



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LLM-8-L10-835-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

[ISSUEDATE] 26-JUL-2021

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

[LUMINAIRE] 8' DIRECT/INDIRECT SURFACE LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC ROUND LENS

[LUMCAT]LLM-8-L10-835-x-RD-xx-xx-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7684
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	156
Total Luminaire Watts	49.3
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)	7.75 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	9817	8352	8687
55	8114	7063	7562
65	6666	6121	6690
75	5116	5207	5640
85	3974	4856	5200

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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	2233.172	2233.172	2233.172	2233.172	2233.172
5	2246.112	2244.264	2247.961	2251.658	2253.507
10	2179.561	2183.258	2201.745	2216.534	2220.231
15	2076.036	2090.825	2124.101	2155.528	2168.469
20	1979.906	2009.485	2070.490	2127.798	2148.134
25	1795.041	1835.711	1922.598	2000.241	2029.820
30	1613.873	1671.181	1789.495	1898.566	1941.085
35	1460.435	1538.078	1689.668	1824.620	1878.230
40	1247.840	1336.575	1526.987	1689.668	1746.976
45	1062.975	1175.743	1401.278	1589.841	1660.090
50	881.807	1001.969	1249.689	1453.040	1521.441
55	719.126	852.229	1112.889	1325.483	1395.732
60	571.233	709.882	979.786	1190.532	1258.932
65	441.828	593.417	872.564	1085.159	1153.559
70	319.817	480.650	756.099	961.299	1020.456
75	214.444	377.125	641.482	824.499	874.412
80	134.952	303.179	560.142	735.763	781.980
85	64.703	240.325	486.195	648.877	691.396
90	9.243	177.471	384.520	515.774	552.747
95	0.000	136.800	340.152	473.255	502.833
100	0.000	112.768	288.390	395.612	425.190
105	0.000	92.433	238.476	332.757	362.336
110	0.000	75.795	201.503	288.390	306.876
115	0.000	64.703	171.925	242.173	268.055
120	0.000	61.006	149.741	212.595	232.930
125	0.000	57.308	127.557	181.168	199.654
130	0.000	51.762	109.070	158.984	173.773
135	0.000	44.368	92.433	133.103	142.346
140	0.000	42.519	86.887	120.162	133.103
145	0.000	44.368	81.341	109.070	120.162
150	0.000	38.822	66.551	86.887	94.281
155	0.000	38.822	59.157	75.795	79.492
160	0.000	38.822	51.762	64.703	66.551
165	0.000	18.487	46.216	55.460	57.308
170	0.000	0.000	42.519	44.368	46.216
175	0.000	0.000	0.000	38.822	38.822
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	814.60	N.A.	10.60
0-30	1701.11	N.A.	22.10
0-40	2744.04	N.A.	35.70
0-60	4780.77	N.A.	62.20
0-80	6249.29	N.A.	81.30
0-90	6721.21	N.A.	87.50
10-90	6508.49	N.A.	84.70
20-40	1929.44	N.A.	25.10
20-50	2992.55	N.A.	38.90
40-70	2864.47	N.A.	37.30
60-80	1468.52	N.A.	19.10
70-80	640.79	N.A.	8.30
80-90	471.92	N.A.	6.10
90-110	551.69	N.A.	7.20
90-120	706.06	N.A.	9.20
90-130	811.60	N.A.	10.60
90-150	924.95	N.A.	12.00
90-180	962.29	N.A.	12.50
110-180	410.60	N.A.	5.30
0-180	7683.51	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	212.72
10-20	601.88
20-30	886.51
30-40	1042.93
40-50	1063.11
50-60	973.63
60-70	827.73
70-80	640.79
80-90	471.92
90-100	325.46
100-110	226.23
110-120	154.37
120-130	105.55
130-140	68.20
140-150	45.15
150-160	24.87
160-170	10.79
170-180	1.68

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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	192	192	192	192	186	186	186	186	173	173	173	161	161	161	150	150	150	145
1	172	163	155	147	165	157	150	143	146	140	134	136	131	127	127	123	119	114
2	156	141	128	118	149	136	124	115	126	117	109	118	110	103	110	104	98	93
3	142	123	109	97	136	119	106	95	111	100	91	103	94	86	97	89	82	78
4	129	109	94	82	124	105	91	80	98	86	77	92	82	74	86	77	70	66
5	119	97	82	70	114	94	80	69	88	76	66	82	72	64	77	68	61	57
6	110	87	72	61	105	85	70	60	79	67	58	75	64	56	70	61	54	50
7	102	79	64	54	98	77	63	53	72	60	51	68	57	49	64	55	48	44
8	95	72	58	48	91	70	57	47	66	54	46	62	52	44	59	50	43	39
9	88	66	52	43	85	64	51	43	61	49	41	58	47	40	55	45	39	35
10	83	61	48	39	80	59	47	39	56	45	37	53	43	36	51	42	35	32

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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

X=2H	Y=2H	13.1	14.6	13.7	15.1	15.7	18.3	19.7	18.8	20.3	20.9
	3H	14.3	15.6	14.9	16.2	16.8	20.9	22.2	21.5	22.8	23.4
	4H	14.7	15.9	15.2	16.5	17.1	22.2	23.4	22.8	24.0	24.7
	6H	14.9	16.1	15.5	16.6	17.3	23.6	24.7	24.2	25.3	26.0
	8H	14.9	16.1	15.5	16.7	17.3	24.3	25.4	24.9	26.0	26.7
	12H	15.0	16.0	15.6	16.6	17.3	25.2	26.2	25.8	26.8	27.5

UGR Viewed Endwise

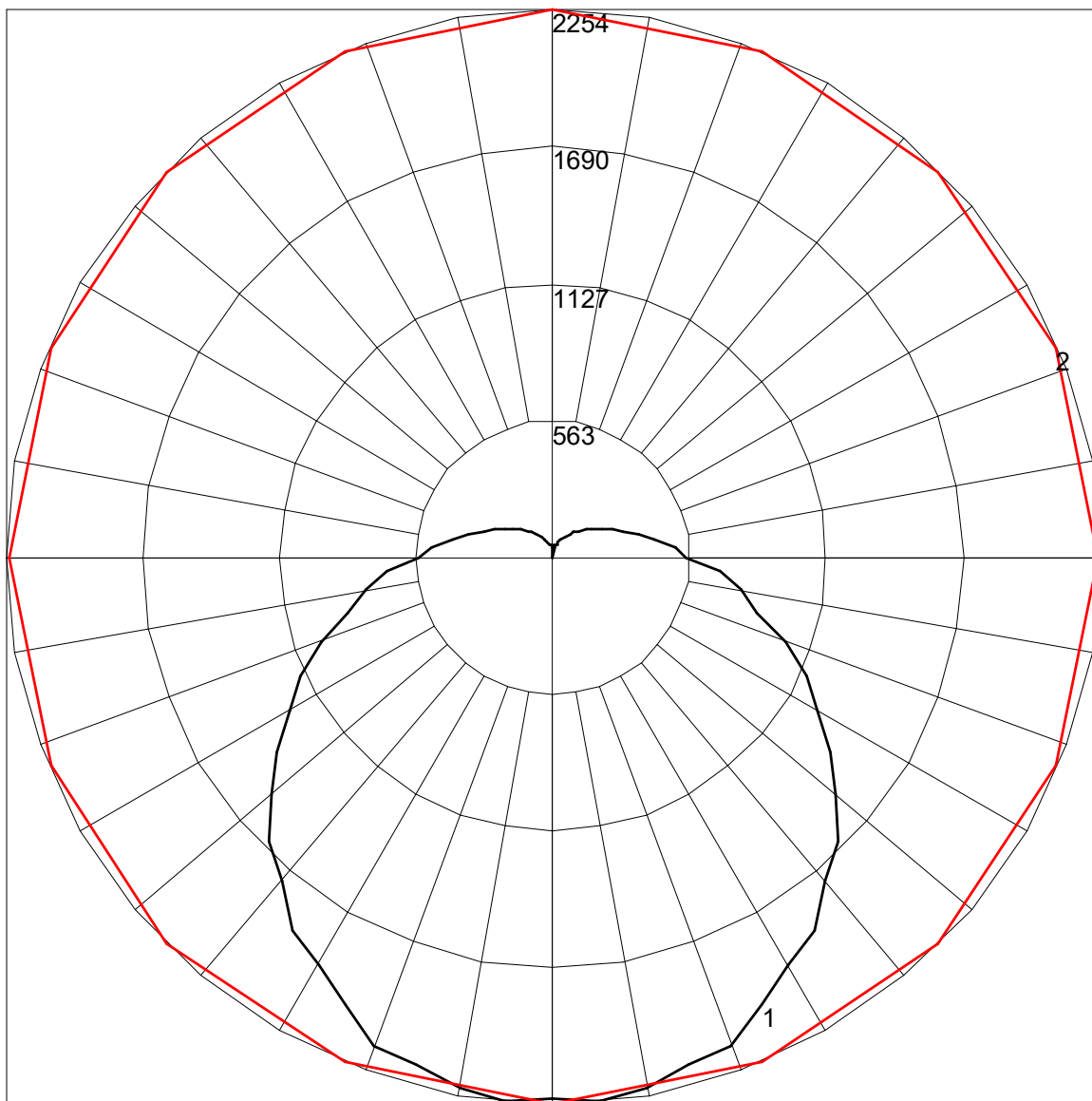
4H	2H	14.6	15.9	15.2	16.4	17.1	18.5	19.8	19.1	20.3	21.0
	3H	16.1	17.1	16.6	17.7	18.4	21.4	22.5	22.0	23.1	23.7
	4H	16.5	17.5	17.1	18.1	18.8	22.8	23.8	23.4	24.4	25.1
	6H	16.9	17.7	17.5	18.4	19.1	24.4	25.3	25.0	25.9	26.6
	8H	17.0	17.8	17.6	18.4	19.1	25.2	26.1	25.9	26.7	27.4
	12H	17.0	17.7	17.7	18.4	19.1	26.2	26.9	26.9	27.6	28.3

8H	4H	17.7	18.5	18.3	19.1	19.9	22.9	23.8	23.6	24.4	25.1
	6H	18.2	18.9	18.9	19.6	20.4	24.7	25.4	25.3	26.0	26.8
	8H	18.5	19.1	19.1	19.8	20.5	25.6	26.3	26.3	27.0	27.7
	12H	18.6	19.1	19.2	19.8	20.6	26.8	27.3	27.4	28.0	28.8

12H	4H	18.0	18.8	18.7	19.5	20.2	22.9	23.7	23.6	24.3	25.1
	6H	18.8	19.4	19.5	20.1	20.8	24.7	25.3	25.4	26.0	26.8
	8H	19.1	19.6	19.7	20.3	21.1	25.7	26.3	26.4	27.0	27.8

Maximum UGR = 28.8

POLAR GRAPH



Maximum Candela = 2253.507 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.)