



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LLM-8-P9-835-X-RD-XX-XX-POE_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 17323.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 10-AUG-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-P9-835-x-RD-xx-xx-PoE

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6855
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	162
Total Luminaire Watts	42.2
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	8758	7451	7750
55	7239	6301	6746
65	5947	5461	5968
75	4564	4645	5031
85	3545	4332	4639

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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	1992.234	1992.234	1992.234	1992.234	1992.234
5	2003.778	2002.129	2005.427	2008.726	2010.375
10	1944.407	1947.705	1964.197	1977.391	1980.689
15	1852.052	1865.245	1894.931	1922.967	1934.512
20	1766.293	1792.680	1847.104	1898.229	1916.370
25	1601.373	1637.656	1715.168	1784.434	1810.822
30	1439.752	1490.877	1596.426	1693.728	1731.660
35	1302.868	1372.134	1507.369	1627.760	1675.587
40	1113.210	1192.372	1362.239	1507.369	1558.494
45	948.290	1048.891	1250.094	1418.312	1480.982
50	786.668	893.866	1114.859	1296.271	1357.292
55	641.539	760.281	992.818	1182.476	1245.146
60	509.603	633.293	874.076	1062.085	1123.105
65	394.159	529.393	778.422	968.080	1029.101
70	285.312	428.792	674.523	857.584	910.358
75	191.307	336.437	572.272	735.543	780.072
80	120.392	270.469	499.708	656.382	697.612
85	57.722	214.396	433.740	578.869	616.801
90	8.246	158.323	343.034	460.127	493.111
95	0.000	122.041	303.453	422.195	448.582
100	0.000	100.601	257.275	352.929	379.316
105	0.000	82.460	212.747	296.856	323.243
110	0.000	67.617	179.763	257.275	273.767
115	0.000	57.722	153.376	216.045	239.134
120	0.000	54.424	133.585	189.658	207.799
125	0.000	51.125	113.795	161.622	178.114
130	0.000	46.178	97.303	141.831	155.025
135	0.000	39.581	82.460	118.742	126.988
140	0.000	37.932	77.512	107.198	118.742
145	0.000	39.581	72.565	97.303	107.198
150	0.000	34.633	59.371	77.512	84.109
155	0.000	34.633	52.774	67.617	70.916
160	0.000	34.633	46.178	57.722	59.371
165	0.000	16.492	41.230	49.476	51.125
170	0.000	0.000	37.932	39.581	41.230
175	0.000	0.000	0.000	34.633	34.633
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	726.71	N.A.	10.60
0-30	1517.57	N.A.	22.10
0-40	2447.98	N.A.	35.70
0-60	4264.97	N.A.	62.20
0-80	5575.05	N.A.	81.30
0-90	5996.06	N.A.	87.50
10-90	5806.29	N.A.	84.70
20-40	1721.27	N.A.	25.10
20-50	2669.68	N.A.	38.90
40-70	2555.42	N.A.	37.30
60-80	1310.08	N.A.	19.10
70-80	571.65	N.A.	8.30
80-90	421.01	N.A.	6.10
90-110	492.17	N.A.	7.20
90-120	629.88	N.A.	9.20
90-130	724.04	N.A.	10.60
90-150	825.16	N.A.	12.00
90-180	858.47	N.A.	12.50
110-180	366.30	N.A.	5.30
0-180	6854.53	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	189.77
10-20	536.94
20-30	790.86
30-40	930.41
40-50	948.41
50-60	868.58
60-70	738.43
70-80	571.65
80-90	421.01
90-100	290.34
100-110	201.82
110-120	137.71
120-130	94.16
130-140	60.84
140-150	40.28
150-160	22.19
160-170	9.63
170-180	1.50

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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	116	116	116	116	112	112	112	112	104	104	104	97	97	97	90	90	90	87
1	104	98	93	89	100	95	90	86	88	84	81	82	79	76	76	74	72	69
2	94	85	77	71	90	82	75	69	76	71	66	71	66	62	66	62	59	56
3	85	74	65	59	82	72	64	57	67	60	55	62	57	52	58	54	50	47
4	78	65	56	49	75	63	55	48	59	52	46	55	49	44	52	47	42	40
5	72	58	49	42	69	57	48	42	53	46	40	50	43	38	47	41	37	34
6	66	53	43	37	63	51	42	36	48	40	35	45	39	34	42	37	32	30
7	61	48	39	33	59	46	38	32	44	36	31	41	35	30	39	33	29	27
8	57	43	35	29	55	42	34	29	40	33	28	38	31	27	36	30	26	24
9	53	40	32	26	51	39	31	26	37	30	25	35	29	24	33	27	23	21
10	50	37	29	24	48	36	28	23	34	27	23	32	26	22	31	25	21	19

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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	14.5	16.0	15.1	16.5	17.1	19.7	21.1	20.2	21.7	22.3
	3H	15.7	17.0	16.3	17.6	18.2	22.3	23.6	22.9	24.2	24.8
	4H	16.1	17.3	16.6	17.9	18.5	23.6	24.8	24.2	25.4	26.1
	6H	16.3	17.5	16.9	18.0	18.7	25.0	26.1	25.6	26.7	27.4
	8H	16.3	17.5	16.9	18.1	18.7	25.7	26.8	26.3	27.4	28.1
	12H	16.4	17.4	17.0	18.0	18.7	26.6	27.6	27.2	28.2	28.9

UGR Viewed Endwise

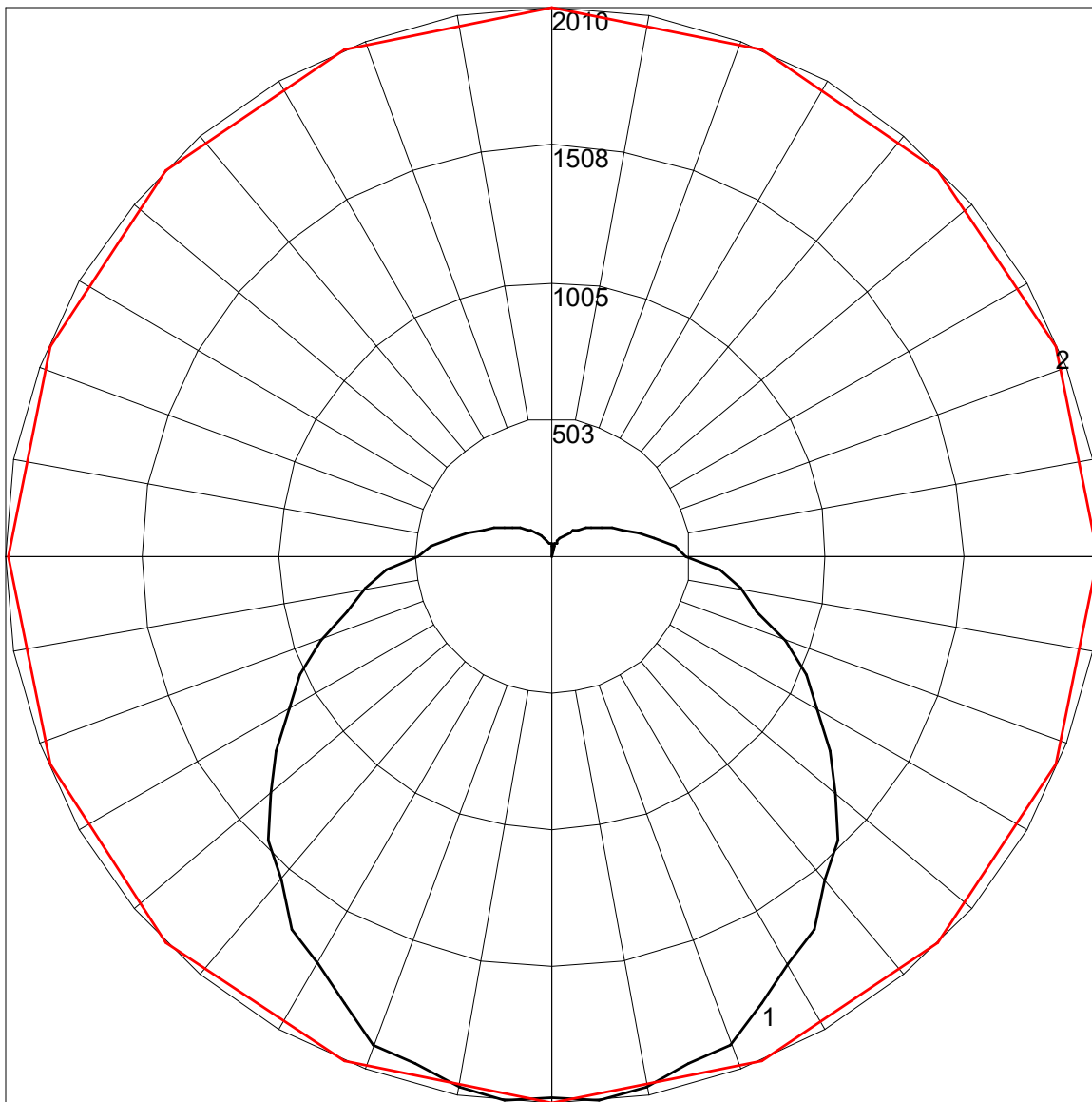
4H	2H	16.0	17.3	16.6	17.8	18.5	19.9	21.2	20.5	21.7	22.4
	3H	17.5	18.5	18.0	19.1	19.8	22.8	23.9	23.4	24.5	25.1
	4H	17.9	18.9	18.5	19.5	20.2	24.2	25.2	24.8	25.8	26.5
	6H	18.3	19.1	18.9	19.8	20.5	25.8	26.7	26.4	27.3	28.0
	8H	18.4	19.2	19.0	19.8	20.5	26.6	27.5	27.3	28.1	28.8
	12H	18.4	19.1	19.1	19.8	20.5	27.6	28.3	28.3	29.0	29.7

8H	4H	19.1	19.9	19.7	20.5	21.3	24.3	25.2	25.0	25.8	26.5
	6H	19.6	20.3	20.3	21.0	21.8	26.1	26.8	26.7	27.4	28.2
	8H	19.9	20.5	20.5	21.2	21.9	27.0	27.7	27.7	28.4	29.1
	12H	20.0	20.5	20.6	21.2	22.0	28.2	28.7	28.8	29.4	30.2

12H	4H	19.4	20.2	20.1	20.9	21.6	24.3	25.1	25.0	25.7	26.5
	6H	20.2	20.8	20.9	21.5	22.2	26.1	26.7	26.8	27.4	28.2
	8H	20.5	21.0	21.1	21.7	22.5	27.1	27.7	27.8	28.4	29.2

Maximum UGR = 30.2

POLAR GRAPH



Maximum Candela = 2010.375 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.)