



IES INDOOR REPORT
PHOTOMETRIC FILENAME : RND-4-L111-835-FXA-DIM-UNV.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM BALLABS TEST NO. 18646.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 07-OCT-2018
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 16-32LED 22"ARRAYS 4x4'RECESSED LUMINAIRE w/WHITE REFL
 [MORE] ARRAYS ON WHITE INTERNAL REFLS & 46"DIA WHITE FROST ACRYLIC
 [MORE] CONVEX LENS
 [LUMCAT] RND-4-L111-835-FXA-DIM-UNV
 [LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	11234
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
Total Luminaire Watts	107
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	3.80 ft (Diameter)
Luminous Width (90-270)	3.80 ft (Diameter)
Luminous Height	0.23 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3223	3217	3223
55	2970	2970	2959
65	2644	2638	2634
75	2119	2107	2119
85	1598	1598	1616

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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>
0	4070.980	4070.980	4070.980	4070.980	4070.980
5	3981.709	3976.636	3976.636	3974.607	3976.636
10	3927.943	3927.943	3927.943	3920.842	3920.842
15	3776.790	3776.790	3778.819	3778.819	3776.790
20	3698.678	3689.548	3687.519	3687.519	3680.418
25	3501.875	3501.875	3495.788	3499.846	3495.788
30	3263.479	3261.450	3257.393	3257.393	3257.393
35	3038.272	3038.272	3038.272	3038.272	3038.272
40	2816.108	2816.108	2813.064	2809.007	2816.108
45	2590.900	2590.900	2585.828	2581.770	2590.900
50	2269.320	2269.320	2269.320	2265.262	2269.320
55	1995.419	1990.347	1995.419	1990.347	1988.318
60	1662.680	1658.623	1658.623	1662.680	1651.521
65	1373.563	1370.519	1370.519	1370.519	1368.490
70	1068.214	1068.214	1068.214	1068.214	1068.214
75	744.605	744.605	740.547	744.605	744.605
80	495.051	493.022	493.022	493.022	497.080
85	275.930	275.930	275.930	269.843	278.973
90	117.676	117.676	117.676	113.618	117.676
95	15.217	22.318	22.318	22.318	18.260
100	0.000	0.000	0.000	0.000	0.000
105	0.000	0.000	0.000	0.000	0.000
110	0.000	0.000	0.000	0.000	0.000
115	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	0.000	0.000
125	0.000	0.000	0.000	0.000	0.000
130	0.000	0.000	0.000	0.000	0.000
135	0.000	0.000	0.000	0.000	0.000
140	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1451.16	N.A.	12.90
0-30	3060.27	N.A.	27.20
0-40	4963.95	N.A.	44.20
0-60	8715.44	N.A.	77.60
0-80	10874.21	N.A.	96.80
0-90	11190.24	N.A.	99.60
10-90	10811.35	N.A.	96.20
20-40	3512.79	N.A.	31.30
20-50	5493.97	N.A.	48.90
40-70	5105.6	N.A.	45.40
60-80	2158.77	N.A.	19.20
70-80	804.66	N.A.	7.20
80-90	316.02	N.A.	2.80
90-110	43.36	N.A.	0.40
90-120	43.36	N.A.	0.40
90-130	43.36	N.A.	0.40
90-150	43.36	N.A.	0.40
90-180	43.36	N.A.	0.40
110-180	0.00	N.A.	0.00
0-180	11233.59	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	378.89
10-20	1072.27
20-30	1609.11
30-40	1903.68
40-50	1981.18
50-60	1770.31
60-70	1354.11
70-80	804.66
80-90	316.02
90-100	43.36
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

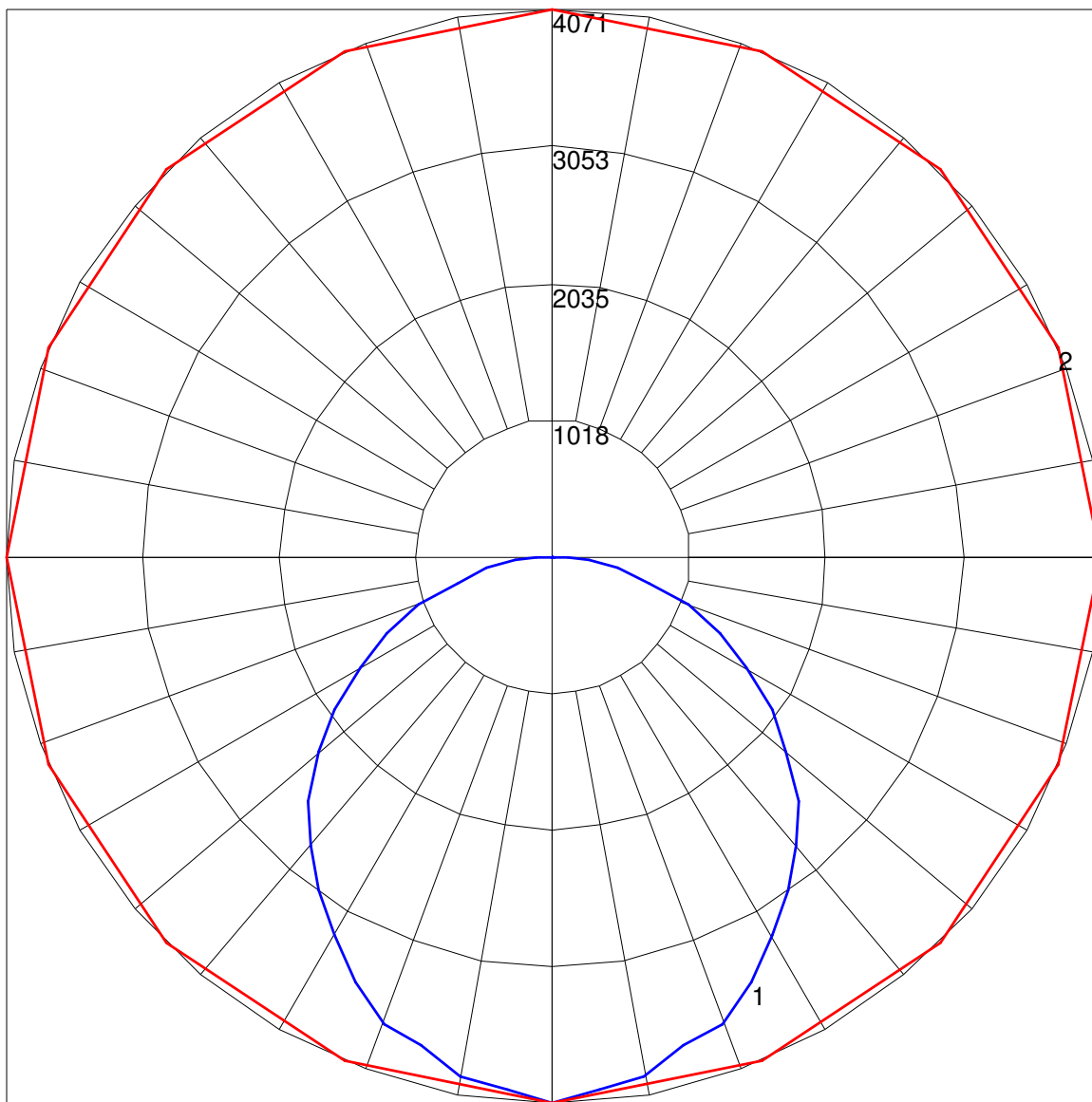
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	76	72	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	47	73	61	53	46	59	52	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	44	37	32	43	36	32	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

POLAR GRAPH



Maximum Candela = 4070.98 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)