



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LLM-8-L15-835-X-SQ-XX-XX-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 17322.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 26-JUL-2021
 [MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 8' DIRECT/INDIRECT SURFACE LUMINAIRE
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC SQUARE LENS
 [LUMCAT] LLM-8-L15-835-S-SQ-xx-xx-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	11755
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	153
Total Luminaire Watts	76.6
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.10
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	7.75 ft
Luminous Width (90-270)	0.21 ft
Luminous Height	0.20 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	15246	11304	11284
55	12226	9447	10102
65	9835	8157	9095
75	7393	6787	7523
85	5464	5900	6369

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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	3585.575	3585.575	3585.575	3585.575	3585.575
5	3599.986	3605.751	3617.280	3617.280	3625.927
10	3499.106	3513.517	3530.811	3542.340	3542.340
15	3320.404	3352.109	3375.167	3386.696	3392.461
20	3184.936	3231.053	3262.758	3285.816	3288.698
25	2867.883	2925.529	2971.646	3003.351	3014.880
30	2573.889	2651.711	2715.122	2772.768	2798.708
35	2314.483	2412.481	2513.361	2611.359	2651.711
40	1962.843	2089.664	2242.425	2389.422	2452.833
45	1657.320	1812.963	2026.253	2245.308	2334.659
50	1357.561	1544.910	1801.434	2072.370	2179.015
55	1089.507	1299.915	1614.085	1928.255	2049.312
60	858.924	1083.743	1426.736	1763.964	1887.903
65	657.163	899.276	1282.621	1634.261	1752.435
70	472.696	726.338	1118.330	1452.677	1559.322
75	314.170	564.930	942.510	1239.387	1328.738
80	190.231	449.638	812.807	1086.625	1161.565
85	92.233	340.111	685.986	928.099	988.627
90	14.411	224.819	518.813	706.162	749.397
95	0.000	213.290	495.755	660.046	694.633
100	0.000	198.878	443.873	579.341	608.164
105	0.000	187.349	400.639	515.931	538.989
110	0.000	170.055	363.169	464.049	492.872
115	0.000	155.644	328.582	417.933	443.873
120	0.000	149.879	299.759	394.874	415.050
125	0.000	138.350	270.936	351.640	377.581
130	0.000	126.821	244.995	322.817	342.993
135	0.000	115.292	219.054	282.465	308.406
140	0.000	112.410	207.525	268.053	288.229
145	0.000	115.292	193.114	256.524	270.936
150	0.000	95.116	158.526	201.761	219.054
155	0.000	95.116	144.115	181.585	190.231
160	0.000	77.822	118.174	146.997	155.644
165	0.000	69.175	106.645	118.174	123.939
170	0.000	0.000	80.704	100.880	103.763
175	0.000	0.000	37.470	72.057	72.057
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1296.18	N.A.	11.00
0-30	2665.14	N.A.	22.70
0-40	4222.97	N.A.	35.90
0-60	7217.69	N.A.	61.40
0-80	9413.05	N.A.	80.10
0-90	10084.14	N.A.	85.80
10-90	9742.66	N.A.	82.90
20-40	2926.79	N.A.	24.90
20-50	4485.43	N.A.	38.20
40-70	4234.00	N.A.	36.00
60-80	2195.35	N.A.	18.70
70-80	956.08	N.A.	8.10
80-90	671.10	N.A.	5.70
90-110	828.13	N.A.	7.00
90-120	1110.27	N.A.	9.40
90-130	1324.65	N.A.	11.30
90-150	1583.26	N.A.	13.50
90-180	1670.59	N.A.	14.20
110-180	842.46	N.A.	7.20
0-180	11754.73	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	341.49
10-20	954.70
20-30	1368.95
30-40	1557.84
40-50	1558.63
50-60	1436.08
60-70	1239.28
70-80	956.08
80-90	671.10
90-100	463.15
100-110	364.98
110-120	282.14
120-130	214.38
130-140	152.28
140-150	106.33
150-160	58.76
160-170	24.75
170-180	3.82

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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	288	288	288	288	277	277	277	277	257	257	257	238	238	238	221	221	221	213
1	258	244	232	221	247	235	224	214	218	209	201	202	195	188	187	182	177	169
2	233	211	193	178	223	203	187	173	189	175	163	175	164	154	163	154	146	138
3	212	185	164	147	203	178	159	143	166	149	136	154	141	129	143	132	123	116
4	194	163	141	124	186	158	137	121	147	130	116	137	122	110	128	115	105	98
5	178	146	123	107	171	141	120	104	132	114	100	123	108	96	115	102	92	85
6	165	131	109	93	158	127	106	91	119	101	88	112	96	84	105	91	81	75
7	153	119	97	82	146	116	95	81	108	91	78	102	86	75	96	82	72	66
8	142	109	88	73	137	106	86	72	99	82	69	94	78	67	88	75	64	59
9	133	100	80	66	128	97	78	65	92	75	63	86	71	60	82	68	58	54
10	125	92	73	60	120	90	71	59	85	68	57	80	65	55	76	63	53	49

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UGR TABLE - CORRECTED

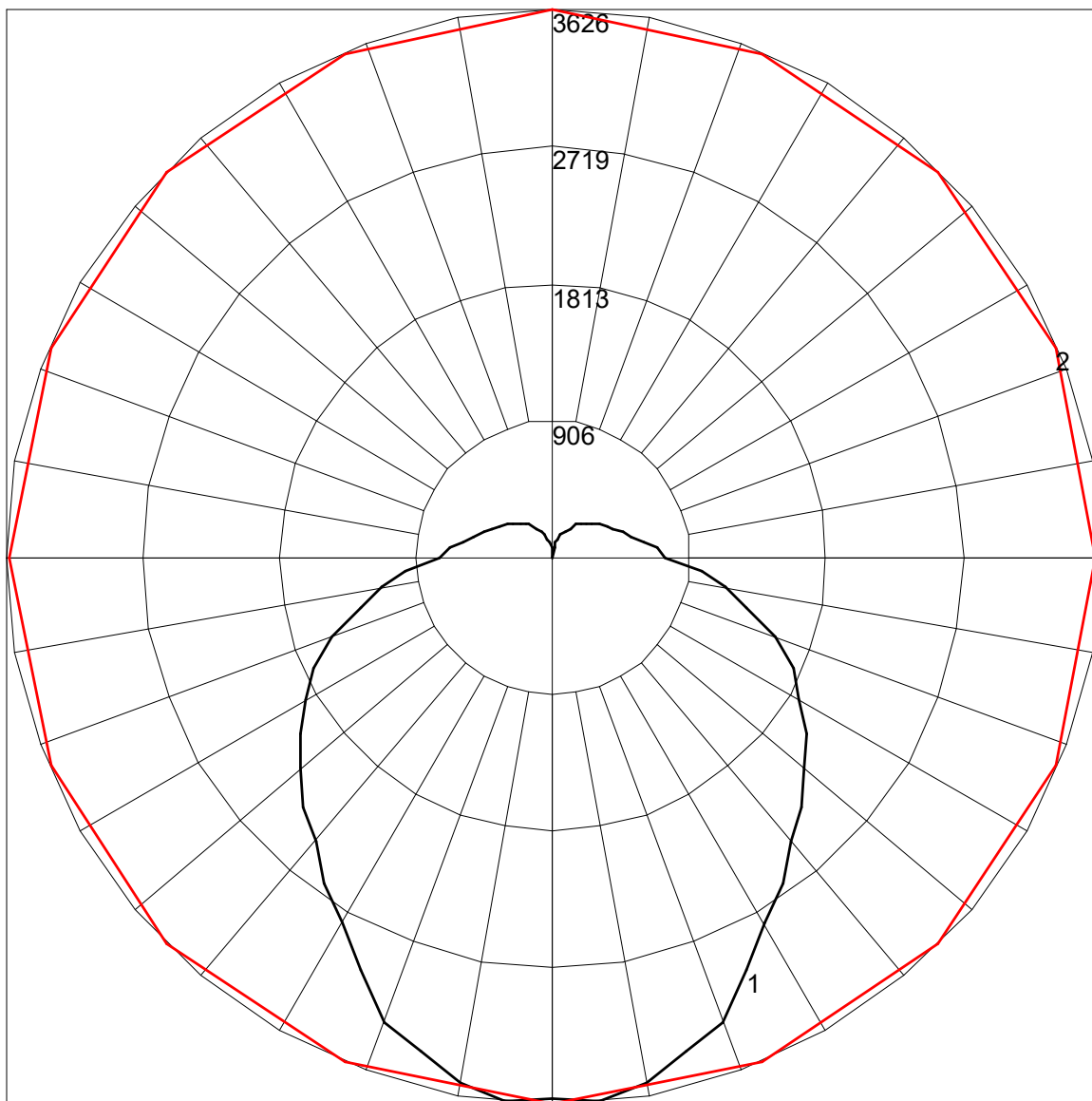
Reflectances

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	12.8	14.2	13.4	14.8	15.4	17.9	19.3	18.4	19.8	20.5
	3H	14.0	15.2	14.5	15.8	16.5	20.6	21.9	21.2	22.5	23.2
	4H	14.3	15.5	14.9	16.1	16.8	21.9	23.1	22.5	23.7	24.4
	6H	14.5	15.6	15.1	16.2	16.9	23.3	24.4	23.9	25.0	25.7
	8H	14.5	15.6	15.1	16.2	16.9	24.0	25.1	24.6	25.7	26.4
	12H	14.5	15.5	15.1	16.2	16.9	24.8	25.8	25.4	26.4	27.2
4H	2H	14.2	15.4	14.8	16.0	16.7	18.1	19.3	18.7	19.9	20.6
	3H	15.6	16.6	16.2	17.3	18.0	21.1	22.1	21.7	22.7	23.4
	4H	16.1	17.0	16.7	17.6	18.4	22.5	23.5	23.1	24.1	24.8
	6H	16.4	17.2	17.0	17.9	18.6	24.0	24.9	24.7	25.6	26.3
	8H	16.4	17.2	17.1	17.9	18.7	24.9	25.6	25.5	26.3	27.1
	12H	16.5	17.2	17.2	17.9	18.7	25.7	26.5	26.4	27.2	27.9
8H	4H	17.2	18.0	17.8	18.6	19.4	22.6	23.4	23.3	24.1	24.8
	6H	17.7	18.4	18.4	19.1	19.9	24.3	25.0	25.0	25.7	26.4
	8H	17.9	18.5	18.6	19.2	20.0	25.2	25.8	25.9	26.5	27.3
	12H	18.0	18.5	18.7	19.2	20.1	26.3	26.8	27.0	27.5	28.4
12H	4H	17.5	18.2	18.2	18.9	19.7	22.6	23.3	23.3	24.0	24.8
	6H	18.2	18.8	18.9	19.5	20.3	24.3	24.9	25.0	25.6	26.4
	8H	18.5	19.0	19.2	19.7	20.6	25.3	25.8	26.0	26.5	27.4

Maximum UGR = 28.4

POLAR GRAPH



Maximum Candela = 3625.927 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.)