



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LLM-4-L6-835-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] 4' DIRECT/INDIRECT SURFACE LUMINAIRE
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC SQUARE LENS
 [LUMCAT] LLM-4-L6-835-S-SQ-xx-xx-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2364
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	159
Total Luminaire Watts	14.9
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)	3.88 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	5984	4499	4539
55	4751	3751	4063
65	3761	3231	3659
75	2736	2680	3026
85	1793	2319	2562

IES INDOOR REPORT
PHOTOMETRIC FILENAME : LLM-4-L6-835-X-SQ-XX-XX-DIM-UNV_.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	721.142	721.142	721.142	721.142	721.142
5	724.040	725.200	727.518	727.518	729.257
10	703.751	706.649	710.127	712.446	712.446
15	667.810	674.186	678.824	681.143	682.302
20	640.564	649.839	656.216	660.853	661.433
25	576.797	588.391	597.666	604.043	606.362
30	517.668	533.320	546.074	557.667	562.885
35	465.496	485.205	505.495	525.204	533.320
40	394.773	420.280	451.003	480.568	493.321
45	333.325	364.629	407.526	451.583	469.554
50	273.037	310.717	362.310	416.801	438.250
55	219.125	261.443	324.630	387.817	412.164
60	172.749	217.966	286.949	354.774	379.701
65	132.171	180.865	257.965	328.688	352.455
70	95.070	146.083	224.922	292.167	313.615
75	63.187	113.620	189.561	249.269	267.240
80	38.260	90.433	163.474	218.545	233.617
85	18.550	68.404	137.968	186.662	198.836
90	2.898	45.216	104.345	142.025	150.721
95	0.000	42.897	99.708	132.750	139.707
100	0.000	39.999	89.273	116.519	122.316
105	0.000	37.680	80.578	103.766	108.403
110	0.000	34.202	73.042	93.331	99.128
115	0.000	31.304	66.085	84.056	89.273
120	0.000	30.144	60.288	79.418	83.476
125	0.000	27.825	54.491	70.723	75.940
130	0.000	25.507	49.274	64.926	68.984
135	0.000	23.188	44.057	56.810	62.027
140	0.000	22.608	41.738	53.912	57.970
145	0.000	23.188	38.840	51.593	54.491
150	0.000	19.130	31.883	40.579	44.057
155	0.000	19.130	28.985	36.521	38.260
160	0.000	15.652	23.768	29.564	31.304
165	0.000	13.913	21.449	23.768	24.927
170	0.000	0.000	16.231	20.289	20.869
175	0.000	0.000	7.536	14.492	14.492
180	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : LLM-4-L6-835-X-SQ-XX-XX-DIM-UNV_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	260.69	N.A.	11.00
0-30	536.02	N.A.	22.70
0-40	849.34	N.A.	35.90
0-60	1451.64	N.A.	61.40
0-80	1893.18	N.A.	80.10
0-90	2028.15	N.A.	85.80
10-90	1959.47	N.A.	82.90
20-40	588.65	N.A.	24.90
20-50	902.12	N.A.	38.20
40-70	851.55	N.A.	36.00
60-80	441.54	N.A.	18.70
70-80	192.29	N.A.	8.10
80-90	134.97	N.A.	5.70
90-110	166.56	N.A.	7.00
90-120	223.30	N.A.	9.40
90-130	266.42	N.A.	11.30
90-150	318.43	N.A.	13.50
90-180	335.99	N.A.	14.20
110-180	169.44	N.A.	7.20
0-180	2364.15	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	68.68
10-20	192.01
20-30	275.33
30-40	313.32
40-50	313.48
50-60	288.83
60-70	249.25
70-80	192.29
80-90	134.97
90-100	93.15
100-110	73.41
110-120	56.75
120-130	43.12
130-140	30.63
140-150	21.39
150-160	11.82
160-170	4.98
170-180	0.77

IES INDOOR REPORT

PHOTOMETRIC FILENAME : LLM-4-L6-835-X-SQ-XX-XX-DIM-UNV_.IES

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	117	117	117	117	113	113	113	113	105	105	105	97	97	97	90	90	90	87
1	105	100	95	90	101	96	91	87	89	85	82	82	79	77	76	74	72	69
2	95	86	79	72	91	83	76	70	77	71	67	71	67	63	66	63	59	56
3	86	75	67	60	83	73	65	58	67	61	55	63	57	53	58	54	50	47
4	79	67	57	51	76	64	56	49	60	53	47	56	50	45	52	47	43	40
5	73	60	50	43	70	58	49	43	54	46	41	50	44	39	47	42	37	35
6	67	54	44	38	64	52	43	37	49	41	36	45	39	34	43	37	33	30
7	62	49	40	33	60	47	39	33	44	37	32	42	35	30	39	33	29	27
8	58	44	36	30	56	43	35	29	41	33	28	38	32	27	36	30	26	24
9	54	41	32	27	52	40	32	26	37	30	26	35	29	25	33	28	24	22
10	51	38	30	24	49	37	29	24	35	28	23	33	27	22	31	26	22	20

IES INDOOR REPORT
PHOTOMETRIC FILENAME : LLM-4-L6-835-X-SQ-XX-XX-DIM-UNV_.IES

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	12.7	14.1	13.3	14.7	15.3	17.7	19.1	18.3	19.7	20.3
	3H	13.9	15.1	14.4	15.7	16.4	20.4	21.7	21.0	22.3	23.0
	4H	14.2	15.4	14.8	16.0	16.7	21.7	22.9	22.3	23.5	24.2
	6H	14.4	15.5	15.0	16.1	16.8	23.0	24.1	23.6	24.7	25.4
	8H	14.4	15.5	15.0	16.1	16.8	23.7	24.8	24.3	25.4	26.1
	12H	14.4	15.4	15.0	16.1	16.8	24.4	25.4	25.0	26.1	26.8

UGR Viewed Endwise

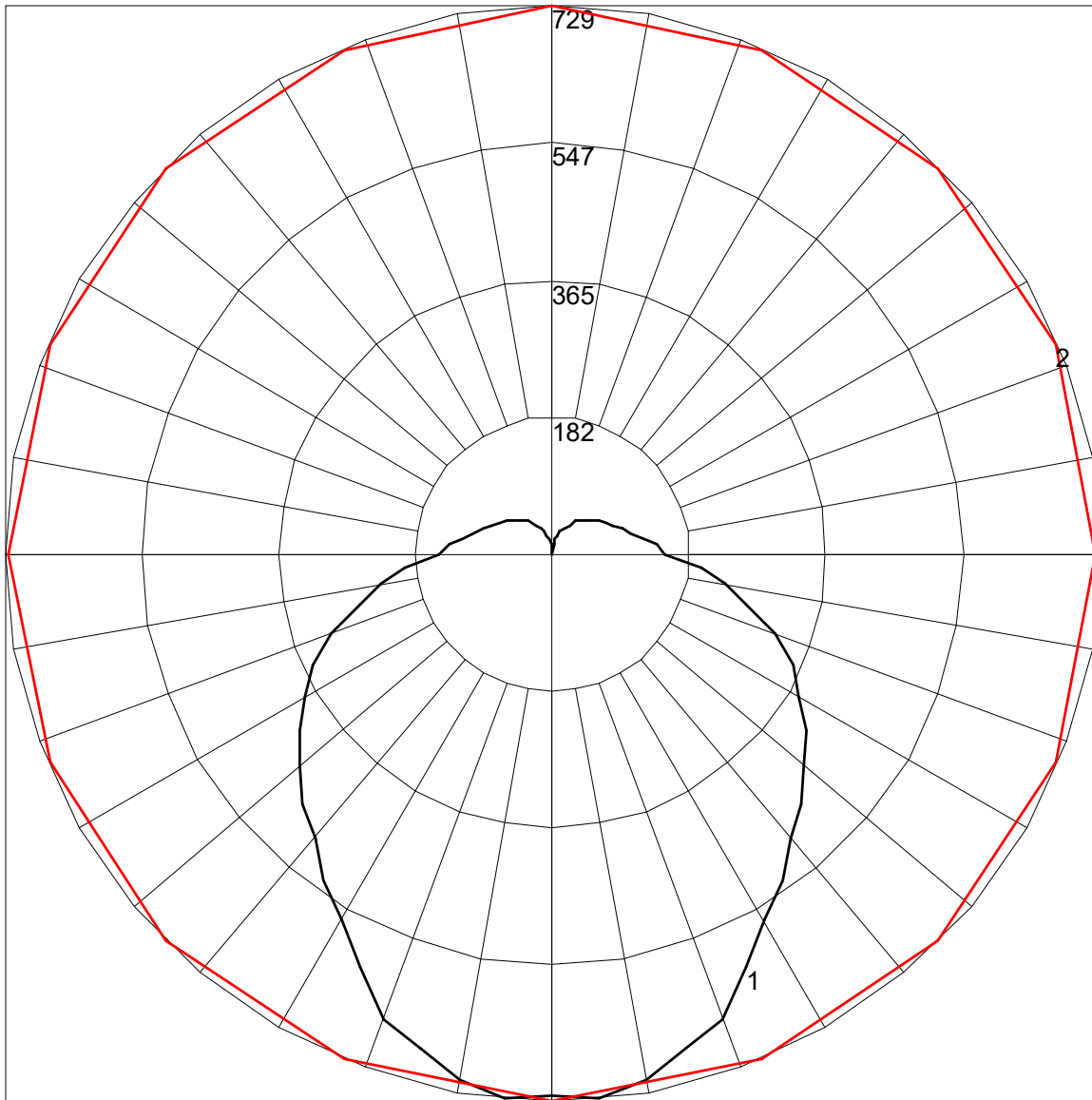
4H	2H	14.1	15.3	14.7	15.9	16.6	17.9	19.1	18.5	19.7	20.4
	3H	15.5	16.5	16.1	17.2	17.9	20.9	21.9	21.5	22.5	23.2
	4H	15.9	16.9	16.6	17.5	18.3	22.3	23.2	22.9	23.9	24.6
	6H	16.2	17.1	16.9	17.7	18.5	23.8	24.6	24.4	25.3	26.0
	8H	16.3	17.1	17.0	17.8	18.5	24.6	25.4	25.2	26.0	26.8
	12H	16.4	17.1	17.0	17.8	18.5	25.4	26.1	26.1	26.8	27.6

8H	4H	17.0	17.8	17.7	18.5	19.3	22.4	23.2	23.0	23.8	24.6
	6H	17.6	18.2	18.3	18.9	19.7	24.0	24.7	24.7	25.4	26.2
	8H	17.8	18.4	18.5	19.1	19.8	24.9	25.5	25.6	26.3	27.0
	12H	17.9	18.4	18.6	19.1	20.0	26.0	26.5	26.7	27.2	28.0

12H	4H	17.4	18.1	18.0	18.8	19.6	22.4	23.1	23.0	23.8	24.5
	6H	18.1	18.7	18.8	19.3	20.2	24.1	24.7	24.8	25.3	26.2
	8H	18.4	18.9	19.1	19.6	20.4	25.0	25.5	25.7	26.2	27.1

Maximum UGR = 28.0

POLAR GRAPH



Maximum Candela = 729.257 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.)