80	146.70
5.5	218.40	219.10	214.50	208.80	200.60	200.40	186.50	160.10	129.80
6.0	219.90	220.60	215.70	209.40	200.80	200.10	179.20	146.70	111.50
6.5	221.50	221.70	217.20	210.20	200.90	199.90	170.90	130.10	93.31
7.0	222.90	223.20	218.30	210.90	201.10	199.60	160.60	115.30	73.55
7.5	224.40	224.40	219.20	211.70	201.20	198.60	149.70	97.56	58.94
8.0	225.90	225.90	220.10	212.20	201.30	197.30	137.60	82.39	45.57
8.5	227.20	227.00	221.10	212.80	201.50	195.60	125.40	68.10	34.44
9.0	228.60	228.10	222.40	213.60	201.60	193.50	112.80	54.73	25.52
9.5	229.50	229.20	223.40	214.10	201.70	190.40	99.48	43.15	16.93
10.0	230.90	230.50	224.50	214.90	201.90	186.70	86.41	33.17	9.41
10.5	232.20	231.30	225.30	215.70	202.10	183.10	74.43	24.77	3.35
11.0	233.60	232.70	226.10	216.00	202.20	178.40	63.84	16.89	0.24
11.5	234.70	233.70	227.20	216.90	202.10	173.40	53.40	11.12	0.00
12.0	236.40	234.60	227.70	217.10	202.40	167.90	44.97	6.07	0.00
12.5	237.10	235.70	228.70	217.80	202.20	161.60	36.90	2.95	0.00
13.0	237.90	236.50	229.40	218.10	202.10	155.30	29.97	0.64	0.00
13.5	238.80	237.40	230.20	218.90	202.40	149.20	23.21	0.00	0.00
14.0	239.90	238.40	231.00	219.00	202.20	142.70	17.48	0.00	0.00
14.5	240.40	239.10	231.80	219.70	202.30	134.90	11.99	0.00	0.00
15.0	241.50	239.90	232.60	220.20	202.10	128.20	7.67	0.00	0.00
15.5	242.20	240.50	233.10	220.50	202.30	120.90	4.40	0.00	0.00
16.0	243.10	241.70	233.70	220.60	202.10	113.60	2.06	0.00	0.00
16.5	243.80	241.90	234.10	221.10	201.70	106.30	0.70	0.00	0.00
17.0	244.20	242.60	234.70	221.30	201.50	98.23	0.00	0.00	0.00
17.5	245.30	243.00	234.80	221.80	201.70	90.79	0.00	0.00	0.00
18.0	246.00	243.60	235.50	222.10	201.70	83.06	0.00	0.00	0.00
18.5	246.40	244.40	235.80	222.20	201.20	75.70	0.00	0.00	0.00
19.0	247.00	244.50	236.20	222.20	201.20	68.60	0.00	0.00	0.00
19.5	247.40	245.10	236.90	222.80	200.90	62.29	0.00	0.00	0.00
20.0	248.10	245.50	237.20	222.80	200.40	56.24	0.00	0.00	0.00
20.5	248.20	246.10	237.20	222.80	200.20	50.58	0.00	0.00	0.00
21.0	248.90	246.30	237.20	222.70	199.80	45.45	0.00	0.00	0.00
21.5	249.40	246.80	237.70	223.00	199.50	40.52	0.00	0.00	0.00
22.0	249.90	246.90	238.10	223.20	199.20	36.01	0.00	0.00	0.00
22.5	249.50	247.10	238.10	223.10	199.00	31.83	0.00	0.00	0.00
23.0	250.60	247.50	238.40	223.20	198.40	27.70	0.00	0.00	0.00
23.5	250.50	247.60	238.60	223.30	198.10	23.65	0.00	0.00	0.00
24.0	250.90	247.80	238.80	223.10	197.90	20.01	0.00	0.00	0.00
24.5	251.00	248.10	238.90	223.00	197.60	16.27	0.00	0.00	0.00
25.0	251.40	248.10	238.90	223.20	196.90	12.88	0.00	0.00	0.00
25.5	251.60	248.30	238.80	223.10	196.70	9.63	0.00	0.00	0.00
26.0	252.00	248.90	239.00	223.10	196.60	6.82	0.00	0.00	0.00
26.5	251.50	249.00	238.70	222.90	196.20	4.34	0.00	0.00	0.00

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CANDELA TABULATION - (Cont.)

27.0	251.90	248.80	239.10	222.80	195.40	2.25	0.00	0.00	0.00
27.5	252.00	249.00	239.00	223.00	195.10	1.22	0.00	0.00	0.00
28.0	252.20	248.80	239.10	222.80	194.60	0.34	0.00	0.00	0.00
28.5	252.40	249.10	239.20	222.40	194.10	0.00	0.00	0.00	0.00
29.0	252.70	248.80	239.20	221.90	193.70	0.00	0.00	0.00	0.00
29.5	252.20	249.10	239.00	221.80	193.10	0.00	0.00	0.00	0.00
30.0	252.30	249.30	238.90	221.70	192.50	0.00	0.00	0.00	0.00
30.5	252.60	249.00	239.00	221.90	192.20	0.00	0.00	0.00	0.00
31.0	252.80	249.00	238.90	221.30	191.70	0.00	0.00	0.00	0.00
31.5	252.50	249.30	238.90	221.20	191.20	0.00	0.00	0.00	0.00
32.0	252.80	249.00	238.60	220.90	190.50	0.00	0.00	0.00	0.00
32.5	252.80	249.10	238.60	220.90	190.20	0.00	0.00	0.00	0.00
33.0	252.60	248.90	238.40	220.60	189.70	0.00	0.00	0.00	0.00
33.5	252.30	248.60	238.10	220.30	189.20	0.00	0.00	0.00	0.00
34.0	252.00	248.60	238.00	220.00	188.70	0.00	0.00	0.00	0.00
34.5	252.30	248.30	237.80	219.60	188.10	0.00	0.00	0.00	0.00
35.0	252.00	248.10	237.50	219.10	187.40	0.00	0.00	0.00	0.00
35.5	251.80	248.00	237.30	218.90	186.90	0.00	0.00	0.00	0.00
36.0	251.70	247.60	236.90	218.60	186.40	0.00	0.00	0.00	0.00
36.5	251.60	247.30	236.80	218.20	185.50	0.00	0.00	0.00	0.00
37.0	251.20	247.20	236.30	217.70	185.00	0.00	0.00	0.00	0.00
37.5	250.70	246.60	236.30	217.50	184.70	0.00	0.00	0.00	0.00
38.0	250.50	246.50	235.90	216.90	183.80	0.00	0.00	0.00	0.00
38.5	250.00	246.10	235.40	216.50	183.60	0.00	0.00	0.00	0.00
39.0	249.70	246.10	235.10	216.10	182.60	0.00	0.00	0.00	0.00
39.5	249.30	245.60	234.60	215.50	182.00	0.00	0.00	0.00	0.00
40.0	249.10	245.40	234.10	214.80	181.30	0.00	0.00	0.00	0.00
40.5	248.80	244.70	233.70	214.60	180.50	0.00	0.00	0.00	0.00
41.0	248.00	244.10	233.10	214.00	179.90	0.00	0.00	0.00	0.00
41.5	247.90	243.50	232.60	213.40	179.20	0.00	0.00	0.00	0.00
42.0	247.40	243.20	232.30	212.50	178.30	0.00	0.00	0.00	0.00
42.5	247.00	242.70	231.60	212.10	177.70	0.00	0.00	0.00	0.00
43.0	246.20	242.60	231.30	211.40	177.00	0.00	0.00	0.00	0.00
43.5	245.60	242.20	230.60	211.10	176.10	0.00	0.00	0.00	0.00
44.0	244.80	241.40	230.20	210.20	175.40	0.00	0.00	0.00	0.00
44.5	244.50	240.60	229.40	209.50	174.50	0.00	0.00	0.00	0.00
45.0	244.10	240.10	228.70	208.80	173.60	0.00	0.00	0.00	0.00
45.5	243.70	239.40	228.10	208.10	173.00	0.00	0.00	0.00	0.00
46.0	242.90	238.70	227.50	207.50	172.30	0.00	0.00	0.00	0.00
46.5	241.90	238.40	226.90	206.70	171.30	0.00	0.00	0.00	0.00
47.0	241.40	237.40	226.20	205.90	170.60	0.00	0.00	0.00	0.00
47.5	241.20	236.90	225.60	205.00	169.70	0.00	0.00	0.00	0.00
48.0	240.30	236.30	224.90	204.30	168.90	0.00	0.00	0.00	0.00
48.5	239.90	235.30	224.10	203.30	167.70	0.00	0.00	0.00	0.00
49.0	239.00	234.50	223.40	202.70	167.20	0.00	0.00	0.00	0.00
49.5	238.10	233.70	222.80	202.00	166.30	0.00	0.00	0.00	0.00
50.0	237.50	233.00	222.10	201.10	165.30	0.00	0.00	0.00	0.00
50.5	236.80	232.20	221.30	200.40	164.40	0.00	0.00	0.00	0.00
51.0	235.80	231.70	220.50	199.30	163.50	0.00	0.00	0.00	0.00
51.5	235.10	230.60	219.50	198.60	162.70	0.00	0.00	0.00	0.00
52.0	234.30	229.80	218.80	197.60	161.80	0.00	0.00	0.00	0.00
52.5	233.40	229.00	217.70	196.90	160.70	0.00	0.00	0.00	0.00
53.0	232.70	228.00	216.90	195.70	160.00	0.00	0.00	0.00	0.00
53.5	232.10	227.20	216.10	194.90	158.90	0.00	0.00	0.00	0.00
54.0	230.90	226.30	215.20	193.80	158.10	0.00	0.00	0.00	0.00
54.5	230.10	225.40	214.10	192.80	157.10	0.00	0.00	0.00	0.00

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CANDELA TABULATION - (Cont.)

55.0	229.20	224.60	212.90	191.90	155.90	0.00	0.00	0.00	0.00
55.5	228.40	223.70	212.40	191.00	155.00	0.00	0.00	0.00	0.00
56.0	227.10	222.70	211.20	190.00	153.90	0.00	0.00	0.00	0.00
56.5	226.70	221.80	210.20	189.10	153.00	0.00	0.00	0.00	0.00
57.0	225.30	220.50	209.30	187.90	152.10	0.00	0.00	0.00	0.00
57.5	224.20	219.50	208.10	186.80	150.80	0.00	0.00	0.00	0.00
58.0	223.10	218.60	207.30	185.70	149.90	0.00	0.00	0.00	0.00
58.5	222.30	217.30	206.20	184.80	148.80	0.00	0.00	0.00	0.00
59.0	221.30	216.40	205.20	183.50	147.90	0.00	0.00	0.00	0.00
59.5	220.10	215.40	204.00	182.50	146.40	0.00	0.00	0.00	0.00
60.0	219.10	214.40	203.20	181.30	145.10	0.00	0.00	0.00	0.00
60.5	218.10	213.00	202.20	180.20	144.20	0.00	0.00	0.00	0.00
61.0	216.60	212.10	201.00	179.10	143.10	0.00	0.00	0.00	0.00
61.5	215.40	210.70	199.70	177.90	142.00	0.00	0.00	0.00	0.00
62.0	214.00	209.70	198.40	176.80	140.80	0.00	0.00	0.00	0.00
62.5	213.00	208.40	197.40	175.60	139.80	0.00	0.00	0.00	0.00
63.0	211.90	207.20	196.20	174.50	138.70	0.00	0.00	0.00	0.00
63.5	210.50	206.10	194.90	173.60	137.20	0.00	0.00	0.00	0.00
64.0	209.40	204.80	193.80	172.20	135.90	0.00	0.00	0.00	0.00
64.5	208.00	203.50	192.40	170.80	134.90	0.00	0.00	0.00	0.00
65.0	206.50	202.30	191.00	169.30	133.80	0.00	0.00	0.00	0.00
65.5	205.30	200.90	189.90	168.20	132.70	0.00	0.00	0.00	0.00
66.0	204.00	199.80	188.50	166.70	131.50	0.00	0.00	0.00	0.00
66.5	202.60	198.50	187.50	165.70	130.00	0.00	0.00	0.00	0.00
67.0	201.40	197.20	186.10	164.20	128.80	0.00	0.00	0.00	0.00
67.5	200.30	195.90	184.80	163.10	127.70	0.00	0.00	0.00	0.00
68.0	198.60	194.40	183.60	161.70	126.10	0.00	0.00	0.00	0.00
68.5	197.40	193.20	182.00	160.40	125.00	0.00	0.00	0.00	0.00
69.0	196.20	191.90	180.70	158.90	123.90	0.00	0.00	0.00	0.00
69.5	194.60	190.50	179.30	157.70	122.70	0.00	0.00	0.00	0.00
70.0	193.20	189.20	178.30	156.70	121.30	0.00	0.00	0.00	0.00
70.5	191.90	187.80	176.70	154.90	120.10	0.00	0.00	0.00	0.00
71.0	190.60	186.50	175.60	153.80	118.80	0.00	0.00	0.00	0.00
71.5	189.10	185.20	173.80	152.50	117.30	0.00	0.00	0.00	0.00
72.0	187.80	183.80	172.50	151.00	116.10	0.00	0.00	0.00	0.00
72.5	186.70	182.00	171.00	149.70	114.90	0.00	0.00	0.00	0.00
73.0	185.00	180.50	169.50	148.50	113.80	0.00	0.00	0.00	0.00
73.5	183.40	179.20	168.30	146.90	112.40	0.00	0.00	0.00	0.00
74.0	182.00	177.90	166.60	145.60	110.80	0.00	0.00	0.00	0.00
74.5	180.60	176.60	165.50	144.30	109.30	0.00	0.00	0.00	0.00
75.0	179.40	174.90	164.20	142.90	108.20	0.00	0.00	0.00	0.00
75.5	178.00	173.60	162.70	141.50	107.00	0.00	0.00	0.00	0.00
76.0	176.70	172.00	161.40	140.00	105.80	0.00	0.00	0.00	0.00
76.5	175.10	171.00	159.90	138.70	104.30	0.00	0.00	0.00	0.00
77.0	173.70	169.20	158.30	137.40	103.00	0.00	0.00	0.00	0.00
77.5	172.40	167.60	156.80	135.80	101.60	0.00	0.00	0.00	0.00
78.0	170.80	166.20	155.20	134.40	100.40	0.00	0.00	0.00	0.00
78.5	169.30	164.70	154.10	133.10	99.02	0.00	0.00	0.00	0.00
79.0	167.80	163.10	152.30	131.80	97.82	0.00	0.00	0.00	0.00
79.5	166.30	161.80	150.80	130.00	96.27	0.00	0.00	0.00	0.00
80.0	164.80	160.20	149.40	128.70	94.82	0.00	0.00	0.00	0.00
80.5	163.10	158.60	147.90	127.30	93.19	0.00	0.00	0.00	0.00
81.0	161.60	156.90	146.30	125.50	91.66	0.00	0.00	0.00	0.00
81.5	160.00	155.20	144.50	123.60	89.71	0.00	0.00	0.00	0.00
82.0	158.10	153.30	142.60	121.50	87.66	0.00	0.00	0.00	0.00
82.5	156.50	151.30	140.70	119.60	85.45	0.00	0.00	0.00	0.00

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CANDELA TABULATION - (Cont.)

83.0	154.80	149.60	138.80	117.30	82.75	0.00	0.00	0.00	0.00
83.5	152.70	147.30	137.20	115.10	80.33	0.00	0.00	0.00	0.00
84.0	150.30	145.40	134.90	113.00	77.32	0.00	0.00	0.00	0.00
84.5	148.20	142.90	132.50	110.60	74.47	0.00	0.00	0.00	0.00
85.0	146.20	140.70	130.50	108.20	70.83	0.00	0.00	0.00	0.00
85.5	143.70	138.70	128.00	105.40	66.64	0.00	0.00	0.00	0.00
86.0	141.60	136.20	125.70	102.90	62.45	0.00	0.00	0.00	0.00
86.5	138.90	133.90	123.40	100.20	58.38	0.00	0.00	0.00	0.00
87.0	136.30	131.50	121.00	97.68	55.01	0.00	0.00	0.00	0.00
87.5	134.30	129.00	118.80	94.97	51.12	0.00	0.00	0.00	0.00
88.0	132.00	127.00	116.40	92.29	47.03	0.00	0.00	0.00	0.00
88.5	129.10	124.70	114.30	90.26	43.77	0.00	0.00	0.00	0.00
89.0	127.50	122.70	111.90	87.94	41.27	0.00	0.00	0.00	0.00
89.5	125.00	120.90	110.40	85.83	38.28	0.00	0.00	0.00	0.00
90.0	122.80	118.70	108.50	84.02	36.01	0.00	0.00	0.00	0.00
90.5	120.60	117.10	106.40	82.16	33.91	0.00	0.00	0.00	0.00
91.0	119.00	115.20	104.70	80.39	31.60	0.00	0.00	0.00	0.00
91.5	117.20	113.50	103.60	78.74	30.20	0.00	0.00	0.00	0.00
92.0	115.40	112.20	102.10	77.11	29.72	0.00	0.00	0.00	0.00
92.5	114.00	110.10	100.00	75.68	29.38	0.00	0.00	0.00	0.00
93.0	112.30	108.80	98.48	73.95	28.50	0.00	0.00	0.00	0.00
93.5	111.10	107.40	96.96	72.45	27.99	0.00	0.00	0.00	0.00
94.0	109.30	106.00	95.67	71.11	27.78	0.00	0.00	0.00	0.00
94.5	107.50	104.60	94.38	69.97	27.30	0.00	0.00	0.00	0.00
95.0	106.10	103.40	93.11	69.20	26.70	0.00	0.00	0.00	0.00
95.5	105.40	102.20	92.49	68.36	26.20	0.00	0.00	0.00	0.00
96.0	104.10	101.50	91.13	67.59	25.75	0.00	0.00	0.00	0.00
96.5	103.20	100.80	90.66	66.88	25.43	0.00	0.00	0.00	0.00
97.0	103.00	100.10	90.28	65.95	25.39	0.00	0.00	0.00	0.00
97.5	102.10	99.64	89.27	65.74	25.60	0.00	0.00	0.00	0.00
98.0	101.70	99.01	89.39	65.29	25.63	0.00	0.00	0.00	0.00
98.5	101.50	98.75	88.85	65.48	25.41	0.00	0.00	0.00	0.00
99.0	101.30	98.53	88.73	65.07	25.10	0.00	0.00	0.00	0.00
99.5	100.60	98.05	88.15	65.04	24.99	0.00	0.00	0.00	0.00
100.0	100.10	97.87	87.98	64.94	25.44	0.00	0.00	0.00	0.00
100.5	100.00	97.38	87.65	65.02	26.38	0.00	0.00	0.00	0.00
101.0	99.42	96.69	87.26	64.63	27.19	0.00	0.00	0.00	0.00
101.5	98.76	96.30	86.99	64.47	27.77	0.00	0.00	0.00	0.00
102.0	98.56	96.07	86.50	64.05	27.91	0.00	0.00	0.00	0.00
102.5	98.04	95.43	85.93	63.89	28.04	0.00	0.00	0.00	0.00
103.0	97.39	94.89	85.55	63.67	28.62	0.00	0.00	0.00	0.00
103.5	96.78	94.56	84.90	63.01	29.31	0.00	0.00	0.00	0.00
104.0	96.45	93.88	84.62	62.58	29.97	0.00	0.00	0.00	0.00
104.5	95.66	92.85	83.97	62.29	30.67	0.00	0.00	0.00	0.00
105.0	95.01	92.62	83.58	61.80	31.07	0.00	0.00	0.00	0.00
105.5	94.28	91.79	82.91	61.31	31.50	0.00	0.00	0.00	0.00
106.0	93.81	90.75	82.34	61.07	31.75	0.00	0.00	0.00	0.00
106.5	92.90	90.21	81.59	60.46	31.86	0.00	0.00	0.00	0.00
107.0	92.12	89.59	80.77	59.95	31.96	0.00	0.00	0.00	0.00
107.5	91.11	88.57	80.04	59.55	32.01	0.00	0.00	0.00	0.00
108.0	90.21	87.68	79.15	58.82	32.08	0.00	0.00	0.00	0.00
108.5	89.36	86.87	78.19	57.62	32.13	0.00	0.00	0.00	0.00
109.0	88.33	86.11	77.17	56.95	32.05	0.00	0.00	0.00	0.00
109.5	87.35	85.15	76.46	56.40	31.87	0.00	0.00	0.00	0.00
110.0	86.69	83.85	75.42	56.02	31.42	0.00	0.00	0.00	0.00
110.5	85.70	82.77	74.71	55.02	31.05	0.00	0.00	0.00	0.00

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CANDELA TABULATION - (Cont.)

111.0	84.77	81.84	73.94	54.23	30.57	0.00	0.00	0.00	0.00
111.5	83.69	81.25	72.80	53.44	29.97	0.00	0.00	0.00	0.00
112.0	82.69	79.86	71.95	52.70	29.44	0.00	0.00	0.00	0.00
112.5	81.91	79.14	70.94	52.13	28.87	0.00	0.00	0.00	0.00
113.0	80.99	78.14	70.09	51.44	28.39	0.00	0.00	0.00	0.00
113.5	79.85	77.43	68.91	50.63	27.84	0.00	0.00	0.00	0.00
114.0	78.99	75.86	68.09	49.92	27.28	0.00	0.00	0.00	0.00
114.5	77.74	75.33	67.42	49.27	26.67	0.00	0.00	0.00	0.00
115.0	76.87	74.20	66.46	48.45	26.13	0.00	0.00	0.00	0.00
115.5	75.95	73.03	65.38	47.79	25.57	0.00	0.00	0.00	0.00
116.0	75.16	72.24	64.25	47.03	24.99	0.00	0.00	0.00	0.00
116.5	74.12	71.51	63.51	46.33	24.40	0.00	0.00	0.00	0.00
117.0	73.34	70.49	62.28	45.59	23.90	0.00	0.00	0.00	0.00
117.5	71.96	69.60	61.51	44.90	23.40	0.00	0.00	0.00	0.00
118.0	71.51	68.73	60.89	44.31	22.94	0.00	0.00	0.00	0.00
118.5	70.43	68.13	60.11	43.77	22.57	0.00	0.00	0.00	0.00
119.0	69.45	67.52	59.32	43.25	22.18	0.00	0.00	0.00	0.00
119.5	68.74	66.38	58.34	42.67	21.78	0.00	0.00	0.00	0.00
120.0	68.51	65.72	57.70	42.28	21.44	0.00	0.00	0.00	0.00
120.5	67.85	64.92	57.10	41.87	21.19	0.00	0.00	0.00	0.00
121.0	67.04	64.41	56.59	41.42	20.85	0.00	0.00	0.00	0.00
121.5	66.37	63.48	55.90	41.00	20.47	0.00	0.00	0.00	0.00
122.0	65.76	62.75	55.48	40.51	20.19	0.00	0.00	0.00	0.00
122.5	65.20	62.09	54.51	40.00	19.79	0.00	0.00	0.00	0.00
123.0	64.15	61.46	53.72	39.48	19.44	0.00	0.00	0.00	0.00
123.5	63.92	61.01	52.96	38.97	19.01	0.00	0.00	0.00	0.00
124.0	63.11	59.95	52.28	38.48	18.65	0.00	0.00	0.00	0.00
124.5	62.39	59.41	51.65	37.94	18.28	0.00	0.00	0.00	0.00
125.0	61.30	58.71	50.90	37.43	17.89	0.00	0.00	0.00	0.00
125.5	60.52	57.65	50.18	36.88	17.49	0.00	0.00	0.00	0.00
126.0	59.57	56.75	49.41	36.33	17.09	0.00	0.00	0.00	0.00
126.5	58.73	55.71	48.60	35.75	16.64	0.00	0.00	0.00	0.00
127.0	58.01	55.23	47.87	35.21	16.19	0.00	0.00	0.00	0.00
127.5	57.29	54.52	47.18	34.61	15.74	0.00	0.00	0.00	0.00
128.0	56.37	53.54	46.44	34.05	15.32	0.00	0.00	0.00	0.00
128.5	55.66	52.76	45.80	33.50	14.91	0.00	0.00	0.00	0.00
129.0	54.80	52.10	45.05	32.93	14.57	0.00	0.00	0.00	0.00
129.5	54.02	51.36	44.51	32.39	14.15	0.00	0.00	0.00	0.00
130.0	53.43	50.58	43.90	31.86	13.74	0.00	0.00	0.00	0.00
130.5	52.62	49.84	43.26	31.32	13.39	0.00	0.00	0.00	0.00
131.0	52.06	49.19	42.72	30.86	13.02	0.00	0.00	0.00	0.00
131.5	51.32	48.46	42.16	30.37	12.62	0.00	0.00	0.00	0.00
132.0	50.70	47.86	41.62	29.92	12.25	0.00	0.00	0.00	0.00
132.5	49.91	47.19	41.04	29.42	11.95	0.00	0.00	0.00	0.00
133.0	49.30	46.58	40.51	28.95	11.59	0.00	0.00	0.00	0.00
133.5	48.59	45.96	39.88	28.51	11.29	0.00	0.00	0.00	0.00
134.0	47.97	45.42	39.41	28.06	10.98	0.00	0.00	0.00	0.00
134.5	47.30	44.79	38.96	27.63	10.70	0.00	0.00	0.00	0.00
135.0	46.73	44.24	38.44	27.19	10.39	0.00	0.00	0.00	0.00
135.5	46.09	43.68	37.94	26.79	10.05	0.00	0.00	0.00	0.00
136.0	45.50	43.08	37.32	26.35	9.80	0.00	0.00	0.00	0.00
136.5	44.92	42.53	36.85	25.97	9.44	0.00	0.00	0.00	0.00
137.0	44.37	41.88	36.30	25.54	9.19	0.00	0.00	0.00	0.00
137.5	43.67	41.39	35.76	25.16	8.97	0.00	0.00	0.00	0.00
138.0	43.08	40.92	35.36	24.69	8.74	0.00	0.00	0.00	0.00
138.5	42.57	40.46	34.90	24.30	8.53	0.00	0.00	0.00	0.00

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CANDELA TABULATION - (Cont.)

139.0	42.01	39.73	34.30	23.95	7.99	0.00	0.00	0.00	0.00
139.5	41.46	39.28	33.80	23.51	7.87	0.00	0.00	0.00	0.00
140.0	40.95	38.85	33.42	23.04	7.67	0.00	0.00	0.00	0.00
140.5	40.47	38.38	32.96	22.67	7.44	0.00	0.00	0.00	0.00
141.0	39.99	37.92	32.53	22.30	7.22	0.00	0.00	0.00	0.00
141.5	39.47	37.40	32.08	21.92	6.99	0.00	0.00	0.00	0.00
142.0	39.00	37.00	31.67	21.53	6.78	0.00	0.00	0.00	0.00
142.5	38.56	36.48	31.17	21.19	6.55	0.00	0.00	0.00	0.00
143.0	38.18	36.07	30.70	20.75	6.34	0.00	0.00	0.00	0.00
143.5	37.68	35.65	30.28	20.37	6.13	0.00	0.00	0.00	0.00
144.0	37.23	35.20	29.87	19.99	5.94	0.00	0.00	0.00	0.00
144.5	36.79	34.70	29.38	19.58	5.70	0.00	0.00	0.00	0.00
145.0	36.39	34.24	28.94	19.20	5.54	0.00	0.00	0.00	0.00
145.5	35.96	33.76	28.51	18.84	5.35	0.00	0.00	0.00	0.00
146.0	35.54	33.35	28.14	18.35	5.20	0.00	0.00	0.00	0.00
146.5	35.15	32.88	27.70	18.01	5.03	0.00	0.00	0.00	0.00
147.0	34.69	32.51	27.28	17.64	4.86	0.00	0.00	0.00	0.00
147.5	34.27	31.92	26.88	17.27	4.71	0.00	0.00	0.00	0.00
148.0	33.80	31.43	26.42	16.86	4.57	0.00	0.00	0.00	0.00
148.5	33.45	30.89	25.97	16.36	4.39	0.00	0.00	0.00	0.00
149.0	33.04	30.44	25.53	15.88	4.24	0.00	0.00	0.00	0.00
149.5	32.55	30.01	25.09	15.44	4.11	0.00	0.00	0.00	0.00
150.0	32.11	29.61	24.64	14.94	3.96	0.00	0.00	0.00	0.00
150.5	31.62	29.14	24.17	14.51	3.84	0.00	0.00	0.00	0.00
151.0	31.20	28.77	23.73	14.00	3.68	0.00	0.00	0.00	0.00
151.5	30.65	28.30	23.26	13.53	3.54	0.00	0.00	0.00	0.00
152.0	30.04	27.83	22.75	13.06	3.42	0.00	0.00	0.00	0.00
152.5	29.31	27.26	22.23	12.59	3.26	0.00	0.00	0.00	0.00
153.0	28.45	26.74	21.73	12.08	3.11	0.00	0.00	0.00	0.00
153.5	27.74	26.13	21.16	11.58	2.89	0.00	0.00	0.00	0.00
154.0	27.11	25.49	20.56	11.13	2.65	0.00	0.00	0.00	0.00
154.5	26.70	24.93	19.95	10.61	2.40	0.00	0.00	0.00	0.00
155.0	26.37	24.28	19.25	10.10	2.12	0.00	0.00	0.00	0.00
155.5	25.94	23.75	18.46	9.70	1.74	0.00	0.00	0.00	0.00
156.0	25.50	23.21	17.82	9.24	1.38	0.00	0.00	0.00	0.00
156.5	24.91	22.73	17.08	8.85	1.19	0.00	0.00	0.00	0.00
157.0	24.40	22.26	16.44	8.49	1.12	0.00	0.00	0.00	0.00
157.5	23.85	21.65	15.73	8.16	1.07	0.00	0.00	0.00	0.00
158.0	23.19	21.14	15.01	7.89	1.03	0.00	0.00	0.00	0.00
158.5	22.65	20.52	14.21	7.57	0.97	0.00	0.00	0.00	0.00
159.0	21.92	19.78	13.45	7.26	0.90	0.00	0.00	0.00	0.00
159.5	20.91	19.05	12.70	6.93	0.78	0.00	0.00	0.00	0.00
160.0	19.94	18.12	11.98	6.55	0.74	0.00	0.00	0.00	0.00
160.5	19.60	17.11	11.29	6.27	0.68	0.00	0.00	0.00	0.00
161.0	19.49	16.00	10.61	5.97	0.61	0.00	0.00	0.00	0.00
161.5	19.02	15.02	9.96	5.59	0.48	0.00	0.00	0.00	0.00
162.0	18.41	14.09	9.42	5.22	0.41	0.00	0.00	0.00	0.00
162.5	17.79	13.10	8.82	4.95	0.35	0.00	0.00	0.00	0.00
163.0	17.11	12.25	8.37	4.71	0.32	0.00	0.00	0.00	0.00
163.5	16.32	11.40	7.90	4.51	0.29	0.00	0.00	0.00	0.00
164.0	15.60	10.68	7.40	4.33	0.23	0.00	0.00	0.00	0.00
164.5	15.03	9.88	6.89	4.17	0.17	0.00	0.00	0.00	0.00
165.0	14.46	9.20	6.56	4.00	0.08	0.00	0.00	0.00	0.00
165.5	13.99	8.57	6.31	3.82	0.04	0.00	0.00	0.00	0.00
166.0	13.30	7.96	6.05	3.65	0.01	0.00	0.00	0.00	0.00
166.5	12.42	7.37	5.82	3.48	0.00	0.00	0.00	0.00	0.00

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CANDELA TABULATION - (Cont.)

167.0	11.32	6.80	5.59	3.34	0.00	0.00	0.00	0.00	0.00
167.5	9.96	6.34	5.43	3.19	0.00	0.00	0.00	0.00	0.00
168.0	8.75	5.92	5.27	3.08	0.00	0.00	0.00	0.00	0.00
168.5	7.53	5.41	5.16	2.98	0.00	0.00	0.00	0.00	0.00
169.0	6.55	5.01	5.04	2.90	0.00	0.00	0.00	0.00	0.00
169.5	5.80	4.66	4.92	2.82	0.00	0.00	0.00	0.00	0.00
170.0	5.15	4.36	4.80	2.74	0.00	0.00	0.00	0.00	0.00
170.5	4.55	4.06	4.66	2.64	0.00	0.00	0.00	0.00	0.00
171.0	4.00	3.77	4.51	2.51	0.00	0.00	0.00	0.00	0.00
171.5	3.68	3.57	4.41	2.40	0.00	0.00	0.00	0.00	0.00
172.0	3.28	3.43	4.25	2.25	0.00	0.00	0.00	0.00	0.00
172.5	2.92	3.33	4.06	2.12	0.00	0.00	0.00	0.00	0.00
173.0	2.67	3.33	3.88	2.03	0.00	0.00	0.00	0.00	0.00
173.5	2.31	3.31	3.70	1.86	0.00	0.00	0.00	0.00	0.00
174.0	2.17	3.24	3.44	1.76	0.00	0.00	0.00	0.00	0.00
174.5	1.81	3.27	3.21	1.56	0.00	0.00	0.00	0.00	0.00
175.0	1.48	3.14	3.03	1.46	0.00	0.00	0.00	0.00	0.00
175.5	1.31	2.96	2.73	1.29	0.00	0.00	0.00	0.00	0.00
176.0	1.10	2.76	2.47	1.08	0.00	0.00	0.00	0.00	0.00
176.5	1.00	2.55	2.19	0.93	0.00	0.00	0.00	0.00	0.00
177.0	0.73	2.20	1.86	0.74	0.00	0.00	0.00	0.00	0.00
177.5	0.32	1.83	1.48	0.54	0.00	0.00	0.00	0.00	0.00
178.0	0.16	1.35	1.10	0.35	0.00	0.00	0.00	0.00	0.00
178.5	0.00	0.89	0.70	0.18	0.00	0.00	0.00	0.00	0.00
179.0	0.17	0.51	0.36	0.07	0.00	0.00	0.00	0.00	0.00
179.5	0.28	0.22	0.15	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	58.46	N.A.	7.10
0-30	119.08	N.A.	14.50
0-40	198.91	N.A.	24.10
0-60	393.69	N.A.	47.80
0-80	582.56	N.A.	70.70
0-90	653.17	N.A.	79.30
10-90	635.57	N.A.	77.10
20-40	140.45	N.A.	17.00
20-50	234.50	N.A.	28.50
40-70	293.86	N.A.	35.70
60-80	188.87	N.A.	22.90
70-80	89.80	N.A.	10.90
80-90	70.61	N.A.	8.60
90-110	89.67	N.A.	10.90
90-120	121.26	N.A.	14.70
90-130	143.17	N.A.	17.40
90-150	165.57	N.A.	20.10
90-180	170.83	N.A.	20.70
110-180	81.16	N.A.	9.80
0-180	824.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	17.60
10-20	40.86
20-30	60.62
30-40	79.83
40-50	94.05
50-60	100.74
60-70	99.07
70-80	89.80
80-90	70.61
90-100	48.19
100-110	41.48
110-120	31.59
120-130	21.91
130-140	14.00
140-150	8.40
150-160	4.07
160-170	1.07
170-180	0.12

IES INDOOR REPORT
PHOTOMETRIC FILENAME : FSN-8993-OPAL.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	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	79	0
1	100	94	88	83	95	89	84	80	81	77	73	74	70	67	67	64	62	58	0
2	90	80	71	65	85	76	68	62	69	63	57	62	57	53	56	52	49	45	0
3	81	69	59	52	76	65	57	50	59	52	46	54	48	43	49	44	40	36	0
4	73	60	50	43	69	57	48	41	52	45	39	47	41	36	43	37	33	30	0
5	67	53	43	36	63	51	42	35	46	39	33	42	36	30	38	33	28	25	0
6	62	47	38	31	58	45	37	30	41	34	28	38	31	26	34	29	24	22	0
7	57	43	34	27	54	41	32	26	37	30	25	34	28	23	31	26	21	19	0
8	53	39	30	24	50	37	29	23	34	27	22	31	25	20	29	23	19	17	0
9	49	35	27	21	47	34	26	21	31	24	19	29	23	18	26	21	17	15	0
10	46	33	24	19	44	31	24	19	29	22	17	27	21	16	24	19	15	13	0

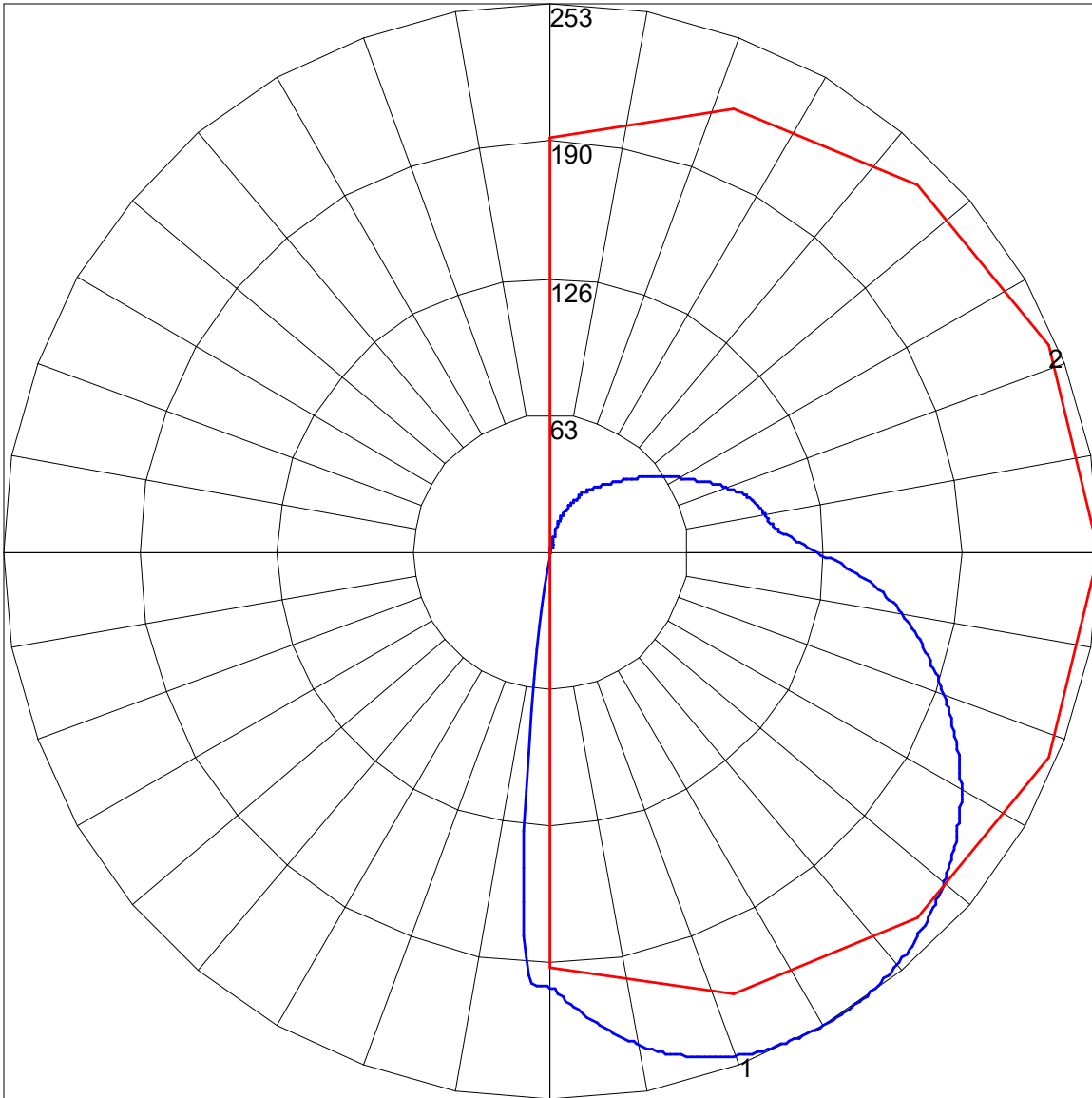
IES INDOOR REPORT
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UGR TABLE - CORRECTED

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	18.3	19.7	18.9	20.3	21.1	14.1	15.5	14.8	16.2	16.9
	3H	21.3	22.5	21.9	23.2	24.0	16.7	18.0	17.4	18.7	19.5
	4H	22.8	24.0	23.4	24.6	25.5	18.0	19.2	18.7	19.9	20.7
	6H	24.3	25.5	25.0	26.2	27.0	19.2	20.4	19.9	21.1	21.9
	8H	25.1	26.2	25.8	26.9	27.8	19.8	20.9	20.5	21.6	22.5
	12H	26.0	27.0	26.7	27.7	28.6	20.3	21.4	21.0	22.1	23.0
4H	2H	19.0	20.2	19.6	20.9	21.7	15.3	16.5	16.0	17.2	18.0
	3H	22.2	23.2	22.9	23.9	24.8	18.1	19.1	18.8	19.9	20.7
	4H	23.8	24.8	24.5	25.5	26.4	19.4	20.4	20.1	21.1	22.0
	6H	25.6	26.5	26.3	27.2	28.1	20.8	21.7	21.5	22.4	23.3
	8H	26.5	27.3	27.2	28.1	29.0	21.4	22.2	22.1	23.0	23.9
	12H	27.5	28.2	28.2	29.0	29.9	22.0	22.7	22.7	23.5	24.4
8H	4H	24.3	25.1	25.0	25.8	26.7	20.3	21.1	21.0	21.8	22.7
	6H	26.3	27.0	27.0	27.7	28.6	21.8	22.5	22.6	23.3	24.2
	8H	27.3	28.0	28.1	28.8	29.6	22.6	23.2	23.3	24.0	24.9
	12H	28.5	29.1	29.3	29.8	30.8	23.3	23.8	24.0	24.6	25.6
12H	4H	24.4	25.1	25.1	25.9	26.8	20.5	21.2	21.2	22.0	22.9
	6H	26.4	27.1	27.2	27.8	28.7	22.1	22.8	22.9	23.6	24.5
	8H	27.6	28.1	28.3	28.9	29.9	23.0	23.6	23.8	24.3	25.3

Maximum UGR = 30.8

POLAR GRAPH



Maximum Candela = 252.8 Located At Horizontal Angle = 0, Vertical Angle = 31
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (31) (Through Max. Cd.)