



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LLM-8-L10-835-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-L10-835-S-SQ-xx-xx-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7840
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	159
Total Luminaire Watts	49.3
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	10169	7540	7527
55	8155	6301	6738
65	6560	5440	6067
75	4931	4527	5018
85	3645	3935	4248

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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	2391.604	2391.604	2391.604	2391.604	2391.604
5	2401.216	2405.061	2412.751	2412.751	2418.519
10	2333.928	2343.541	2355.076	2362.766	2362.766
15	2214.733	2235.880	2251.260	2258.950	2262.795
20	2124.375	2155.135	2176.282	2191.663	2193.585
25	1912.898	1951.349	1982.109	2003.256	2010.946
30	1716.802	1768.710	1811.005	1849.456	1866.758
35	1543.776	1609.142	1676.430	1741.795	1768.710
40	1309.230	1393.820	1495.714	1593.762	1636.057
45	1105.444	1209.259	1351.525	1497.636	1557.234
50	905.503	1030.466	1201.569	1382.285	1453.418
55	726.709	867.052	1076.606	1286.160	1366.905
60	572.908	722.864	951.643	1176.577	1259.245
65	438.333	599.823	855.517	1090.064	1168.887
70	315.292	484.473	745.934	968.946	1040.078
75	209.554	376.812	628.661	826.680	886.278
80	126.886	299.912	542.148	724.787	774.772
85	61.520	226.856	457.558	619.049	659.421
90	9.613	149.956	346.052	471.015	499.853
95	0.000	142.266	330.672	440.255	463.325
100	0.000	132.653	296.067	386.425	405.650
105	0.000	124.963	267.229	344.129	359.510
110	0.000	113.428	242.236	309.524	328.749
115	0.000	103.816	219.166	278.764	296.067
120	0.000	99.971	199.941	263.384	276.842
125	0.000	92.281	180.716	234.546	251.849
130	0.000	84.590	163.413	215.321	228.779
135	0.000	76.900	146.111	188.406	205.709
140	0.000	74.978	138.421	178.794	192.251
145	0.000	76.900	128.808	171.103	180.716
150	0.000	63.443	105.738	134.576	146.111
155	0.000	63.443	96.126	121.118	126.886
160	0.000	51.908	78.823	98.048	103.816
165	0.000	46.140	71.133	78.823	82.668
170	0.000	0.000	53.830	67.288	69.210
175	0.000	0.000	24.993	48.063	48.063
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	864.56	N.A.	11.00
0-30	1777.66	N.A.	22.70
0-40	2816.75	N.A.	35.90
0-60	4814.25	N.A.	61.40
0-80	6278.57	N.A.	80.10
0-90	6726.19	N.A.	85.80
10-90	6498.42	N.A.	82.90
20-40	1952.19	N.A.	24.90
20-50	2991.81	N.A.	38.20
40-70	2824.1	N.A.	36.00
60-80	1464.32	N.A.	18.70
70-80	637.71	N.A.	8.10
80-90	447.63	N.A.	5.70
90-110	552.37	N.A.	7.00
90-120	740.56	N.A.	9.40
90-130	883.55	N.A.	11.30
90-150	1056.05	N.A.	13.50
90-180	1114.3	N.A.	14.20
110-180	561.93	N.A.	7.20
0-180	7840.49	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	227.77
10-20	636.79
20-30	913.10
30-40	1039.09
40-50	1039.62
50-60	957.88
60-70	826.61
70-80	637.71
80-90	447.63
90-100	308.92
100-110	243.44
110-120	188.19
120-130	142.99
130-140	101.57
140-150	70.92
150-160	39.19
160-170	16.51
170-180	2.55

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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	185	185	185	185	171	171	171	159	159	159	148	148	148	142
1	172	163	155	147	165	157	149	143	145	139	134	135	130	126	125	121	118	113
2	156	141	129	118	149	136	125	115	126	117	109	117	109	103	108	103	97	92
3	142	123	109	98	135	119	106	95	110	100	91	103	94	86	96	88	82	77
4	129	109	94	83	124	105	91	81	98	86	77	91	82	74	85	77	70	66
5	119	97	82	71	114	94	80	70	88	76	67	82	72	64	77	68	61	57
6	110	88	73	62	105	85	71	61	79	67	58	74	64	56	70	61	54	50
7	102	80	65	55	98	77	63	54	72	60	52	68	58	50	64	55	48	44
8	95	73	59	49	91	70	57	48	66	55	46	62	52	45	59	50	43	40
9	89	67	53	44	85	65	52	43	61	50	42	58	48	40	54	45	39	36
10	83	61	48	40	80	60	47	39	57	46	38	53	44	37	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

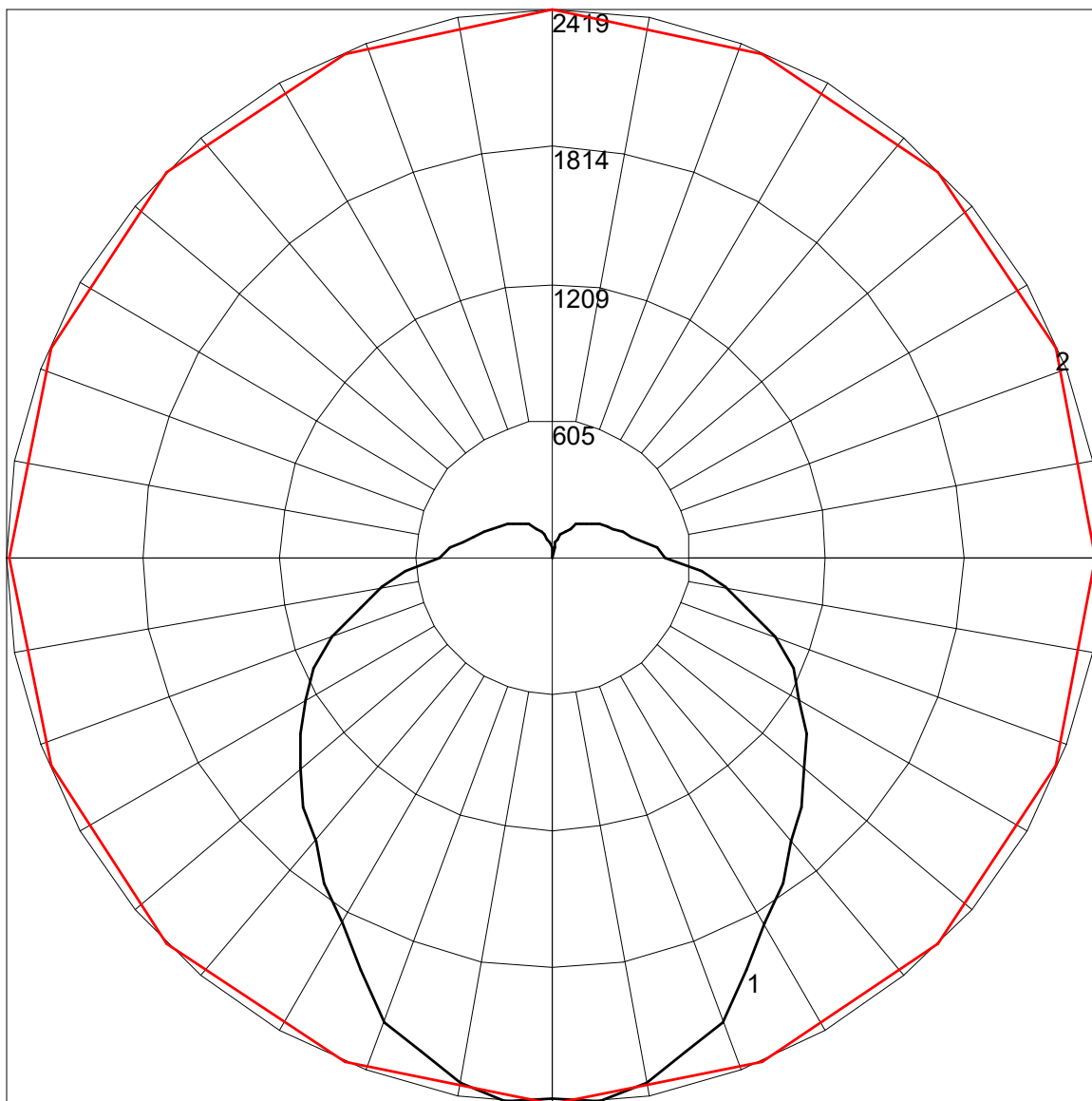
X=2H	Y=2H	12.8	14.2	13.4	14.8	15.4	17.9	19.3	18.4	19.8	20.5
	3H	14.0	15.2	14.5	15.8	16.5	20.6	21.9	21.2	22.5	23.2
	4H	14.3	15.5	14.9	16.1	16.8	21.9	23.1	22.5	23.7	24.4
	6H	14.5	15.6	15.1	16.2	16.9	23.3	24.4	23.9	25.0	25.7
	8H	14.5	15.6	15.1	16.2	16.9	24.0	25.1	24.6	25.7	26.4
	12H	14.5	15.5	15.1	16.2	16.9	24.8	25.8	25.4	26.4	27.2

UGR Viewed Endwise

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 = 2418.519 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.)