



IES INDOOR REPORT

PHOTOMETRIC FILENAME : RND-3-L67-840-FXA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 18642.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 15 APRIL 2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 8-32LED 22"ARRAYS 3x3'SQ HOUSING w/3/4"DIA APERTURE
 [MORE] ARRAYS ON WHITE INTERNAL REFLS & WHITE ACRYLIC LENS
 [LUMCAT] RND-3-L67-840-FXA-DIM-UNV
 [LAMPCAT] HLM 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7003
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	65
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	2.80 ft (Diameter)
Luminous Width (90-270)	2.80 ft (Diameter)
Luminous Height	0.17 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3662	3667	3662
55	3372	3387	3366
65	2991	2991	2998
75	2435	2435	2435
85	1790	1767	1790

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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	2619.165	2619.165	2619.165	2619.165	2619.165
5	2583.828	2588.112	2583.828	2588.112	2583.828
10	2533.501	2535.643	2535.643	2535.643	2538.855
15	2463.899	2463.899	2469.253	2469.253	2473.537
20	2358.962	2362.174	2362.174	2364.315	2364.315
25	2244.386	2249.740	2249.740	2249.740	2249.740
30	2013.095	2013.095	2015.236	2013.095	2013.095
35	1871.750	1874.962	1879.245	1879.245	1874.962
40	1726.122	1729.334	1729.334	1726.122	1726.122
45	1597.626	1599.768	1599.768	1597.626	1597.626
50	1409.166	1413.449	1415.591	1413.449	1413.449
55	1229.273	1234.627	1234.627	1234.627	1227.131
60	1029.034	1029.034	1031.176	1031.176	1031.176
65	842.716	838.433	842.716	842.716	844.857
70	659.610	661.751	659.610	659.610	661.751
75	463.654	460.442	463.654	460.442	463.654
80	298.752	298.752	296.610	298.752	298.752
85	167.044	167.044	164.902	164.902	167.044
90	69.602	69.602	66.389	69.602	69.602
95	0.000	0.000	0.000	0.000	0.000
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	940.34	N.A.	13.40
0-30	1963.47	N.A.	28.00
0-40	3137.72	N.A.	44.80
0-60	5460.89	N.A.	78.00
0-80	6793.26	N.A.	97.00
0-90	6983.68	N.A.	99.70
10-90	6738.23	N.A.	96.20
20-40	2197.38	N.A.	31.40
20-50	3421.94	N.A.	48.90
40-70	3158.73	N.A.	45.10
60-80	1332.37	N.A.	19.00
70-80	496.82	N.A.	7.10
80-90	190.41	N.A.	2.70
90-110	18.84	N.A.	0.30
90-120	18.84	N.A.	0.30
90-130	18.84	N.A.	0.30
90-150	18.84	N.A.	0.30
90-180	18.84	N.A.	0.30
110-180	0.00	N.A.	0.00
0-180	7002.51	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	245.45
10-20	694.90
20-30	1023.13
30-40	1174.25
40-50	1224.56
50-60	1098.61
60-70	835.55
70-80	496.82
80-90	190.41
90-100	18.84
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	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	75	81	77	73	78	74	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	50	44	40	38
7	65	51	43	36	63	51	42	36	49	41	36	47	41	36	46	40	35	33
8	60	47	38	33	59	46	38	32	45	37	32	44	37	32	42	36	32	30
9	57	43	35	29	55	42	35	29	41	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	39	32	27	38	31	26	37	31	26	36	30	26	24

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UGR TABLE - CORRECTED

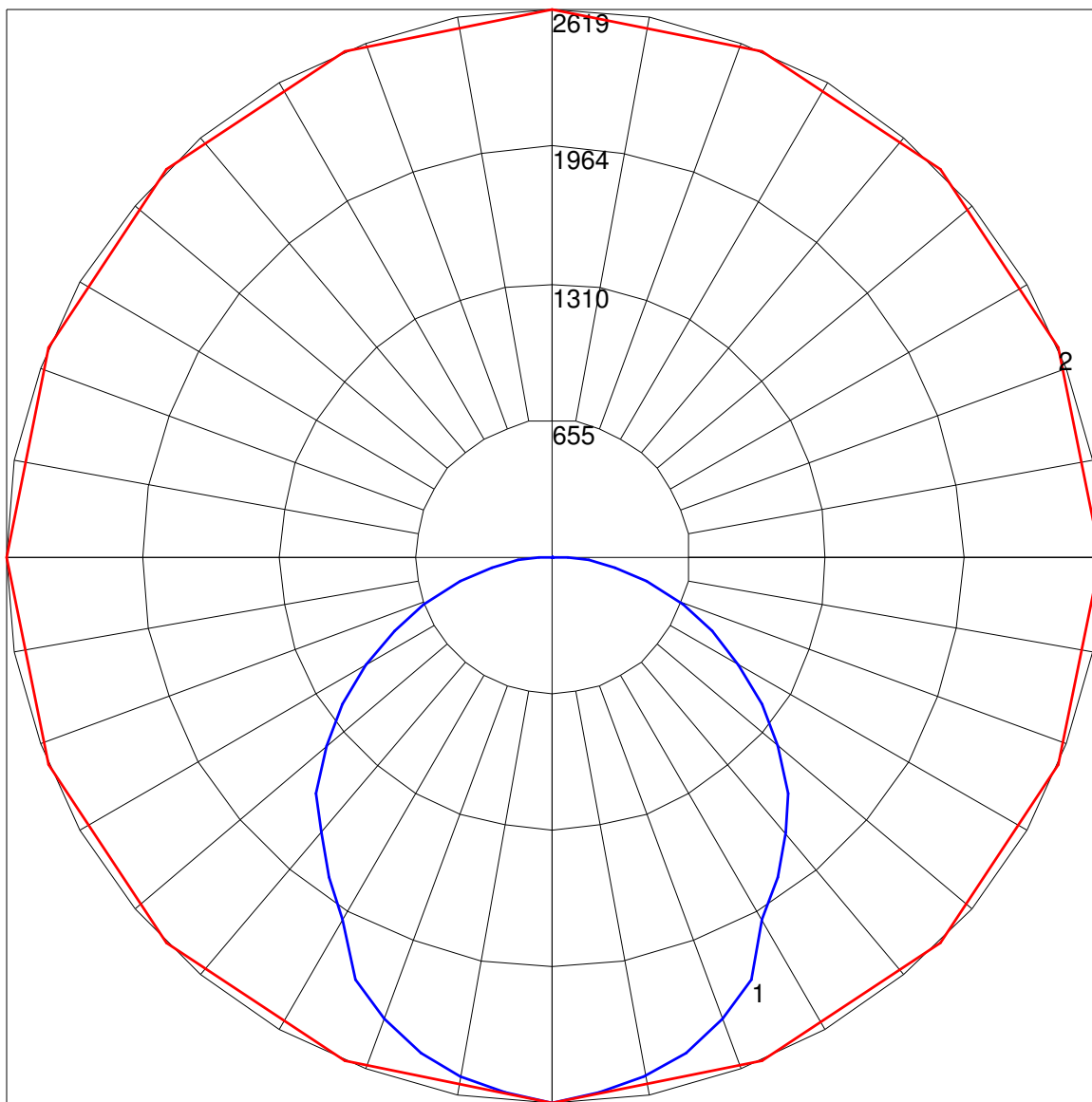
Reflectances

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	15.4	17.1	15.8	17.4	17.7	15.4	17.1	15.8	17.4	17.7
	3H	17.2	18.7	17.6	19.0	19.4	17.2	18.7	17.6	19.0	19.4
	4H	17.8	19.2	18.2	19.6	20.0	17.8	19.2	18.2	19.6	20.0
	6H	18.3	19.6	18.7	20.0	20.4	18.3	19.6	18.7	20.0	20.4
	8H	18.5	19.7	18.9	20.1	20.5	18.5	19.8	18.9	20.1	20.5
	12H	18.7	19.8	19.1	20.2	20.6	18.7	19.8	19.1	20.2	20.7
4H	2H	16.0	17.4	16.4	17.8	18.1	16.0	17.4	16.4	17.8	18.1
	3H	18.0	19.2	18.4	19.6	20.0	18.0	19.2	18.4	19.6	20.0
	4H	18.8	19.8	19.2	20.3	20.7	18.8	19.8	19.2	20.3	20.7
	6H	19.4	20.3	19.8	20.8	21.2	19.4	20.3	19.8	20.8	21.2
	8H	19.6	20.5	20.1	20.9	21.4	19.6	20.5	20.1	20.9	21.4
	12H	19.8	20.6	20.3	21.1	21.5	19.8	20.6	20.3	21.1	21.6
8H	4H	19.0	19.9	19.5	20.4	20.8	19.0	19.9	19.5	20.4	20.8
	6H	19.8	20.5	20.3	21.0	21.5	19.8	20.5	20.3	21.0	21.5
	8H	20.1	20.8	20.6	21.3	21.8	20.1	20.8	20.6	21.3	21.8
	12H	20.4	21.0	20.9	21.5	22.0	20.4	21.0	20.9	21.5	22.0
12H	4H	19.1	19.9	19.6	20.4	20.8	19.1	19.9	19.6	20.4	20.8
	6H	19.9	20.5	20.4	21.0	21.5	19.9	20.5	20.4	21.0	21.5
	8H	20.2	20.8	20.7	21.3	21.9	20.2	20.8	20.7	21.3	21.9

Maximum UGR = 22.0

POLAR GRAPH



Maximum Candela = 2619.165 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.)