

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 97-4-L50-835-FA-(L30)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 18138.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 03-27-2023

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4' SUSPENDED LED ENCLOSED/GASKETED LUMINAIRE

[MORE] RAW ALUM A-SHAPED HEATSINK w/BTM SPEC REFL & FROSTED ACRYLIC

[MORE] DROP LENS

[LUMCAT] 97-4-L50-835-FR-(L30)-DIM-UNV

[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2867
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	144
Total Luminaire Watts	19.9
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.36
Spacing Criterion (90-270)	5.24
Spacing Criterion (Diagonal)	4.38
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.25 ft
Luminous Width (90-270)	0.52 ft
Luminous Height	0.30 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	276	2963	3191
55	295	3133	3408
65	336	3404	3568
75	424	2879	3042
85	602	2902	3404

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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	56.596	56.596	56.596	56.596	56.596
5	59.697	60.472	62.023	60.085	59.697
10	58.146	61.247	57.759	57.759	58.146
15	60.085	60.085	63.573	236.849	274.838
20	50.006	50.006	254.293	479.513	492.693
25	51.169	52.332	432.608	576.811	569.446
30	48.455	137.613	570.609	560.530	612.474
35	50.006	232.585	520.603	652.789	688.065
40	45.354	370.198	566.733	676.048	715.587
45	42.641	471.760	625.654	710.935	729.542
50	41.478	400.822	639.997	770.245	796.992
55	37.989	372.524	609.373	672.559	731.868
60	36.051	372.524	588.053	700.081	725.666
65	33.337	431.446	585.339	683.025	693.492
70	31.011	370.198	539.985	589.603	602.783
75	28.298	284.142	415.165	485.715	511.300
80	23.646	218.242	357.794	452.766	481.839
85	19.382	160.096	325.232	427.181	465.170
90	12.792	115.905	269.024	368.648	399.271
95	2.326	38.764	224.057	334.535	372.912
100	0.000	14.343	62.023	261.658	296.934
105	0.000	19.382	21.708	44.191	61.635
110	0.000	10.854	17.832	25.972	31.011
115	0.000	5.815	20.157	21.708	25.197
120	0.000	4.652	15.506	20.545	19.770
125	0.000	0.000	9.691	21.320	24.421
130	0.000	0.000	8.140	15.118	17.832
135	0.000	0.000	8.140	9.691	11.242
140	0.000	0.000	6.590	8.528	8.916
145	0.000	0.000	0.000	8.528	9.691
150	0.000	0.000	0.000	6.978	7.365
155	0.000	0.000	0.000	6.590	6.590
160	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	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	49.60	N.A.	1.70
0-30	207.25	N.A.	7.20
0-40	488.65	N.A.	17.00
0-60	1373.94	N.A.	47.90
0-80	2265.84	N.A.	79.00
0-90	2576.07	N.A.	89.90
10-90	2570.41	N.A.	89.70
20-40	439.05	N.A.	15.30
20-50	856.43	N.A.	29.90
40-70	1380.36	N.A.	48.10
60-80	891.90	N.A.	31.10
70-80	396.82	N.A.	13.80
80-90	310.24	N.A.	10.80
90-110	258.27	N.A.	9.00
90-120	273.27	N.A.	9.50
90-130	282.79	N.A.	9.90
90-150	289.85	N.A.	10.10
90-180	290.76	N.A.	10.10
110-180	32.48	N.A.	1.10
0-180	2866.83	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	5.67
10-20	43.93
20-30	157.65
30-40	281.40
40-50	417.38
50-60	467.92
60-70	495.07
70-80	396.82
80-90	310.24
90-100	205.79
100-110	52.48
110-120	15.00
120-130	9.52
130-140	4.80
140-150	2.26
150-160	0.91
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	117	117	117	117	113	113	113	113	105	105	105	99	99	99	93	93	93	90
1	101	93	87	81	97	90	84	79	84	79	74	78	74	70	72	69	66	63
2	89	77	68	60	85	74	66	59	69	62	56	64	58	53	59	54	50	47
3	79	65	55	46	75	63	53	45	58	50	43	54	47	41	50	44	39	36
4	71	56	45	37	67	54	44	36	50	41	34	46	39	32	42	36	31	28
5	64	48	38	30	61	47	37	29	43	34	28	40	32	26	37	30	25	22
6	58	43	32	24	55	41	31	24	38	29	23	35	28	22	33	26	21	18
7	53	38	28	21	51	36	27	20	34	25	19	31	24	18	29	22	17	15
8	49	34	24	17	47	33	23	17	30	22	16	28	21	16	26	20	15	12
9	46	30	21	15	44	29	21	15	27	20	14	26	18	13	24	17	13	11
10	42	28	19	13	41	27	18	13	25	17	12	23	16	12	22	16	11	9

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UGR TABLE - CORRECTED

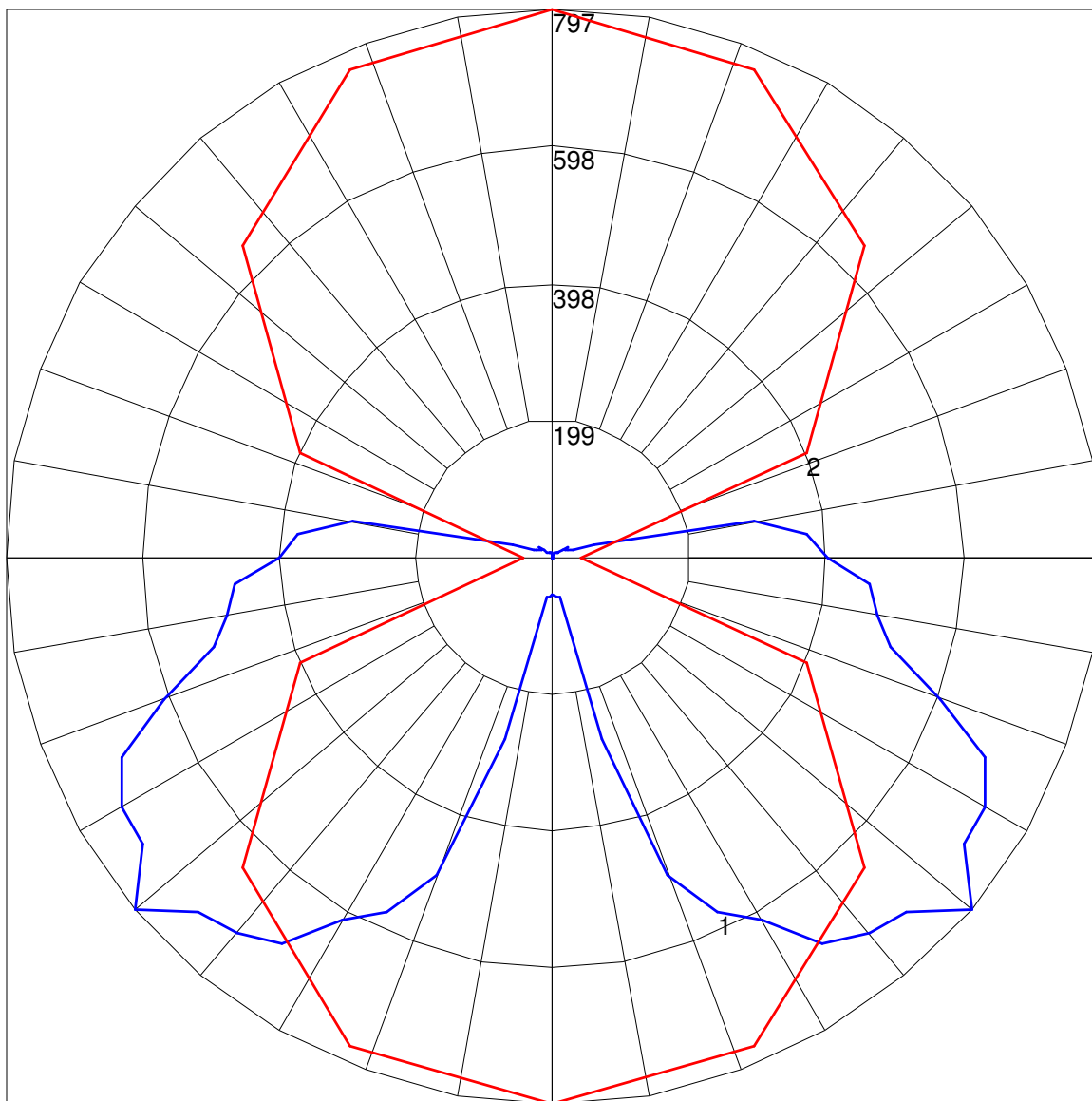
Reflectances

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	11.4	13.1	11.9	13.6	14.2	18.1	19.8	18.6	20.3	20.8
	3H	13.1	14.6	13.6	15.1	15.7	21.1	22.6	21.6	23.1	23.7
	4H	13.4	14.9	13.9	15.5	16.1	22.3	23.8	22.8	24.3	24.9
	6H	13.6	15.0	14.2	15.6	16.2	23.7	25.1	24.2	25.7	26.3
	8H	13.7	15.0	14.2	15.6	16.2	24.5	25.8	25.0	26.4	27.0
	12H	13.7	15.0	14.3	15.6	16.2	25.4	26.7	25.9	27.2	27.9
4H	2H	14.5	16.0	15.0	16.6	17.2	18.6	20.1	19.1	20.6	21.2
	3H	16.5	17.8	17.1	18.4	19.0	21.8	23.1	22.3	23.6	24.3
	4H	17.2	18.4	17.7	18.9	19.6	23.1	24.4	23.7	24.9	25.6
	6H	17.5	18.6	18.1	19.2	19.9	24.7	25.8	25.3	26.4	27.1
	8H	17.6	18.6	18.2	19.2	19.9	25.6	26.6	26.2	27.3	27.9
	12H	17.7	18.6	18.3	19.2	19.9	26.6	27.6	27.2	28.2	28.9
8H	4H	18.6	19.6	19.2	20.2	20.9	23.4	24.4	24.0	25.0	25.7
	6H	19.3	20.2	19.9	20.8	21.5	25.1	26.0	25.7	26.7	27.3
	8H	19.5	20.3	20.2	21.0	21.7	26.2	27.0	26.8	27.6	28.3
	12H	19.7	20.4	20.3	21.1	21.8	27.4	28.1	28.0	28.8	29.5
12H	4H	19.0	19.9	19.6	20.5	21.2	23.4	24.3	24.0	25.0	25.6
	6H	19.9	20.7	20.5	21.3	22.0	25.2	26.0	25.8	26.6	27.4
	8H	20.2	21.0	20.9	21.6	22.4	26.3	27.0	26.9	27.7	28.4

Maximum UGR = 29.5

POLAR GRAPH



Maximum Candela = 796.992 Located At Horizontal Angle = 90, Vertical Angle = 50

1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)

2 - Horizontal Cone Through Vertical Angle (50) (Through Max. Cd.)