



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 97-4-L50-840-FR-DRV-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 19304.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 05-04-2022

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 4 LED 22" ARRAYS 4' SUSPENDED ENCLOSED/GASKETED

[MORE] LUMINAIRE WHITE FLAT REFL w/HIGHLY SPEC CENTER REFL & FROSTED

[MORE] ACRYLIC DROP LENS

[LUMCAT] 97-4-L50-840-FR-DIM-UNV

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5016
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	145
Total Luminaire Watts	34.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.32
Spacing Criterion (90-270)	1.86
Spacing Criterion (Diagonal)	1.90
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.25 ft
Luminous Width (90-270)	0.46 ft
Luminous Height	0.27 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4178	4549	5264
55	3896	5616	6952
65	3401	7100	8372
75	2773	6790	6346
85	2088	3768	2945

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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	808.233	808.233	808.233	808.233	808.233
5	821.414	833.540	836.176	798.216	762.365
10	814.032	827.213	840.394	807.179	772.909
15	799.270	816.141	841.448	818.250	785.035
20	775.018	800.852	841.975	826.686	796.107
25	746.548	783.981	840.921	836.703	812.451
30	710.697	762.892	836.703	851.993	836.176
35	672.209	734.949	834.067	879.935	878.881
40	622.650	695.407	834.594	925.804	955.328
45	568.874	653.229	851.993	1013.850	1072.372
50	507.189	608.943	897.861	1137.220	1199.960
55	441.286	567.819	969.036	1268.499	1331.766
60	367.475	530.914	1039.684	1385.015	1448.282
65	295.772	503.498	1082.916	1404.522	1453.027
70	226.179	473.446	1039.684	1276.407	1285.897
75	160.803	421.778	868.336	995.924	953.747
80	101.227	339.532	598.398	632.668	611.052
85	56.940	243.050	374.328	378.546	360.621
90	36.378	167.657	240.414	237.250	215.107
95	26.888	112.299	164.494	156.585	147.095
100	22.671	76.447	120.207	113.353	109.135
105	18.980	53.250	97.009	93.846	90.155
110	14.235	34.797	78.029	82.247	78.556
115	11.599	23.725	61.158	72.230	70.121
120	7.908	15.817	46.396	62.212	60.631
125	5.799	9.490	33.742	50.086	49.559
130	4.745	5.799	23.198	36.378	37.960
135	0.000	0.000	15.817	26.888	28.470
140	0.000	0.000	10.017	19.507	20.562
145	0.000	0.000	6.327	13.708	14.762
150	0.000	0.000	0.000	8.963	10.017
155	0.000	0.000	0.000	4.745	5.272
160	0.000	0.000	0.000	0.000	4.745
165	0.000	2.636	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	309.12	N.A.	6.20
0-30	684.02	N.A.	13.60
0-40	1191.29	N.A.	23.70
0-60	2668.89	N.A.	53.20
0-80	4344.31	N.A.	86.60
0-90	4692.27	N.A.	93.50
10-90	4614.49	N.A.	92.00
20-40	882.18	N.A.	17.60
20-50	1532.36	N.A.	30.50
40-70	2416.44	N.A.	48.20
60-80	1675.42	N.A.	33.40
70-80	736.57	N.A.	14.70
80-90	347.97	N.A.	6.90
90-110	229.71	N.A.	4.60
90-120	279.20	N.A.	5.60
90-130	306.66	N.A.	6.10
90-150	322.72	N.A.	6.40
90-180	323.79	N.A.	6.50
110-180	94.08	N.A.	1.90
0-180	5016.07	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	77.79
10-20	231.33
20-30	374.91
30-40	507.27
40-50	650.19
50-60	827.41
60-70	938.85
70-80	736.57
80-90	347.97
90-100	149.29
100-110	80.42
110-120	49.49
120-130	27.45
130-140	11.74
140-150	4.33
150-160	0.93
160-170	0.14
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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	103	96	90	85	99	93	88	83	88	83	79	83	79	76	78	75	72	69
2	91	80	72	64	87	78	70	63	73	66	60	69	63	58	64	60	56	53
3	81	68	58	50	78	66	57	49	62	54	47	58	51	46	55	49	44	41
4	73	59	48	40	70	57	47	40	54	45	38	50	43	37	47	41	36	33
5	67	52	41	33	64	50	40	33	47	38	32	44	37	31	42	35	30	27
6	61	46	36	28	58	44	35	28	42	33	27	39	32	26	37	30	25	23
7	56	41	31	24	54	40	30	24	38	29	23	35	28	23	33	27	22	20
8	52	37	28	21	50	36	27	21	34	26	20	32	25	20	31	24	19	17
9	48	34	25	19	47	33	24	18	31	23	18	30	22	17	28	22	17	15
10	45	31	22	17	44	30	22	16	29	21	16	27	20	16	26	20	15	13

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**UGR TABLE - CORRECTED**

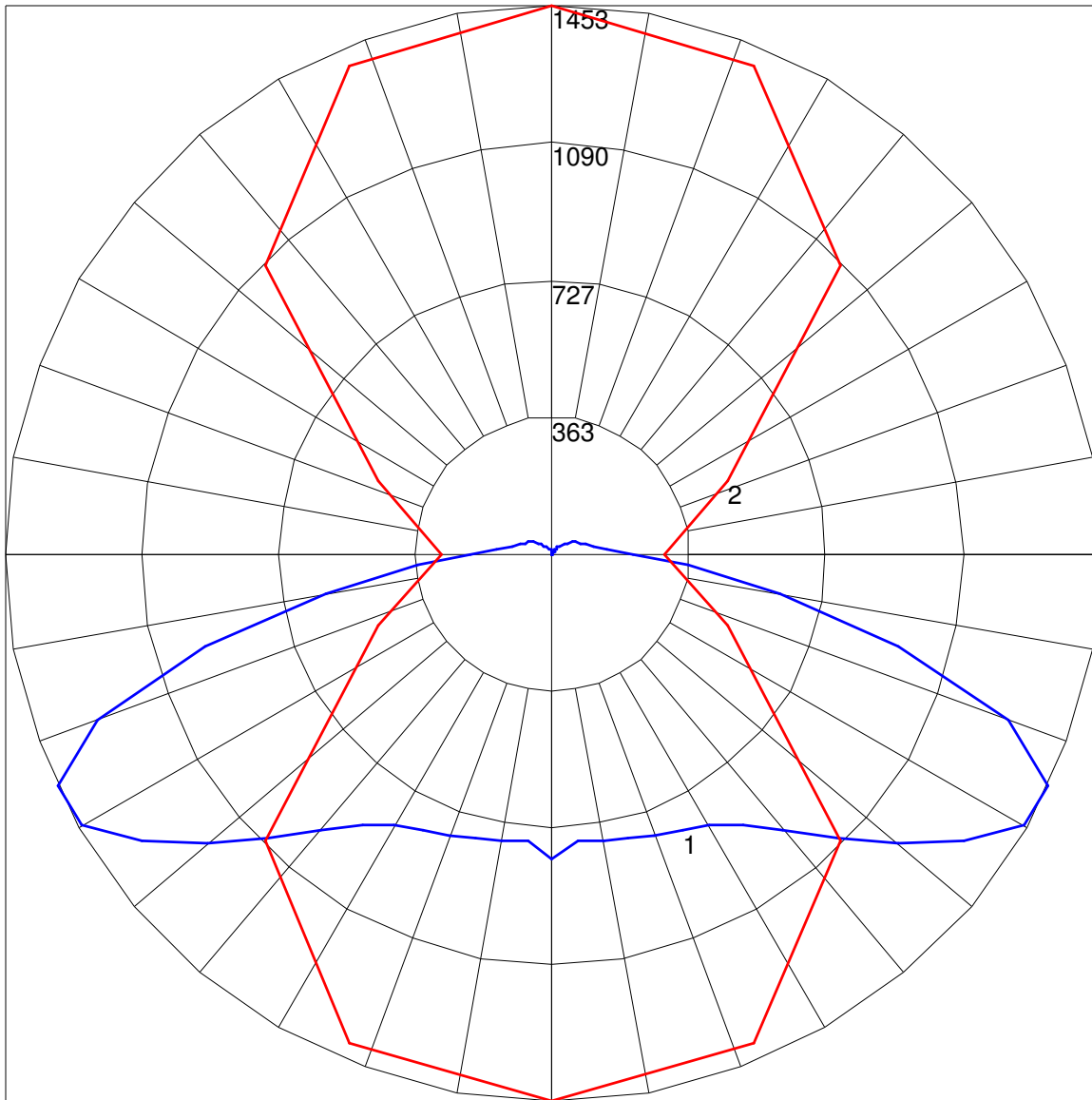
Reflectances

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	13.7	15.4	14.1	15.8	16.3	21.4	23.1	21.8	23.5	24.0
	3H	15.4	17.0	15.9	17.4	17.9	24.8	26.4	25.2	26.8	27.3
	4H	16.0	17.5	16.5	18.0	18.5	25.9	27.5	26.4	27.9	28.4
	6H	16.3	17.8	16.8	18.3	18.8	26.7	28.2	27.2	28.6	29.2
	8H	16.4	17.8	17.0	18.3	18.9	27.0	28.4	27.5	28.9	29.4
	12H	16.5	17.8	17.0	18.3	18.9	27.3	28.6	27.8	29.1	29.7
4H	2H	17.2	18.8	17.7	19.2	19.7	21.8	23.3	22.3	23.8	24.3
	3H	19.0	20.3	19.5	20.8	21.4	25.4	26.8	25.9	27.3	27.8
	4H	19.6	20.8	20.1	21.3	21.9	26.8	28.0	27.3	28.5	29.1
	6H	20.0	21.1	20.5	21.6	22.2	27.7	28.8	28.2	29.3	29.9
	8H	20.1	21.1	20.6	21.7	22.2	28.0	29.1	28.6	29.6	30.2
	12H	20.2	21.1	20.7	21.7	22.3	28.4	29.3	28.9	29.9	30.5
8H	4H	21.3	22.4	21.9	22.9	23.5	26.9	28.0	27.5	28.5	29.1
	6H	22.0	22.8	22.5	23.4	24.0	28.0	28.9	28.6	29.5	30.1
	8H	22.2	23.0	22.7	23.6	24.2	28.5	29.3	29.0	29.8	30.5
	12H	22.3	23.0	22.9	23.6	24.3	28.9	29.6	29.4	30.2	30.8
12H	4H	21.6	22.6	22.2	23.1	23.7	27.0	27.9	27.5	28.5	29.1
	6H	22.4	23.2	23.0	23.7	24.4	28.1	28.9	28.7	29.4	30.1
	8H	22.7	23.4	23.3	24.0	24.7	28.5	29.2	29.1	29.8	30.5

Maximum UGR = 30.8

POLAR GRAPH



Maximum Candela = 1453.027 Located At Horizontal Angle = 90, Vertical Angle = 65  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (65) (Through Max. Cd.)