



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LLM-2-L6-927-X-RD-XX-XX-DRV-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 17323.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 05-30-2023
 [MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2' DIRECT/INDIRECT SURFACE LUMINAIRE
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC ROUND LENS
 [LUMCAT]LLM-2-L6-927-x-RD-xx-xx-DRV-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	955
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	122
Total Luminaire Watts	7.8
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)	2.03 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	4398	3859	4123
55	3553	3244	3589
65	2814	2791	3175
75	2007	2353	2677
85	1211	2166	2468

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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	277.642	277.642	277.642	277.642	277.642
5	279.251	279.021	279.481	279.941	280.171
10	270.977	271.437	273.735	275.574	276.034
15	258.106	259.945	264.082	267.989	269.598
20	246.155	249.832	257.417	264.542	267.070
25	223.171	228.228	239.030	248.683	252.360
30	200.647	207.772	222.482	236.042	241.328
35	181.571	191.224	210.070	226.849	233.514
40	155.140	166.172	189.845	210.070	217.195
45	132.156	146.176	174.216	197.659	206.393
50	109.632	124.571	155.369	180.651	189.155
55	89.406	105.955	138.362	164.793	173.526
60	71.019	88.257	121.813	148.015	156.519
65	54.931	73.777	108.483	134.914	143.418
70	39.762	59.757	94.003	119.515	126.870
75	26.661	46.887	79.753	102.507	108.713
80	16.778	37.693	69.640	91.475	97.221
85	8.044	29.879	60.447	80.673	85.959
90	1.149	22.064	47.806	64.124	68.721
95	0.000	17.008	42.290	58.838	62.516
100	0.000	14.020	35.854	49.185	52.862
105	0.000	11.492	29.649	41.371	45.048
110	0.000	9.423	25.052	35.854	38.153
115	0.000	8.044	21.375	30.109	33.326
120	0.000	7.585	18.617	26.431	28.959
125	0.000	7.125	15.859	22.524	24.822
130	0.000	6.435	13.560	19.766	21.605
135	0.000	5.516	11.492	16.548	17.697
140	0.000	5.286	10.802	14.939	16.548
145	0.000	5.516	10.113	13.560	14.939
150	0.000	4.827	8.274	10.802	11.722
155	0.000	4.827	7.355	9.423	9.883
160	0.000	4.827	6.435	8.044	8.274
165	0.000	2.298	5.746	6.895	7.125
170	0.000	0.000	5.286	5.516	5.746
175	0.000	0.000	0.000	4.827	4.827
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	101.28	N.A.	10.60
0-30	211.49	N.A.	22.10
0-40	341.16	N.A.	35.70
0-60	594.38	N.A.	62.20
0-80	776.95	N.A.	81.30
0-90	835.62	N.A.	87.50
10-90	809.18	N.A.	84.70
20-40	239.88	N.A.	25.10
20-50	372.05	N.A.	38.90
40-70	356.13	N.A.	37.30
60-80	182.58	N.A.	19.10
70-80	79.67	N.A.	8.30
80-90	58.67	N.A.	6.10
90-110	68.59	N.A.	7.20
90-120	87.78	N.A.	9.20
90-130	100.90	N.A.	10.60
90-150	115.00	N.A.	12.00
90-180	119.64	N.A.	12.50
110-180	51.05	N.A.	5.30
0-180	955.26	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	26.45
10-20	74.83
20-30	110.22
30-40	129.66
40-50	132.17
50-60	121.05
60-70	102.91
70-80	79.67
80-90	58.67
90-100	40.46
100-110	28.13
110-120	19.19
120-130	13.12
130-140	8.48
140-150	5.61
150-160	3.09
160-170	1.34
170-180	0.21

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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	91	91	91	88
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	63	59	56
3	85	74	66	59	82	72	64	57	67	60	55	62	57	52	58	54	50	47
4	78	66	56	49	75	63	55	48	59	52	46	55	49	44	52	47	43	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	12.2	13.7	12.8	14.2	14.8	17.2	18.7	17.8	19.2	19.8
	3H	13.4	14.7	14.0	15.3	15.9	19.8	21.1	20.3	21.7	22.3
	4H	13.8	15.0	14.4	15.6	16.3	21.0	22.2	21.6	22.8	23.5
	6H	14.0	15.2	14.6	15.8	16.4	22.3	23.4	22.9	24.0	24.7
	8H	14.1	15.2	14.7	15.8	16.4	23.0	24.1	23.5	24.7	25.3
	12H	14.1	15.2	14.7	15.7	16.4	23.7	24.7	24.3	25.3	26.0

UGR Viewed Endwise

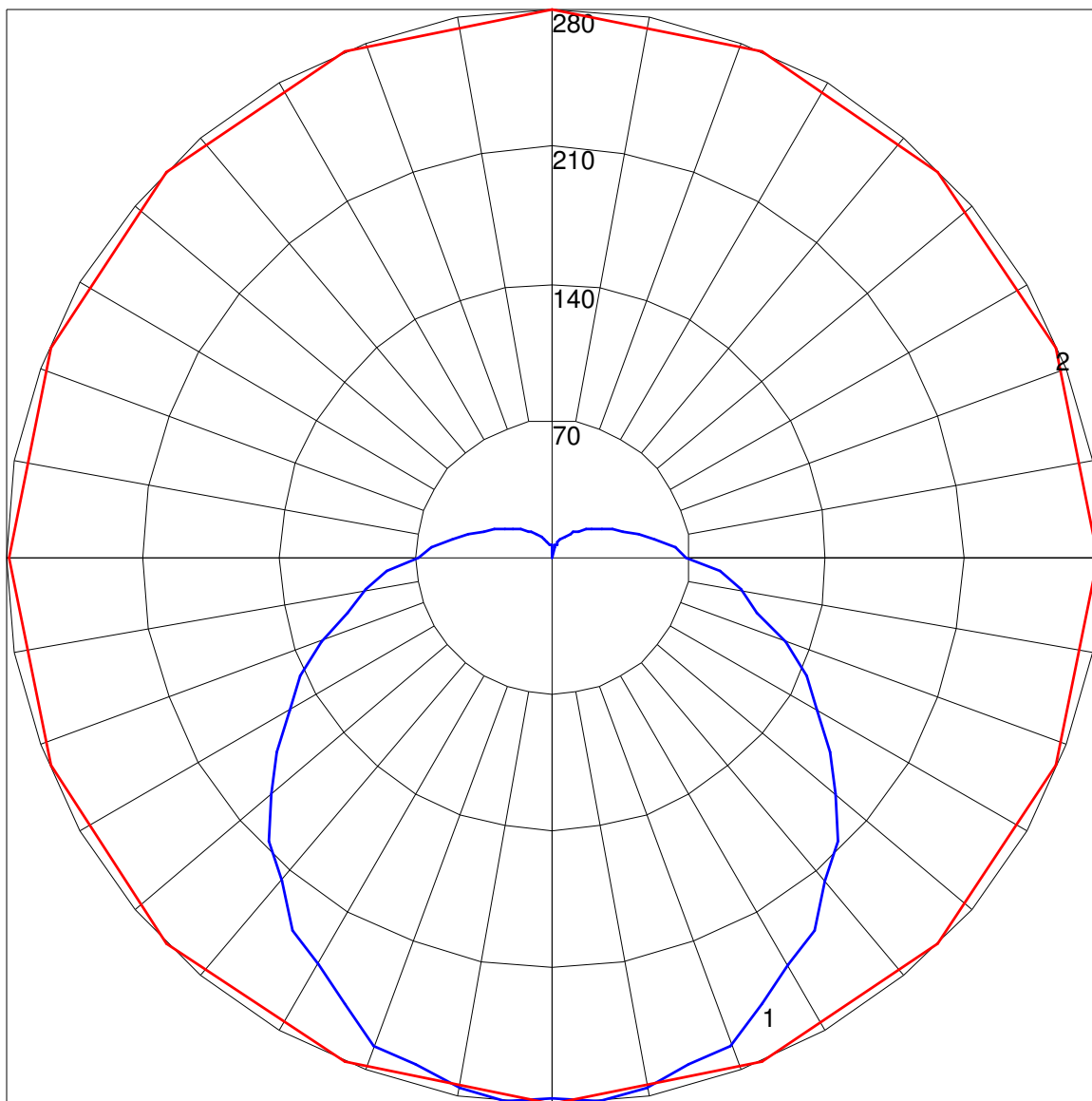
4H	2H	13.7	14.9	14.3	15.5	16.2	17.5	18.7	18.0	19.3	19.9
	3H	15.1	16.2	15.7	16.8	17.5	20.3	21.3	20.9	21.9	22.6
	4H	15.6	16.6	16.2	17.2	17.9	21.6	22.6	22.2	23.2	23.9
	6H	15.9	16.8	16.6	17.4	18.2	23.1	24.0	23.8	24.6	25.3
	8H	16.0	16.9	16.7	17.5	18.2	23.9	24.7	24.5	25.4	26.1
	12H	16.1	16.8	16.7	17.5	18.2	24.8	25.5	25.4	26.2	26.9

8H	4H	16.7	17.5	17.4	18.2	18.9	21.8	22.6	22.4	23.2	24.0
	6H	17.3	18.0	17.9	18.7	19.4	23.4	24.1	24.1	24.8	25.5
	8H	17.5	18.1	18.2	18.8	19.6	24.3	25.0	25.0	25.7	26.4
	12H	17.6	18.2	18.3	18.9	19.7	25.4	25.9	26.0	26.6	27.4

12H	4H	17.1	17.8	17.7	18.5	19.2	21.8	22.5	22.4	23.2	23.9
	6H	17.8	18.4	18.5	19.1	19.9	23.5	24.1	24.1	24.7	25.5
	8H	18.1	18.7	18.8	19.3	20.2	24.4	25.0	25.1	25.7	26.5

Maximum UGR = 27.4

POLAR GRAPH



Maximum Candela = 280.171 Located At Horizontal Angle = 90, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)