



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LLM-2-P9-835-X-RD-XX-XX-POE_.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] 11-AUG-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-P9-835-x-RD-xx-xx-PoE

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1748
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	152
Total Luminaire Watts	11.5
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	8049	7063	7546
55	6501	5936	6569
65	5149	5108	5811
75	3673	4305	4899
85	2217	3964	4517

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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	508.081	508.081	508.081	508.081	508.081
5	511.025	510.604	511.446	512.287	512.707
10	495.883	496.725	500.931	504.295	505.137
15	472.330	475.695	483.266	490.416	493.360
20	450.459	457.189	471.068	484.107	488.733
25	408.399	417.653	437.421	455.086	461.815
30	367.181	380.219	407.138	431.953	441.627
35	332.271	349.936	384.425	415.129	427.326
40	283.903	304.091	347.413	384.425	397.464
45	241.843	267.499	318.812	361.713	377.696
50	200.625	227.963	284.323	330.589	346.151
55	163.612	193.895	253.199	301.568	317.551
60	129.964	161.509	222.916	270.864	286.426
65	100.523	135.012	198.522	246.890	262.452
70	72.763	109.355	172.024	218.710	232.169
75	48.789	85.802	145.947	187.586	198.942
80	30.704	68.978	127.441	167.397	177.912
85	14.721	54.678	110.617	147.629	157.303
90	2.103	40.377	87.484	117.346	125.758
95	0.000	31.124	77.390	107.673	114.402
100	0.000	25.656	65.613	90.008	96.737
105	0.000	21.030	54.257	75.707	82.437
110	0.000	17.244	45.845	65.613	69.819
115	0.000	14.721	39.115	55.098	60.987
120	0.000	13.880	34.068	48.369	52.995
125	0.000	13.038	29.021	41.218	45.424
130	0.000	11.777	24.815	36.171	39.536
135	0.000	10.094	21.030	30.283	32.386
140	0.000	9.674	19.768	27.339	30.283
145	0.000	10.094	18.506	24.815	27.339
150	0.000	8.833	15.141	19.768	21.450
155	0.000	8.833	13.459	17.244	18.086
160	0.000	8.833	11.777	14.721	15.141
165	0.000	4.206	10.515	12.618	13.038
170	0.000	0.000	9.674	10.094	10.515
175	0.000	0.000	0.000	8.833	8.833
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	185.33	N.A.	10.60
0-30	387.03	N.A.	22.10
0-40	624.31	N.A.	35.70
0-60	1087.7	N.A.	62.20
0-80	1421.81	N.A.	81.30
0-90	1529.18	N.A.	87.50
10-90	1480.78	N.A.	84.70
20-40	438.98	N.A.	25.10
20-50	680.85	N.A.	38.90
40-70	651.71	N.A.	37.30
60-80	334.11	N.A.	19.10
70-80	145.79	N.A.	8.30
80-90	107.37	N.A.	6.10
90-110	125.52	N.A.	7.20
90-120	160.64	N.A.	9.20
90-130	184.65	N.A.	10.60
90-150	210.44	N.A.	12.00
90-180	218.94	N.A.	12.50
110-180	93.42	N.A.	5.30
0-180	1748.11	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	48.40
10-20	136.94
20-30	201.69
30-40	237.28
40-50	241.87
50-60	221.51
60-70	188.32
70-80	145.79
80-90	107.37
90-100	74.05
100-110	51.47
110-120	35.12
120-130	24.01
130-140	15.52
140-150	10.27
150-160	5.66
160-170	2.45
170-180	0.38

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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	115	115	115	115	111	111	111	111	103	103	103	96	96	96	89	89	89	86
1	103	97	92	88	99	94	89	85	87	83	80	81	78	75	75	73	71	68
2	93	84	76	70	89	81	74	68	75	70	65	70	66	62	65	62	58	56
3	84	73	65	58	81	71	63	57	66	59	54	62	56	51	57	53	49	46
4	77	65	56	49	74	63	54	48	58	51	46	55	49	44	51	46	42	39
5	71	58	49	42	68	56	47	41	52	45	40	49	43	38	46	41	36	34
6	65	52	43	36	63	50	42	36	47	40	35	44	38	33	42	36	32	30
7	61	47	38	32	58	46	37	32	43	36	31	41	34	29	38	33	28	26
8	56	43	34	29	54	42	34	28	39	32	27	37	31	26	35	30	25	23
9	53	39	31	26	51	38	31	25	36	29	25	34	28	24	32	27	23	21
10	49	36	28	23	47	35	28	23	34	27	22	32	26	22	30	25	21	19

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UGR TABLE - CORRECTED

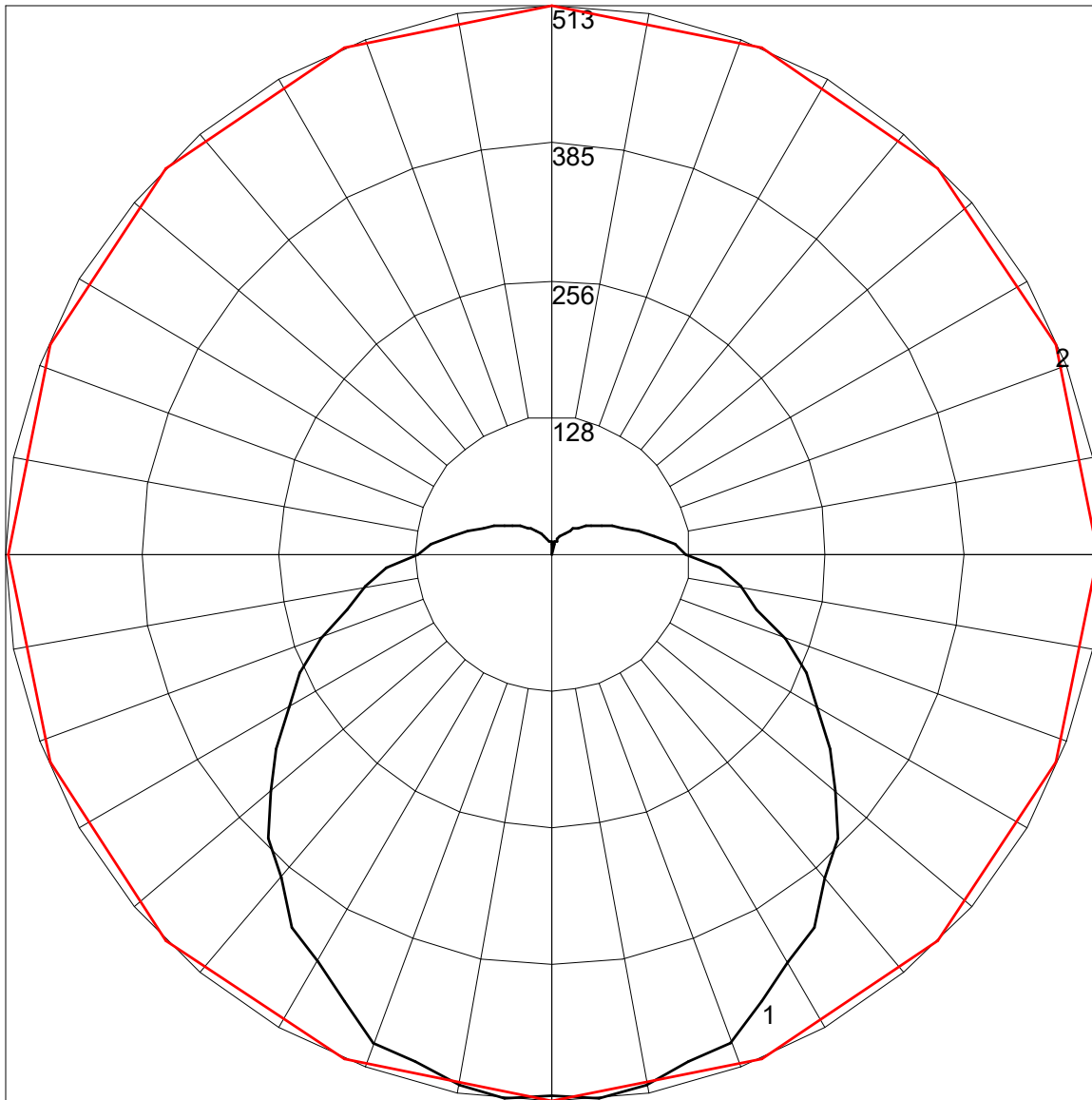
Reflectances

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	14.4	15.9	15.0	16.4	17.0	19.4	20.9	20.0	21.4	22.0
	3H	15.6	16.9	16.2	17.5	18.1	22.0	23.3	22.5	23.9	24.5
	4H	16.0	17.2	16.6	17.8	18.5	23.2	24.5	23.8	25.0	25.7
	6H	16.2	17.4	16.8	18.0	18.6	24.5	25.7	25.1	26.2	26.9
	8H	16.3	17.4	16.9	18.0	18.6	25.2	26.3	25.7	26.9	27.5
	12H	16.3	17.4	16.9	18.0	18.6	25.9	26.9	26.5	27.5	28.2
4H	2H	15.9	17.1	16.5	17.7	18.4	19.7	20.9	20.2	21.5	22.1
	3H	17.3	18.4	17.9	19.0	19.7	22.5	23.5	23.1	24.1	24.8
	4H	17.8	18.8	18.4	19.4	20.1	23.8	24.8	24.4	25.4	26.1
	6H	18.1	19.0	18.8	19.6	20.4	25.3	26.2	26.0	26.8	27.6
	8H	18.2	19.1	18.9	19.7	20.4	26.1	26.9	26.7	27.6	28.3
	12H	18.3	19.0	18.9	19.7	20.4	27.0	27.7	27.6	28.4	29.1
8H	4H	18.9	19.7	19.6	20.4	21.1	24.0	24.8	24.6	25.4	26.2
	6H	19.5	20.2	20.1	20.9	21.6	25.6	26.3	26.3	27.0	27.7
	8H	19.7	20.3	20.4	21.0	21.8	26.5	27.2	27.2	27.9	28.6
	12H	19.8	20.4	20.5	21.1	21.9	27.6	28.1	28.2	28.8	29.6
12H	4H	19.3	20.0	19.9	20.7	21.4	24.0	24.7	24.6	25.4	26.1
	6H	20.0	20.6	20.7	21.3	22.1	25.7	26.3	26.3	26.9	27.7
	8H	20.3	20.9	21.0	21.6	22.4	26.6	27.2	27.3	27.9	28.7

Maximum UGR = 29.6

POLAR GRAPH



Maximum Candela = 512.707 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.)