



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 29-4-L54-840-AF-(L40)-DIM-UNV\_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] GEN FROM BALLABS TEST NO. 20306.0  
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
[ISSUEDATE] 01-11-2024  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
[LUMINAIRE] 4' WALL MOUNT LED LUMINAIRE  
[MORE] WHITE REFL W/CLEAR PRISMATIC DIFFUSER TOP/BTM  
[MORE] 0-10V DIMMING DRIVER  
[LUMCAT] 29-4-L54-840-AF-(L40)-DIM-UNV  
[LAMPCAT] HLMX 80 CRI 4000K CCT  
[ \_SEARCH\_SOURCETYPE] LED  
[ \_SEARCH\_APPLICATION] Indoor, Corridor, Healthcare, Direct-Indirect  
[ \_SEARCH\_MOUNTING] Wall

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4064
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	32.7
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.40 ft
Luminous Width (90-270)	3.96 ft
Luminous Height	0.23 ft



**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6843	5238	3093
55	7339	5549	3017
65	6886	5212	2849
75	6310	4464	2664
85	5611	3834	2574

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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	425.109	425.109	425.109	425.109	425.109	425.109	425.109	425.109	425.109
5	419.451	410.776	417.188	410.021	428.504	374.941	361.739	348.914	344.765
10	478.672	462.075	453.400	425.864	427.373	367.397	344.765	328.922	325.150
15	552.227	528.463	493.383	441.329	425.109	357.590	325.150	310.062	302.895
20	643.511	605.790	542.420	456.417	420.583	341.370	304.027	285.921	279.508
25	752.523	704.618	594.097	472.260	412.284	325.150	281.394	259.517	251.595
30	859.649	798.164	652.186	482.822	400.591	305.536	253.104	228.586	218.401
35	966.020	889.448	707.258	489.989	384.371	278.377	222.551	196.901	184.830
40	1054.663	968.661	752.146	489.234	363.625	248.200	190.111	164.461	151.259
45	1113.130	1022.601	782.699	480.936	337.221	216.893	159.935	133.530	120.705
50	1140.289	1044.856	786.848	460.189	306.667	184.830	128.249	102.977	92.038
55	1120.297	1022.601	761.953	429.636	273.096	154.654	98.828	76.195	66.765
60	1047.119	957.722	706.127	387.012	236.507	123.346	70.914	49.414	41.115
65	950.178	867.947	630.686	333.449	197.278	93.924	44.887	26.404	18.860
70	854.368	775.532	542.797	277.245	159.180	64.125	19.237	3.395	0.000
75	751.768	665.389	451.136	222.551	122.214	36.589	0.000	0.000	0.000
80	639.739	556.376	368.529	171.251	87.889	10.562	0.000	0.000	0.000
85	542.420	473.392	299.123	125.609	54.317	4.904	0.000	0.000	0.000
90	473.392	402.477	242.165	91.661	46.019	6.790	0.000	0.000	1.132
95	463.961	394.933	235.376	102.977	71.669	25.650	10.562	13.202	14.334
100	458.681	389.652	250.464	137.680	97.696	45.265	32.062	28.290	21.123
105	462.075	411.153	296.105	178.040	122.969	64.879	52.431	50.545	28.668
110	507.717	457.926	354.195	227.454	155.031	77.704	73.555	74.686	75.441
115	579.386	529.218	431.522	290.447	192.374	88.643	92.415	100.714	103.731
120	640.493	600.132	527.332	370.415	233.490	95.810	98.828	125.232	129.758
125	731.022	694.056	617.861	451.136	274.605	109.766	101.845	136.548	148.241
130	836.639	799.673	719.706	517.524	314.966	128.249	110.898	130.890	159.935
135	935.090	893.597	802.314	576.746	353.441	141.452	121.083	113.539	164.084
140	1000.346	958.854	853.991	614.466	382.108	145.978	128.249	110.898	161.066
145	1022.224	978.468	835.131	623.519	402.854	164.461	133.908	114.670	143.338
150	988.275	947.915	838.148	615.598	417.942	184.830	133.908	124.855	104.108
155	908.308	877.755	780.436	589.193	422.846	216.515	133.530	131.267	85.625
160	804.200	771.760	700.469	555.999	425.487	248.578	153.522	135.039	97.319
165	684.626	657.844	618.615	514.130	426.618	291.579	200.296	147.110	125.609
170	551.850	540.911	524.314	468.865	428.127	324.019	267.061	200.673	177.286
175	432.276	428.127	439.443	429.636	430.390	362.116	336.089	302.895	270.456
180	418.320	418.320	418.320	418.320	418.320	418.320	418.320	418.320	418.320

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	155.79	N.A.	3.80
0-30	361.23	N.A.	8.90
0-40	654.44	N.A.	16.10
0-60	1393.93	N.A.	34.30
0-80	1974.06	N.A.	48.60
0-90	2144.41	N.A.	52.80
10-90	2106.26	N.A.	51.80
20-40	498.65	N.A.	12.30
20-50	859.37	N.A.	21.10
40-70	1070.95	N.A.	26.40
60-80	580.13	N.A.	14.30
70-80	248.67	N.A.	6.10
80-90	170.35	N.A.	4.20
90-110	341.94	N.A.	8.40
90-120	598.39	N.A.	14.70
90-130	914.74	N.A.	22.50
90-150	1554.82	N.A.	38.30
90-180	1919.43	N.A.	47.20
110-180	1577.49	N.A.	38.80
0-180	4063.84	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	38.14
10-20	117.64
20-30	205.45
30-40	293.20
40-50	360.73
50-60	378.77
60-70	331.46
70-80	248.67
80-90	170.35
90-100	151.17
100-110	190.77
110-120	256.45
120-130	316.35
130-140	340.63
140-150	299.46
150-160	210.93
160-170	116.36
170-180	37.32

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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	96	91	86	82	89	84	80	76	71	68	65	59	57	55	49	47	45	40
2	87	78	71	65	80	72	66	61	61	56	52	51	47	44	41	39	36	32
3	78	68	59	53	72	62	55	49	53	47	42	44	40	36	36	32	30	25
4	71	59	50	44	65	55	47	41	46	40	35	38	34	30	31	28	25	21
5	65	52	43	37	59	48	40	34	41	35	30	34	29	25	28	24	21	17
6	60	46	38	31	55	43	35	29	36	30	25	30	25	22	25	21	18	15
7	55	42	33	27	50	39	31	25	33	27	22	27	22	19	22	18	15	13
8	51	38	29	24	47	35	27	22	30	24	19	25	20	16	20	16	14	11
9	47	34	26	21	43	32	24	20	27	21	17	23	18	15	19	15	12	10
10	44	31	24	18	40	29	22	17	25	19	15	21	16	13	17	13	11	9

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**UGR TABLE - CORRECTED**

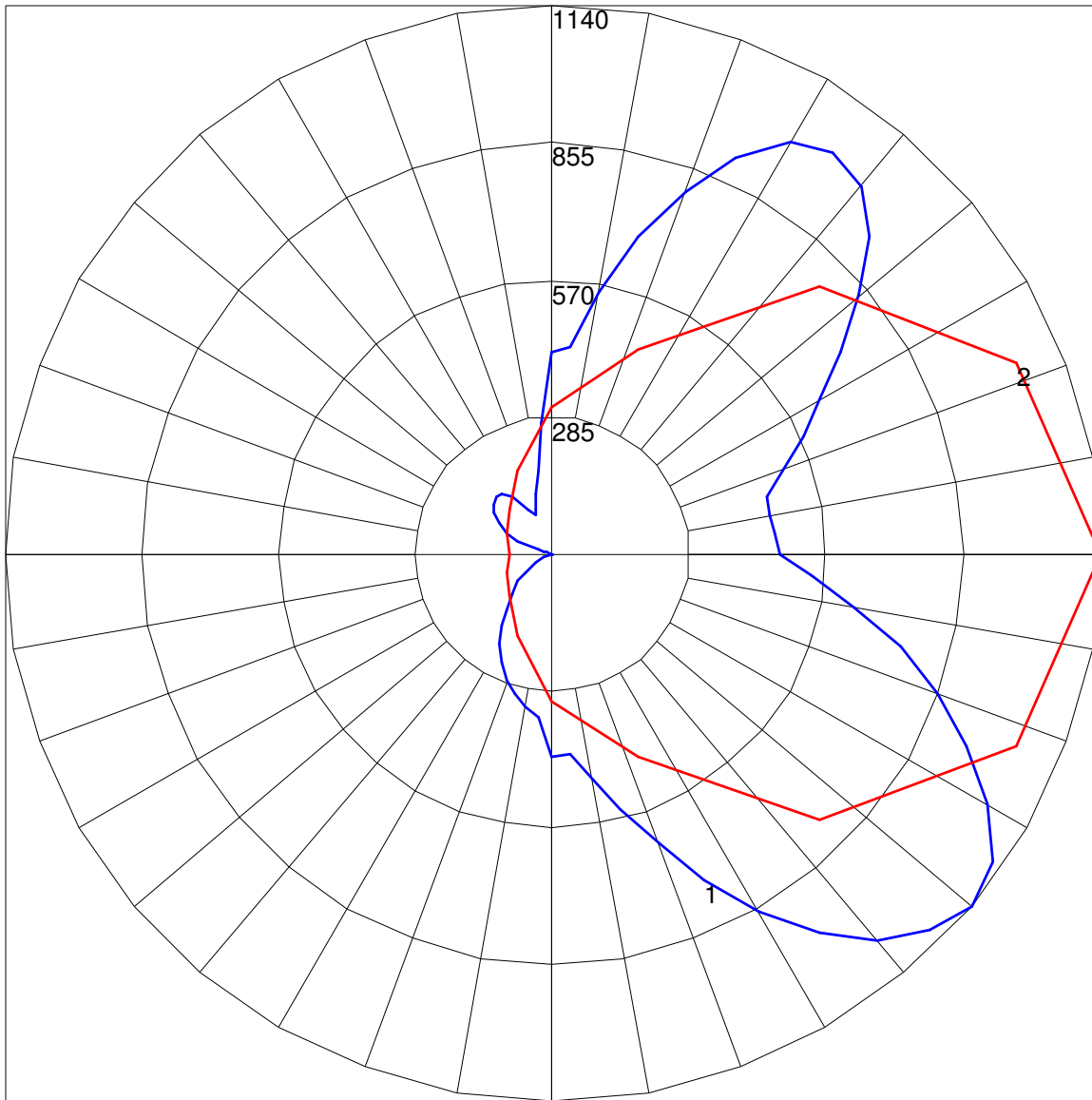
Reflectances

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	20.0	21.0	20.9	21.9	23.1	10.2	11.2	11.2	12.2	13.4
	3H	22.7	23.6	23.6	24.5	25.8	11.7	12.6	12.6	13.5	14.8
	4H	24.0	24.8	24.9	25.8	27.0	12.2	13.0	13.1	14.0	15.2
	6H	25.2	26.0	26.2	27.0	28.3	12.6	13.4	13.5	14.3	15.6
	8H	25.9	26.6	26.8	27.6	28.9	12.7	13.4	13.6	14.4	15.7
	12H	26.6	27.3	27.5	28.3	29.6	12.8	13.5	13.7	14.5	15.7
4H	2H	20.1	21.0	21.1	21.9	23.2	12.5	13.4	13.5	14.3	15.6
	3H	23.1	23.8	24.0	24.8	26.0	14.0	14.7	15.0	15.7	17.0
	4H	24.6	25.2	25.5	26.2	27.5	14.5	15.2	15.5	16.2	17.4
	6H	26.0	26.6	27.0	27.6	28.9	14.9	15.5	15.8	16.5	17.7
	8H	26.8	27.3	27.8	28.3	29.6	15.0	15.5	16.0	16.5	17.8
	12H	27.6	28.1	28.6	29.1	30.4	15.1	15.6	16.1	16.6	17.9
8H	4H	24.6	25.2	25.6	26.2	27.5	16.0	16.5	16.9	17.5	18.8
	6H	26.3	26.7	27.3	27.7	29.1	16.5	17.0	17.5	18.0	19.3
	8H	27.1	27.6	28.2	28.6	29.9	16.7	17.1	17.7	18.1	19.4
	12H	28.1	28.5	29.2	29.5	30.9	16.8	17.2	17.8	18.2	19.5
12H	4H	24.6	25.1	25.6	26.1	27.4	16.4	16.9	17.4	17.9	19.2
	6H	26.2	26.7	27.3	27.7	29.0	17.1	17.5	18.1	18.5	19.8
	8H	27.2	27.6	28.2	28.6	29.9	17.3	17.7	18.4	18.7	20.1

Maximum UGR = 30.9

POLAR GRAPH



Maximum Candela = 1140.289 Located At Horizontal Angle = 0, Vertical Angle = 50  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (50) (Through Max. Cd.)