



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LLM-8-P9-835-X-SQ-XX-XX-POE_.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] 10-AUG-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-P9-835-S-SQ-xx-xx-PoE

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6995
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	166
Total Luminaire Watts	42.2
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	9073	6727	6715
55	7276	5622	6012
65	5853	4854	5413
75	4400	4039	4477
85	3252	3511	3791

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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	2133.836	2133.836	2133.836	2133.836	2133.836
5	2142.412	2145.843	2152.704	2152.704	2157.850
10	2082.377	2090.953	2101.245	2108.106	2108.106
15	1976.028	1994.896	2008.619	2015.480	2018.910
20	1895.409	1922.854	1941.722	1955.444	1957.160
25	1706.725	1741.032	1768.476	1787.345	1794.206
30	1531.765	1578.078	1615.814	1650.121	1665.558
35	1377.387	1435.708	1495.743	1554.064	1578.078
40	1168.121	1243.594	1334.505	1421.985	1459.722
45	986.299	1078.925	1205.857	1336.220	1389.395
50	807.907	919.402	1072.064	1233.302	1296.768
55	648.384	773.601	960.569	1147.537	1219.580
60	511.160	644.954	849.074	1049.765	1123.523
65	391.089	535.174	763.309	972.576	1042.904
70	281.310	432.256	665.537	864.512	927.978
75	186.968	336.199	560.904	737.580	790.754
80	113.210	267.587	483.715	646.669	691.267
85	54.890	202.406	408.242	552.327	588.349
90	8.577	133.794	308.754	420.249	445.979
95	0.000	126.932	295.032	392.804	413.388
100	0.000	118.356	264.157	344.776	361.929
105	0.000	111.495	238.427	307.039	320.761
110	0.000	101.203	216.128	276.164	293.317
115	0.000	92.626	195.544	248.719	264.157
120	0.000	89.196	178.391	234.996	247.003
125	0.000	82.334	161.238	209.267	224.705
130	0.000	75.473	145.801	192.114	204.121
135	0.000	68.612	130.363	168.100	183.537
140	0.000	66.897	123.502	159.523	171.530
145	0.000	68.612	114.925	152.662	161.238
150	0.000	56.605	94.342	120.071	130.363
155	0.000	56.605	85.765	108.064	113.210
160	0.000	46.313	70.327	87.480	92.626
165	0.000	41.167	63.466	70.327	73.758
170	0.000	0.000	48.028	60.036	61.751
175	0.000	0.000	22.299	42.883	42.883
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	771.38	N.A.	11.00
0-30	1586.07	N.A.	22.70
0-40	2513.16	N.A.	35.90
0-60	4295.37	N.A.	61.40
0-80	5601.86	N.A.	80.10
0-90	6001.24	N.A.	85.80
10-90	5798.02	N.A.	82.90
20-40	1741.78	N.A.	24.90
20-50	2669.35	N.A.	38.20
40-70	2519.72	N.A.	36.00
60-80	1306.49	N.A.	18.70
70-80	568.98	N.A.	8.10
80-90	399.38	N.A.	5.70
90-110	492.83	N.A.	7.00
90-120	660.74	N.A.	9.40
90-130	788.32	N.A.	11.30
90-150	942.23	N.A.	13.50
90-180	994.20	N.A.	14.20
110-180	501.36	N.A.	7.20
0-180	6995.44	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	203.22
10-20	568.16
20-30	814.69
30-40	927.10
40-50	927.57
50-60	854.64
60-70	737.52
70-80	568.98
80-90	399.38
90-100	275.63
100-110	217.21
110-120	167.91
120-130	127.58
130-140	90.62
140-150	63.28
150-160	34.97
160-170	14.73
170-180	2.28

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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	111	111	111	111	103	103	103	96	96	96	89	89	89	86
1	104	98	93	89	99	94	90	86	88	84	81	81	78	76	75	73	71	68
2	94	85	78	71	90	82	75	69	76	70	66	70	66	62	65	62	59	56
3	85	74	66	59	82	72	64	58	67	60	55	62	57	52	58	53	49	46
4	78	66	57	50	75	63	55	49	59	52	47	55	49	44	51	46	42	40
5	72	59	50	43	69	57	48	42	53	46	40	50	43	38	46	41	37	34
6	66	53	44	37	63	51	43	37	48	41	35	45	39	34	42	37	32	30
7	61	48	39	33	59	46	38	32	44	36	31	41	35	30	38	33	29	27
8	57	44	35	29	55	42	34	29	40	33	28	38	31	27	35	30	26	24
9	54	40	32	26	51	39	31	26	37	30	25	35	29	24	33	27	23	22
10	50	37	29	24	48	36	29	24	34	27	23	32	26	22	31	25	21	20

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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	14.2	15.6	14.8	16.2	16.8	19.3	20.7	19.8	21.2	21.9
	3H	15.4	16.6	15.9	17.2	17.9	22.0	23.3	22.6	23.9	24.6
	4H	15.7	16.9	16.3	17.5	18.2	23.3	24.5	23.9	25.1	25.8
	6H	15.9	17.0	16.5	17.6	18.3	24.7	25.8	25.3	26.4	27.1
	8H	15.9	17.0	16.5	17.6	18.3	25.4	26.5	26.0	27.1	27.8
	12H	15.9	16.9	16.5	17.6	18.3	26.2	27.2	26.8	27.8	28.6

UGR Viewed Endwise

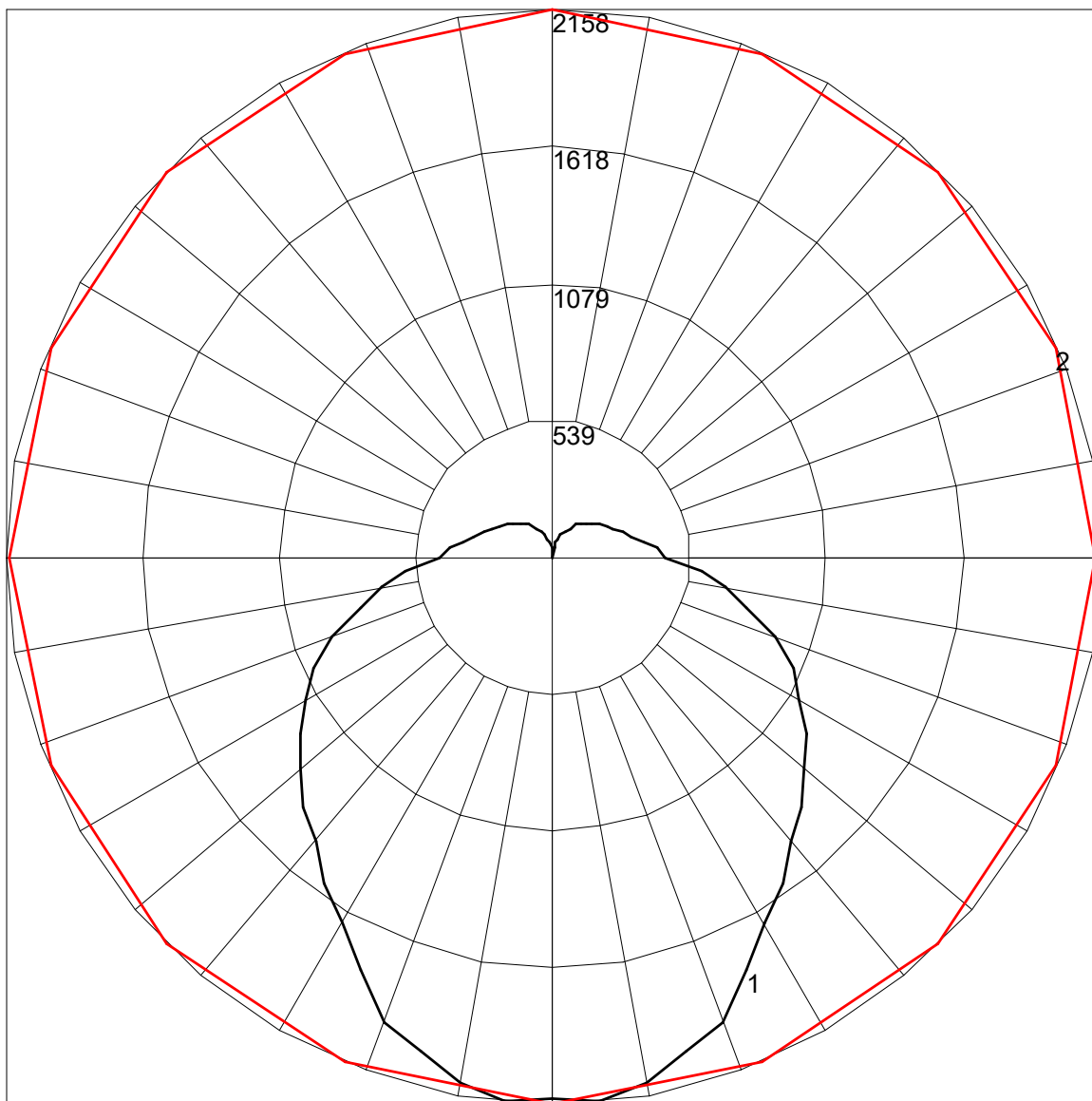
4H	2H	15.6	16.8	16.2	17.4	18.1	19.5	20.7	20.1	21.3	22.0
	3H	17.0	18.0	17.6	18.7	19.4	22.5	23.5	23.1	24.1	24.8
	4H	17.5	18.4	18.1	19.0	19.8	23.9	24.9	24.5	25.5	26.2
	6H	17.8	18.6	18.4	19.3	20.0	25.4	26.3	26.1	27.0	27.7
	8H	17.8	18.6	18.5	19.3	20.1	26.3	27.0	26.9	27.7	28.5
	12H	17.9	18.6	18.6	19.3	20.1	27.1	27.9	27.8	28.6	29.3

8H	4H	18.6	19.4	19.2	20.0	20.8	24.0	24.8	24.7	25.5	26.2
	6H	19.1	19.8	19.8	20.5	21.3	25.7	26.4	26.4	27.1	27.8
	8H	19.3	19.9	20.0	20.6	21.4	26.6	27.2	27.3	27.9	28.7
	12H	19.4	19.9	20.1	20.6	21.5	27.7	28.2	28.4	28.9	29.8

12H	4H	18.9	19.6	19.6	20.3	21.1	24.0	24.7	24.7	25.4	26.2
	6H	19.6	20.2	20.3	20.9	21.7	25.7	26.3	26.4	27.0	27.8
	8H	19.9	20.4	20.6	21.1	22.0	26.7	27.2	27.4	27.9	28.8

Maximum UGR = 29.8

POLAR GRAPH



Maximum Candela = 2157.85 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.)