



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 18-4-L90-840-A-(L80)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 18321.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 02 SEPTEMBER 2021

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS INC - CARTHAGE, MO 64836

[LUMINAIRE] 4' SURFACE MOUNT WRAP LED LUMINAIRE

[MORE] WITH FROSTED PRISMATIC ACRYLIC DIFFUSER

[LUMCAT] 18-4-L90-840-A-(L80)-DIM-UNV

[LAMPCAT] HLM 80 CRI, 4000K CCT

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] INDOOR, CLASSROOM, COMMERCIAL, INDUSTRIAL, MANUFACTURING, OFFICE, DIRECT

[_SEARCH_MOUNTING] PENDANT, SURFACE, SUSPENDED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8239
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	153
Total Luminaire Watts	53.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	1.38 ft
Luminous Height	0.15 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5754	5117	4812
55	4154	3561	3165
65	2553	2184	2283
75	1872	1655	1827
85	1362	1566	2358

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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	3457.138	3457.138	3457.138	3457.138	3457.138
5	3381.078	3396.471	3432.690	3417.297	3400.093
10	3346.669	3343.047	3329.465	3321.316	3296.868
15	3222.618	3224.429	3236.200	3217.185	3201.792
20	3104.905	3112.149	3079.551	3110.338	3115.771
25	2927.430	2941.012	2951.878	2910.226	2906.604
30	2827.827	2770.781	2767.159	2768.970	2759.915
35	2643.108	2577.008	2574.291	2548.032	2532.639
40	2435.752	2365.124	2361.502	2320.756	2311.701
45	2156.863	2094.385	2037.339	1949.507	1925.059
50	1745.773	1709.554	1608.140	1595.463	1540.228
55	1282.165	1280.354	1195.239	1133.666	1069.377
60	865.643	861.115	814.030	776.000	766.040
65	594.903	584.943	574.077	574.077	605.769
70	402.035	394.791	413.806	434.632	470.852
75	281.606	267.118	301.526	320.541	337.746
80	182.908	192.868	229.087	272.551	324.163
85	86.021	114.091	150.310	230.898	232.709
90	3.622	22.637	74.250	131.295	160.271
95	0.000	17.204	74.250	101.414	101.414
100	0.000	22.637	65.195	68.817	79.683
105	1.811	24.448	46.180	60.667	65.195
110	9.960	28.975	47.991	58.856	65.195
115	11.771	28.975	47.991	58.856	60.667
120	11.771	30.786	51.613	65.195	67.006
125	15.393	32.597	51.613	60.667	67.006
130	22.637	38.030	58.856	72.439	72.439
135	22.637	36.219	58.856	68.817	74.250
140	22.637	36.219	53.424	68.817	72.439
145	24.448	36.219	51.613	60.667	67.006
150	30.786	36.219	46.180	53.424	53.424
155	30.786	36.219	46.180	47.991	46.180
160	30.786	32.597	38.030	39.841	38.030
165	32.597	32.597	36.219	38.030	38.030
170	32.597	32.597	32.597	32.597	32.597
175	30.786	36.219	36.219	32.597	32.597
180	34.408	34.408	34.408	34.408	34.408

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1233.07	N.A.	15.00
0-30	2587.84	N.A.	31.40
0-40	4197.27	N.A.	50.90
0-60	6832.62	N.A.	82.90
0-80	7758.74	N.A.	94.20
0-90	7933.65	N.A.	96.30
10-90	7610.52	N.A.	92.40
20-40	2964.19	N.A.	36.00
20-50	4517.76	N.A.	54.80
40-70	3229.76	N.A.	39.20
60-80	926.12	N.A.	11.20
70-80	331.71	N.A.	4.00
80-90	174.92	N.A.	2.10
90-110	114.06	N.A.	1.40
90-120	157.75	N.A.	1.90
90-130	201.21	N.A.	2.40
90-150	272.65	N.A.	3.30
90-180	305.01	N.A.	3.70
110-180	190.95	N.A.	2.30
0-180	8238.67	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	323.13
10-20	909.94
20-30	1354.77
30-40	1609.43
40-50	1553.57
50-60	1081.79
60-70	594.40
70-80	331.71
80-90	174.92
90-100	67.80
100-110	46.27
110-120	43.69
120-130	43.46
130-140	41.05
140-150	30.39
150-160	19.20
160-170	9.96
170-180	3.21

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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	115	115	115	115	109	109	109	104	104	104	99	99	99	96
1	109	104	101	97	106	102	98	95	97	94	91	92	90	88	88	86	85	82
2	100	92	86	81	97	90	85	80	86	81	77	82	79	75	79	76	73	71
3	92	82	75	69	89	80	74	68	77	71	66	74	69	65	71	67	63	61
4	85	74	65	59	82	72	65	59	69	63	57	66	61	56	64	59	55	53
5	78	66	58	52	76	65	57	51	62	56	50	60	54	50	58	53	49	47
6	73	60	52	46	70	59	51	45	57	50	45	55	49	44	53	48	43	41
7	67	55	46	41	66	54	46	40	52	45	40	50	44	39	49	43	39	37
8	63	50	42	36	61	49	42	36	48	41	36	46	40	35	45	39	35	33
9	59	46	38	33	57	45	38	33	44	37	32	43	36	32	41	36	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	33	29	38	33	29	27

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UGR TABLE - CORRECTED

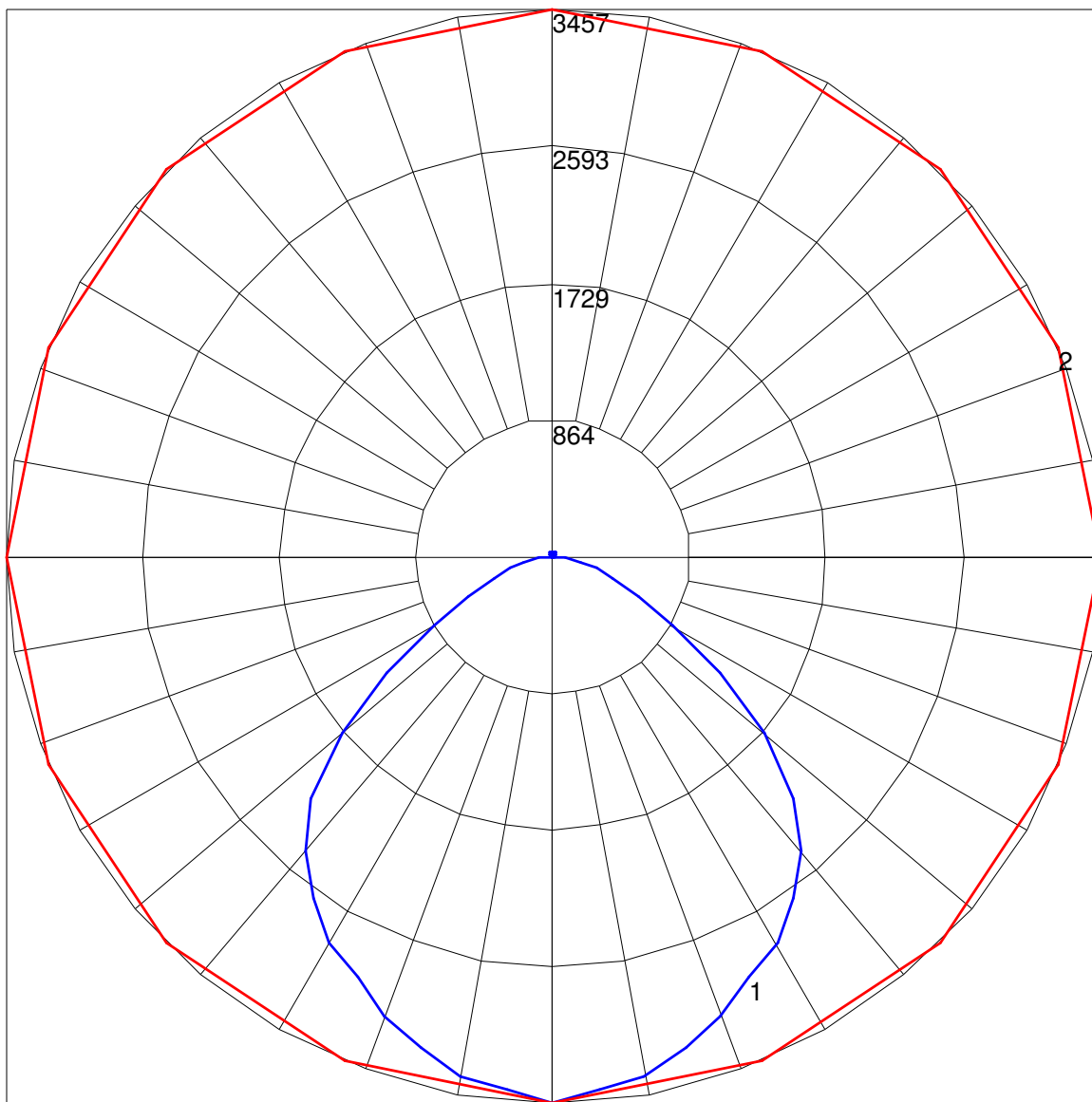
Reflectances

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	15.4	16.8	15.8	17.2	17.7	14.8	16.2	15.2	16.6	17.0
	3H	16.2	17.5	16.7	18.0	18.4	16.1	17.4	16.5	17.8	18.2
	4H	16.5	17.8	17.0	18.2	18.7	16.6	17.8	17.1	18.3	18.8
	6H	16.8	17.9	17.3	18.4	18.8	17.4	18.5	17.9	18.9	19.4
	8H	16.9	17.9	17.4	18.4	18.9	17.8	18.8	18.3	19.3	19.8
	12H	16.9	17.9	17.4	18.4	18.9	18.2	19.2	18.7	19.7	20.2
4H	2H	15.7	16.9	16.1	17.3	17.8	15.1	16.3	15.6	16.8	17.2
	3H	16.7	17.7	17.2	18.2	18.7	16.6	17.6	17.1	18.1	18.6
	4H	17.1	18.0	17.6	18.5	19.0	17.3	18.2	17.8	18.7	19.2
	6H	17.5	18.3	18.0	18.8	19.3	18.3	19.0	18.8	19.5	20.1
	8H	17.6	18.3	18.1	18.8	19.4	18.8	19.5	19.3	20.0	20.6
	12H	17.7	18.3	18.2	18.9	19.4	19.3	20.0	19.9	20.5	21.1
8H	4H	17.3	18.0	17.8	18.5	19.1	17.5	18.2	18.0	18.7	19.3
	6H	17.8	18.4	18.3	19.0	19.5	18.6	19.2	19.1	19.8	20.3
	8H	18.0	18.5	18.6	19.1	19.7	19.2	19.8	19.8	20.4	20.9
	12H	18.1	18.6	18.7	19.2	19.8	20.0	20.5	20.5	21.0	21.7
12H	4H	17.3	18.0	17.9	18.5	19.1	17.5	18.2	18.0	18.7	19.3
	6H	17.9	18.4	18.5	19.0	19.6	18.6	19.2	19.2	19.7	20.3
	8H	18.1	18.6	18.7	19.2	19.8	19.3	19.8	19.9	20.4	21.0

Maximum UGR = 21.7

POLAR GRAPH



Maximum Candela = 3457.138 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)