



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LLM-2-L10-927-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-L10-927-x-RD-xx-xx-DRV-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1584
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
Total Luminaire Watts	13.4
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	7293	6400	6838
55	5891	5379	5952
65	4666	4629	5266
75	3329	3901	4439
85	2009	3592	4093

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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	460.412	460.412	460.412	460.412	460.412
5	463.080	462.699	463.461	464.223	464.604
10	449.359	450.121	453.933	456.982	457.744
15	428.015	431.064	437.925	444.404	447.072
20	408.196	414.295	426.872	438.687	442.880
25	370.083	378.468	396.381	412.389	418.487
30	332.731	344.547	368.939	391.426	400.192
35	301.097	317.105	348.358	376.181	387.234
40	257.267	275.561	314.818	348.358	360.173
45	219.153	242.402	288.901	327.777	342.260
50	181.802	206.576	257.648	299.573	313.675
55	148.262	175.704	229.444	273.274	287.757
60	117.771	146.356	202.002	245.451	259.553
65	91.091	122.345	179.896	223.727	237.829
70	65.936	99.095	155.885	198.191	210.387
75	44.212	77.752	132.254	169.987	180.277
80	27.823	62.506	115.484	151.692	161.220
85	13.340	49.548	100.239	133.779	142.545
90	1.906	36.589	79.276	106.337	113.960
95	0.000	28.204	70.129	97.571	103.669
100	0.000	23.249	59.457	81.563	87.661
105	0.000	19.057	49.167	68.604	74.703
110	0.000	15.627	41.544	59.457	63.269
115	0.000	13.340	35.446	49.929	55.265
120	0.000	12.577	30.872	43.831	48.023
125	0.000	11.815	26.298	37.351	41.163
130	0.000	10.672	22.487	32.778	35.827
135	0.000	9.147	19.057	27.442	29.347
140	0.000	8.766	17.913	24.774	27.442
145	0.000	9.147	16.770	22.487	24.774
150	0.000	8.004	13.721	17.913	19.438
155	0.000	8.004	12.196	15.627	16.389
160	0.000	8.004	10.672	13.340	13.721
165	0.000	3.811	9.528	11.434	11.815
170	0.000	0.000	8.766	9.147	9.528
175	0.000	0.000	0.000	8.004	8.004
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	167.95	N.A.	10.60
0-30	350.72	N.A.	22.10
0-40	565.74	N.A.	35.70
0-60	985.65	N.A.	62.20
0-80	1288.41	N.A.	81.30
0-90	1385.71	N.A.	87.50
10-90	1341.85	N.A.	84.70
20-40	397.79	N.A.	25.10
20-50	616.97	N.A.	38.90
40-70	590.57	N.A.	37.30
60-80	302.76	N.A.	19.10
70-80	132.11	N.A.	8.30
80-90	97.30	N.A.	6.10
90-110	113.74	N.A.	7.20
90-120	145.57	N.A.	9.20
90-130	167.33	N.A.	10.60
90-150	190.70	N.A.	12.00
90-180	198.40	N.A.	12.50
110-180	84.65	N.A.	5.30
0-180	1584.11	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	43.86
10-20	124.09
20-30	182.77
30-40	215.02
40-50	219.18
50-60	200.73
60-70	170.65
70-80	132.11
80-90	97.30
90-100	67.10
100-110	46.64
110-120	31.83
120-130	21.76
130-140	14.06
140-150	9.31
150-160	5.13
160-170	2.22
170-180	0.35

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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	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	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

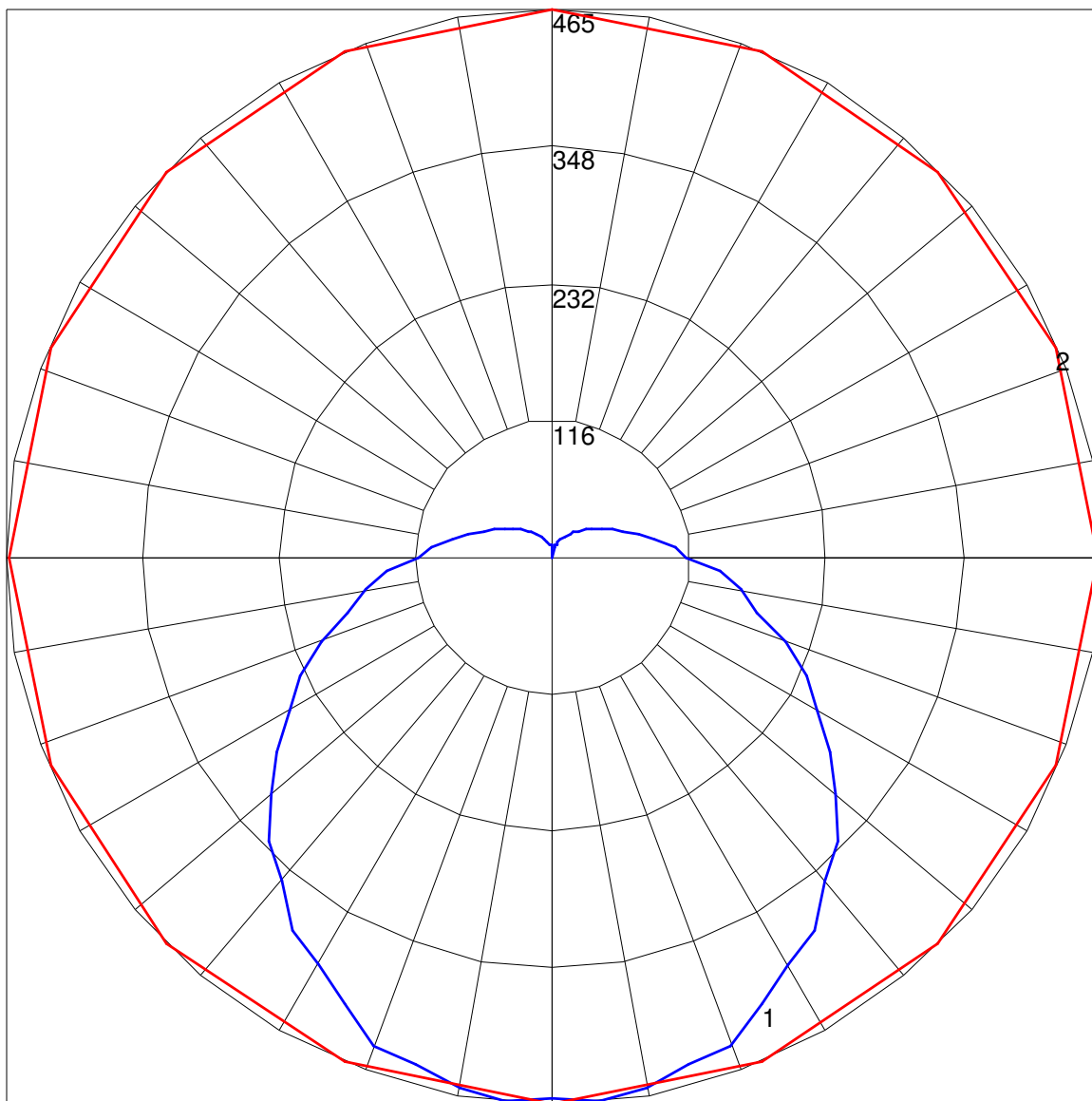
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	14.1	15.5	14.6	16.0	16.6	19.0	20.5	19.6	21.0	21.6
	3H	15.2	16.5	15.8	17.1	17.7	21.6	22.9	22.1	23.5	24.1
	4H	15.6	16.8	16.2	17.4	18.1	22.8	24.1	23.4	24.6	25.3
	6H	15.8	17.0	16.4	17.6	18.2	24.1	25.3	24.7	25.8	26.5
	8H	15.9	17.0	16.5	17.6	18.2	24.8	25.9	25.4	26.5	27.1
	12H	15.9	17.0	16.5	17.6	18.2	25.5	26.5	26.1	27.1	27.8
4H	2H	15.5	16.7	16.1	17.3	18.0	19.3	20.5	19.8	21.1	21.7
	3H	16.9	18.0	17.5	18.6	19.3	22.1	23.1	22.7	23.7	24.4
	4H	17.4	18.4	18.0	19.0	19.7	23.4	24.4	24.0	25.0	25.7
	6H	17.7	18.6	18.4	19.2	20.0	24.9	25.8	25.6	26.4	27.2
	8H	17.8	18.7	18.5	19.3	20.0	25.7	26.5	26.3	27.2	27.9
	12H	17.9	18.6	18.5	19.3	20.0	26.6	27.3	27.2	28.0	28.7
8H	4H	18.5	19.3	19.2	20.0	20.7	23.6	24.4	24.2	25.0	25.8
	6H	19.1	19.8	19.7	20.5	21.2	25.2	25.9	25.9	26.6	27.3
	8H	19.3	19.9	20.0	20.6	21.4	26.1	26.8	26.8	27.5	28.2
	12H	19.4	20.0	20.1	20.7	21.5	27.2	27.7	27.8	28.4	29.2
12H	4H	18.9	19.6	19.5	20.3	21.0	23.6	24.3	24.2	25.0	25.7
	6H	19.6	20.2	20.3	20.9	21.7	25.3	25.9	25.9	26.5	27.3
	8H	19.9	20.5	20.6	21.2	22.0	26.2	26.8	26.9	27.5	28.3

Maximum UGR = 29.2

POLAR GRAPH



Maximum Candela = 464.604 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.)