



IES INDOOR REPORT
PHOTOMETRIC FILENAME : CL-4-L54-840-FDMA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 18716.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 1-SEP-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO. 64836
 [LUMINAIRE] 4' CORNER MOUNT LUMINAIRE
 [MORE] WITH SMOOTH MATTE ACRYLIC LENS
 [LUMCAT] CL-4-L54/840-FDMA-DIM-UNV
 [LAMPCAT] HLM 80 CRI, 4000K CCT
 [SEARCH_SOURCETYPE] LED
 [SEARCH_APPLICATION] INDOOR, COMMERCIAL, EDUCATIONAL, OFFICE
 [SEARCH_MOUNTING] SURFACE

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5421
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	116
Total Luminaire Watts	46.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	2.72
Spacing Criterion (90-270)	1.14
Spacing Criterion (Diagonal)	1.66
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.48 ft
Luminous Width (90-270)	3.77 ft
Luminous Height	0.48 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10991	9054	4161
55	10651	8588	3504
65	10386	8014	2980
75	9292	6898	2504
85	8428	5900	1733

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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>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0	1056.877	1056.877	1056.877	1056.877	1056.877	1056.877	1056.877	1056.877	1056.877
5	1310.341	1279.530	1220.233	1121.406	1033.623	987.116	916.774	865.034	847.013
10	1553.923	1496.951	1364.987	1181.284	999.905	865.034	743.534	668.541	640.056
15	1828.897	1753.323	1559.155	1287.088	1012.695	808.063	652.845	569.714	538.903
20	2038.179	1924.237	1647.519	1248.719	880.731	624.360	466.235	383.103	357.524
25	2235.254	2124.218	1792.272	1320.805	877.824	574.946	406.938	326.132	302.878
30	2388.146	2245.718	1872.497	1308.016	790.042	466.235	313.342	238.350	209.864
35	2466.046	2325.943	1911.447	1295.226	735.396	409.264	261.603	178.471	147.660
40	2535.807	2385.821	1932.375	1245.812	644.706	316.249	178.471	90.689	54.646
45	2610.800	2445.118	1932.375	1173.145	556.924	254.046	111.617	28.486	18.022
50	2574.757	2400.936	1875.404	1098.152	481.931	202.306	44.182	20.928	0.000
55	2491.625	2315.479	1769.019	989.441	398.799	145.335	18.022	0.000	0.000
60	2382.914	2196.304	1649.844	891.195	334.271	85.457	0.000	0.000	0.000
65	2318.385	2121.311	1541.133	787.135	269.161	26.160	0.000	0.000	0.000
70	2157.354	1960.861	1388.241	678.424	220.328	0.000	0.000	0.000	0.000
75	1911.447	1722.512	1191.748	564.482	160.450	0.000	0.000	0.000	0.000
80	1732.976	1543.459	1030.716	458.678	111.617	0.000	0.000	0.000	0.000
85	1533.576	1346.966	873.173	373.221	62.203	0.000	0.000	0.000	0.000
90	1188.841	1035.949	658.077	274.393	0.000	0.000	0.000	0.000	0.000
95	1007.463	857.477	528.438	191.842	0.000	0.000	0.000	0.000	0.000
100	772.020	647.613	396.474	126.732	0.000	0.000	0.000	0.000	0.000
105	582.503	492.395	290.089	64.529	0.000	0.000	0.000	0.000	0.000
110	450.539	380.778	215.096	0.000	0.000	0.000	0.000	0.000	0.000
115	336.596	284.857	145.335	0.000	0.000	0.000	0.000	0.000	0.000
120	251.139	206.957	74.993	0.000	0.000	0.000	0.000	0.000	0.000
125	168.589	124.407	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130	95.921	54.646	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135	12.789	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	406.05	N.A.	7.50
0-30	902.26	N.A.	16.60
0-40	1558.79	N.A.	28.80
0-60	3082.28	N.A.	56.90
0-80	4422.07	N.A.	81.60
0-90	4879.39	N.A.	90.00
10-90	4778.39	N.A.	88.10
20-40	1152.74	N.A.	21.30
20-50	1905.49	N.A.	35.20
40-70	2251.28	N.A.	41.50
60-80	1339.79	N.A.	24.70
70-80	612.00	N.A.	11.30
80-90	457.33	N.A.	8.40
90-110	436.70	N.A.	8.10
90-120	512.20	N.A.	9.40
90-130	538.46	N.A.	9.90
90-150	541.36	N.A.	10.00
90-180	541.36	N.A.	10.00
110-180	104.67	N.A.	1.90
0-180	5420.76	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	101.00
10-20	305.05
20-30	496.21
30-40	656.53
40-50	752.74
50-60	770.75
60-70	727.79
70-80	612.00
80-90	457.33
90-100	282.53
100-110	154.16
110-120	75.50
120-130	26.27
130-140	2.90
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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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	105	105	105	98	98	98	92	92	92	90
1	102	96	90	85	98	93	87	83	86	82	78	81	77	74	75	73	70	67
2	91	81	73	66	88	79	71	65	73	67	61	68	63	59	64	60	56	53
3	82	70	61	53	79	68	59	52	63	56	50	59	53	48	55	50	46	43
4	75	61	51	44	72	59	50	43	55	47	41	52	45	40	48	43	38	35
5	68	54	44	37	65	52	43	36	49	41	35	46	39	34	43	37	32	30
6	63	48	39	32	60	47	38	31	44	36	30	41	34	29	39	33	28	26
7	58	44	34	28	56	42	33	27	40	32	26	37	30	25	35	29	24	22
8	54	39	30	24	52	38	30	24	36	29	23	34	27	22	32	26	22	19
9	50	36	27	22	48	35	27	21	33	26	21	31	25	20	30	24	19	17
10	47	33	25	19	45	32	24	19	30	23	18	29	22	18	27	22	17	15

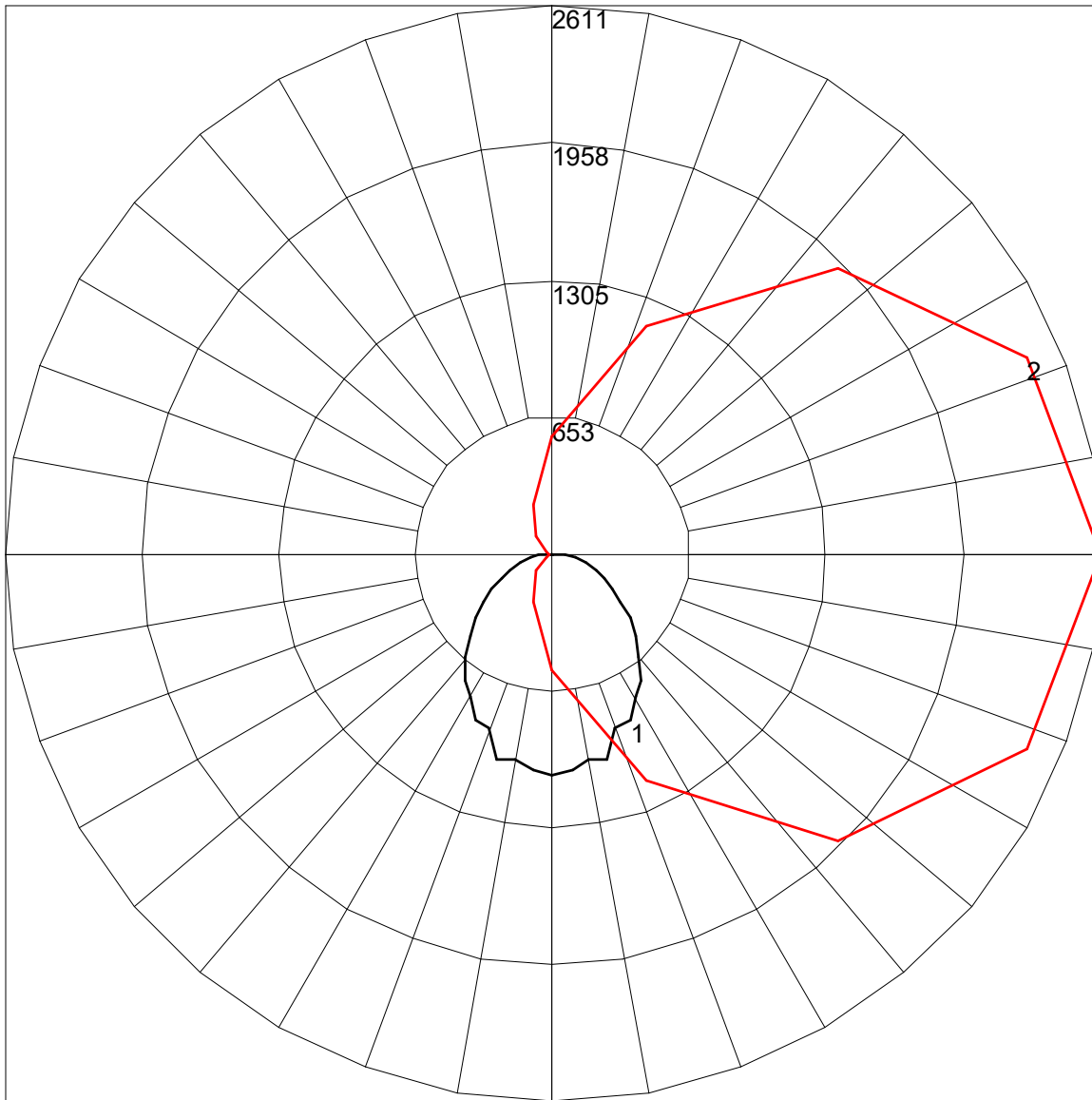
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UGR TABLE - CORRECTED

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	24.4	25.9	24.9	26.4	27.0	13.6	15.2	14.1	15.7	16.3
	3H	27.4	28.9	27.9	29.4	30.0	14.8	16.2	15.3	16.8	17.3
	4H	28.8	30.2	29.4	30.7	31.3	15.2	16.5	15.7	17.1	17.7
	6H	30.3	31.6	30.8	32.1	32.7	15.4	16.7	16.0	17.2	17.9
	8H	31.0	32.2	31.6	32.8	33.4	15.5	16.7	16.0	17.3	17.9
	12H	31.7	32.9	32.3	33.5	34.1	15.5	16.7	16.1	17.3	17.9
4H	2H	24.6	26.0	25.1	26.5	27.1	16.6	18.0	17.1	18.5	19.1
	3H	27.9	29.1	28.4	29.6	30.3	18.0	19.2	18.5	19.8	20.4
	4H	29.4	30.5	30.0	31.1	31.8	18.4	19.5	19.0	20.1	20.8
	6H	31.1	32.1	31.7	32.7	33.3	18.7	19.7	19.3	20.3	21.0
	8H	31.9	32.8	32.5	33.5	34.1	18.8	19.7	19.4	20.3	21.0
	12H	32.8	33.7	33.4	34.3	35.0	18.9	19.7	19.5	20.3	21.0
8H	4H	29.6	30.5	30.2	31.1	31.8	20.3	21.2	20.9	21.9	22.5
	6H	31.4	32.1	32.0	32.8	33.5	20.9	21.7	21.5	22.3	23.0
	8H	32.3	33.0	33.0	33.7	34.4	21.0	21.8	21.7	22.4	23.1
	12H	33.4	34.0	34.0	34.7	35.4	21.2	21.8	21.8	22.5	23.2
12H	4H	29.5	30.4	30.2	31.0	31.7	20.9	21.7	21.5	22.4	23.0
	6H	31.4	32.1	32.0	32.7	33.5	21.6	22.3	22.3	23.0	23.7
	8H	32.4	33.0	33.0	33.7	34.4	21.9	22.6	22.6	23.2	24.0

Maximum UGR = 35.4

POLAR GRAPH



Maximum Candela = 2610.8 Located At Horizontal Angle = 0, Vertical Angle = 45
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (45) (Through Max. Cd.)