



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LLM-2-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] 2' DIRECT/INDIRECT SURFACE LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC SQUARE LENS

[LUMCAT] LLM-2-L10-835-S-SQ-xx-xx-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1960
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	147
Total Luminaire Watts	13.3
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)	2.00 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	9193	7086	7291
55	7174	5885	6527
65	5529	5044	5877
75	3821	4160	4861
85	2140	3574	4116

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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	597.901	597.901	597.901	597.901	597.901
5	600.304	601.265	603.188	603.188	604.630
10	583.482	585.885	588.769	590.691	590.691
15	553.683	558.970	562.815	564.738	565.699
20	531.094	538.784	544.071	547.916	548.396
25	478.225	487.837	495.527	500.814	502.737
30	429.201	442.177	452.751	462.364	466.689
35	385.944	402.285	419.107	435.449	442.177
40	327.307	348.455	373.928	398.440	409.014
45	276.361	302.315	337.881	374.409	389.308
50	226.376	257.616	300.392	345.571	363.355
55	181.677	216.763	269.152	321.540	341.726
60	143.227	180.716	237.911	294.144	314.811
65	109.583	149.956	213.879	272.516	292.222
70	78.823	121.118	186.484	242.236	260.020
75	52.388	94.203	157.165	206.670	221.569
80	31.721	74.978	135.537	181.197	193.693
85	15.380	56.714	114.389	154.762	164.855
90	2.403	37.489	86.513	117.754	124.963
95	0.000	35.566	82.668	110.064	115.831
100	0.000	33.163	74.017	96.606	101.412
105	0.000	31.241	66.807	86.032	89.877
110	0.000	28.357	60.559	77.381	82.187
115	0.000	25.954	54.792	69.691	74.017
120	0.000	24.993	49.985	65.846	69.210
125	0.000	23.070	45.179	58.637	62.962
130	0.000	21.148	40.853	53.830	57.195
135	0.000	19.225	36.528	47.102	51.427
140	0.000	18.744	34.605	44.698	48.063
145	0.000	19.225	32.202	42.776	45.179
150	0.000	15.861	26.435	33.644	36.528
155	0.000	15.861	24.031	30.280	31.721
160	0.000	12.977	19.706	24.512	25.954
165	0.000	11.535	17.783	19.706	20.667
170	0.000	0.000	13.458	16.822	17.303
175	0.000	0.000	6.248	12.016	12.016
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	216.14	N.A.	11.00
0-30	444.42	N.A.	22.70
0-40	704.19	N.A.	35.90
0-60	1203.56	N.A.	61.40
0-80	1569.64	N.A.	80.10
0-90	1681.55	N.A.	85.80
10-90	1624.6	N.A.	82.90
20-40	488.05	N.A.	24.90
20-50	747.95	N.A.	38.20
40-70	706.03	N.A.	36.00
60-80	366.08	N.A.	18.70
70-80	159.43	N.A.	8.10
80-90	111.91	N.A.	5.70
90-110	138.09	N.A.	7.00
90-120	185.14	N.A.	9.40
90-130	220.89	N.A.	11.30
90-150	264.01	N.A.	13.50
90-180	278.57	N.A.	14.20
110-180	140.48	N.A.	7.20
0-180	1960.12	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	56.94
10-20	159.20
20-30	228.28
30-40	259.77
40-50	259.90
50-60	239.47
60-70	206.65
70-80	159.43
80-90	111.91
90-100	77.23
100-110	60.86
110-120	47.05
120-130	35.75
130-140	25.39
140-150	17.73
150-160	9.80
160-170	4.13
170-180	0.64

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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	12.7	14.1	13.3	14.6	15.3	17.5	18.9	18.1	19.5	20.1
	3H	13.8	15.1	14.4	15.7	16.3	20.2	21.5	20.8	22.1	22.8
	4H	14.2	15.3	14.7	15.9	16.6	21.5	22.6	22.0	23.2	23.9
	6H	14.3	15.5	14.9	16.1	16.8	22.7	23.8	23.3	24.4	25.1
	8H	14.4	15.4	15.0	16.1	16.8	23.3	24.4	24.0	25.0	25.7
	12H	14.4	15.4	15.0	16.0	16.8	24.0	25.0	24.6	25.6	26.4

UGR Viewed Endwise

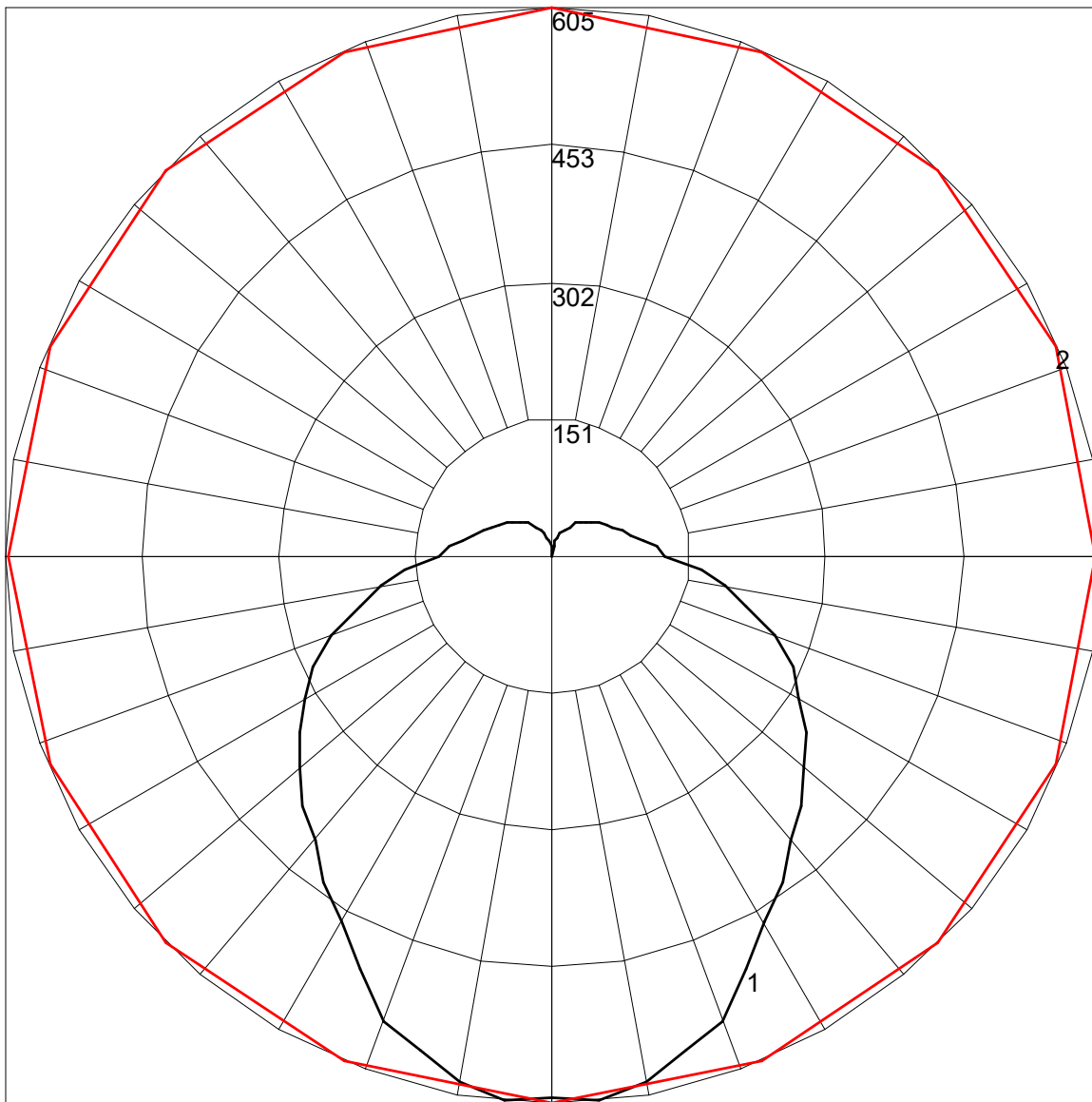
4H	2H	14.0	15.2	14.6	15.8	16.5	17.8	19.0	18.4	19.6	20.3
	3H	15.4	16.5	16.1	17.1	17.8	20.7	21.7	21.3	22.3	23.0
	4H	15.9	16.8	16.5	17.5	18.2	22.1	23.0	22.7	23.6	24.4
	6H	16.2	17.0	16.8	17.7	18.4	23.5	24.3	24.1	25.0	25.7
	8H	16.3	17.1	16.9	17.7	18.5	24.2	25.0	24.9	25.7	26.4
	12H	16.3	17.0	17.0	17.7	18.5	25.0	25.7	25.7	26.4	27.2

8H	4H	17.0	17.7	17.6	18.4	19.2	22.1	22.9	22.8	23.6	24.4
	6H	17.5	18.2	18.2	18.9	19.6	23.8	24.4	24.4	25.1	25.9
	8H	17.7	18.3	18.4	19.0	19.8	24.6	25.2	25.3	25.9	26.7
	12H	17.8	18.3	18.5	19.0	19.9	25.6	26.1	26.3	26.8	27.6

12H	4H	17.3	18.0	18.0	18.7	19.5	22.1	22.9	22.8	23.5	24.3
	6H	18.0	18.6	18.7	19.3	20.1	23.8	24.4	24.5	25.1	25.9
	8H	18.3	18.8	19.0	19.5	20.3	24.7	25.2	25.4	25.9	26.8

Maximum UGR = 27.6

POLAR GRAPH



Maximum Candela = 604.63 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.)