



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LLM-2-L6-835-X-RD-XX-XX-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 17323.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 26-JUL-2021

[MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 2' DIRECT/INDIRECT SURFACE LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC ROUND LENS

[LUMCAT] LLM-2-L6-835-x-RD-xx-xx-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1158
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	148
Total Luminaire Watts	7.8
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.10
Spacing Criterion (90-270)	1.32
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	2.03 ft
Luminous Width (90-270)	0.21 ft
Luminous Height	0.17 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5332	4679	4999
55	4307	3933	4351
65	3411	3384	3850
75	2433	2852	3245
85	1469	2626	2992

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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	336.589	336.589	336.589	336.589	336.589
5	338.539	338.261	338.818	339.375	339.654
10	328.509	329.066	331.852	334.081	334.639
15	312.905	315.134	320.150	324.886	326.837
20	298.416	302.874	312.069	320.707	323.772
25	270.553	276.683	289.779	301.481	305.939
30	243.247	251.885	269.717	286.156	292.565
35	220.120	231.823	254.671	275.011	283.091
40	188.077	201.452	230.151	254.671	263.308
45	160.214	177.211	211.204	239.625	250.213
50	132.908	151.019	188.356	219.006	229.315
55	108.388	128.450	167.737	199.780	210.368
60	86.098	106.995	147.676	179.440	189.749
65	66.593	89.441	131.515	163.558	173.867
70	48.204	72.445	113.961	144.889	153.806
75	32.321	56.841	96.686	124.270	131.794
80	20.340	45.696	84.426	110.896	117.862
85	9.752	36.222	73.281	97.800	104.209
90	1.393	26.749	57.956	77.739	83.311
95	0.000	20.619	51.269	71.330	75.788
100	0.000	16.997	43.467	59.628	64.086
105	0.000	13.932	35.944	50.154	54.612
110	0.000	11.424	30.371	43.467	46.253
115	0.000	9.752	25.913	36.501	40.402
120	0.000	9.195	22.569	32.043	35.108
125	0.000	8.638	19.226	27.306	30.092
130	0.000	7.802	16.439	23.962	26.192
135	0.000	6.687	13.932	20.062	21.455
140	0.000	6.409	13.096	18.111	20.062
145	0.000	6.687	12.260	16.439	18.111
150	0.000	5.851	10.031	13.096	14.210
155	0.000	5.851	8.916	11.424	11.981
160	0.000	5.851	7.802	9.752	10.031
165	0.000	2.786	6.966	8.359	8.638
170	0.000	0.000	6.409	6.687	6.966
175	0.000	0.000	0.000	5.851	5.851
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	122.78	N.A.	10.60
0-30	256.39	N.A.	22.10
0-40	413.59	N.A.	35.70
0-60	720.57	N.A.	62.20
0-80	941.91	N.A.	81.30
0-90	1013.04	N.A.	87.50
10-90	980.98	N.A.	84.70
20-40	290.81	N.A.	25.10
20-50	451.04	N.A.	38.90
40-70	431.74	N.A.	37.30
60-80	221.34	N.A.	19.10
70-80	96.58	N.A.	8.30
80-90	71.13	N.A.	6.10
90-110	83.15	N.A.	7.20
90-120	106.42	N.A.	9.20
90-130	122.33	N.A.	10.60
90-150	139.41	N.A.	12.00
90-180	145.04	N.A.	12.50
110-180	61.89	N.A.	5.30
0-180	1158.08	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	32.06
10-20	90.72
20-30	133.62
30-40	157.19
40-50	160.23
50-60	146.75
60-70	124.76
70-80	96.58
80-90	71.13
90-100	49.05
100-110	34.10
110-120	23.27
120-130	15.91
130-140	10.28
140-150	6.81
150-160	3.75
160-170	1.63
170-180	0.25

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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	114	114	114	114	110	110	110	110	102	102	102	95	95	95	89	89	89	86
1	102	96	91	87	98	93	88	84	86	83	79	80	77	75	75	73	70	67
2	92	83	76	70	88	80	74	68	75	69	64	70	65	61	65	61	58	55
3	84	73	64	57	80	70	62	56	65	59	54	61	56	51	57	53	49	46
4	76	64	55	48	73	62	54	47	58	51	45	54	48	44	51	46	42	39
5	70	57	48	42	67	55	47	41	52	45	39	49	43	38	46	40	36	34
6	65	52	43	36	62	50	42	36	47	40	34	44	38	33	41	36	32	29
7	60	47	38	32	58	45	37	31	43	35	30	40	34	29	38	32	28	26
8	56	43	34	28	54	41	33	28	39	32	27	37	31	26	35	29	25	23
9	52	39	31	26	50	38	30	25	36	29	24	34	28	24	32	27	23	21
10	49	36	28	23	47	35	28	23	33	27	22	32	26	21	30	25	21	19

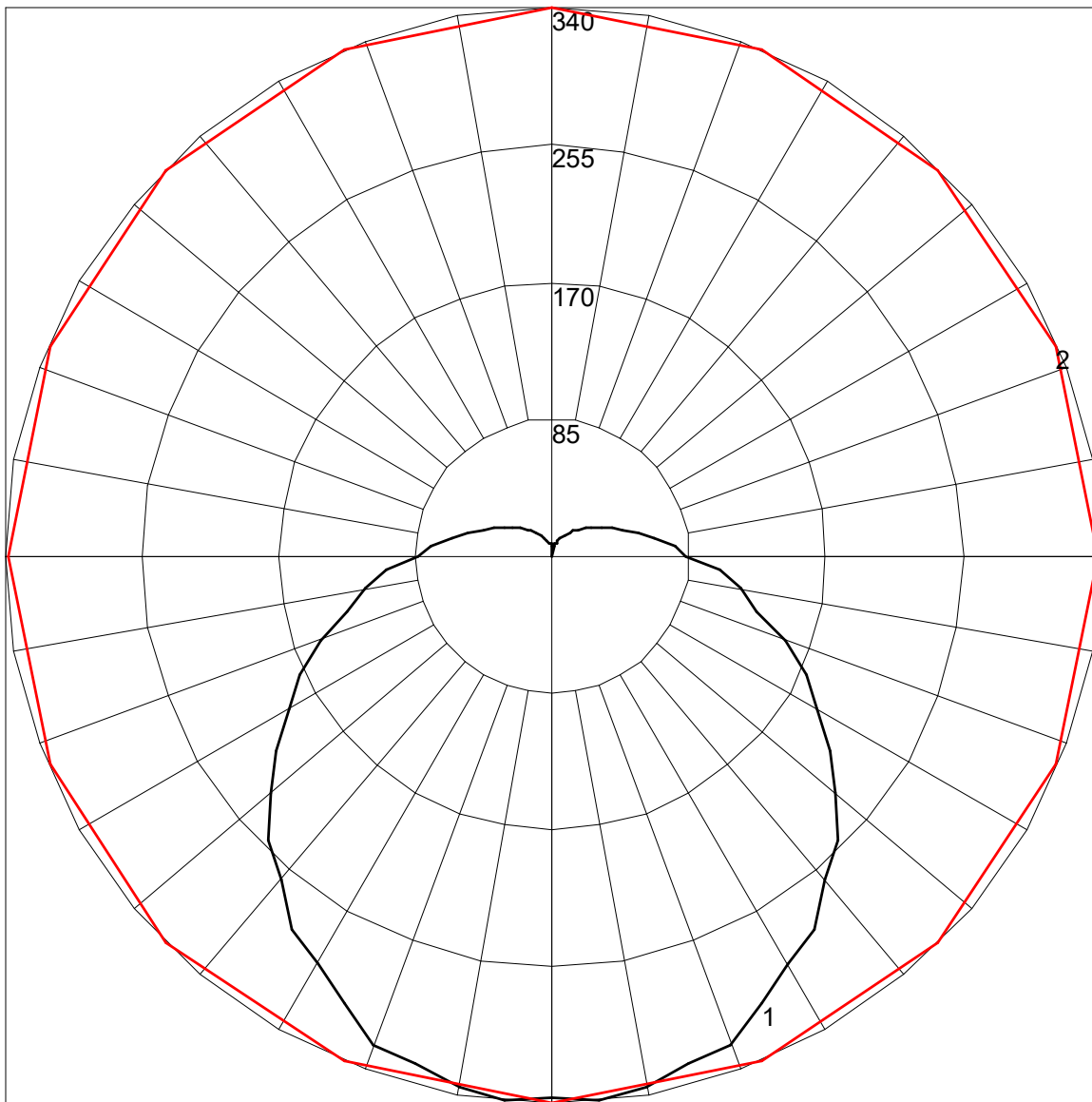
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UGR TABLE - CORRECTED

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	13.0	14.4	13.6	15.0	15.6	18.0	19.4	18.5	20.0	20.6
	3H	14.2	15.5	14.8	16.1	16.7	20.6	21.9	21.1	22.4	23.1
	4H	14.6	15.8	15.2	16.4	17.0	21.8	23.0	22.4	23.6	24.3
	6H	14.8	15.9	15.4	16.5	17.2	23.1	24.2	23.7	24.8	25.5
	8H	14.8	15.9	15.4	16.5	17.2	23.7	24.8	24.3	25.4	26.1
	12H	14.9	15.9	15.5	16.5	17.2	24.5	25.5	25.1	26.1	26.8
4H	2H	14.5	15.7	15.1	16.3	16.9	18.2	19.5	18.8	20.0	20.7
	3H	15.9	17.0	16.5	17.6	18.3	21.1	22.1	21.7	22.7	23.4
	4H	16.4	17.3	17.0	18.0	18.7	22.4	23.4	23.0	24.0	24.7
	6H	16.7	17.6	17.4	18.2	18.9	23.9	24.8	24.5	25.4	26.1
	8H	16.8	17.6	17.5	18.3	19.0	24.7	25.5	25.3	26.1	26.9
	12H	16.9	17.6	17.5	18.3	19.0	25.5	26.3	26.2	26.9	27.7
8H	4H	17.5	18.3	18.1	19.0	19.7	22.6	23.3	23.2	24.0	24.7
	6H	18.1	18.7	18.7	19.4	20.2	24.2	24.9	24.9	25.6	26.3
	8H	18.3	18.9	19.0	19.6	20.3	25.1	25.7	25.8	26.4	27.2
	12H	18.4	19.0	19.1	19.6	20.5	26.1	26.7	26.8	27.4	28.2
12H	4H	17.8	18.6	18.5	19.2	20.0	22.5	23.3	23.2	23.9	24.7
	6H	18.6	19.2	19.3	19.9	20.7	24.2	24.8	24.9	25.5	26.3
	8H	18.9	19.4	19.6	20.1	20.9	25.2	25.7	25.9	26.4	27.2

Maximum UGR = 28.2

POLAR GRAPH



Maximum Candela = 339.654 Located At Horizontal Angle = 90, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)