



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 18-4-L90-835-AF-(L70)-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] 04-14-2022

[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-L90-835-A-(L70)-DIM-UNV

[LAMPCAT] HLM 80 CRI, 3500K 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	7023
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	156
Total Luminaire Watts	45
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	4905	4362	4102
55	3541	3036	2698
65	2176	1861	1946
75	1596	1411	1558
85	1161	1335	2010

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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	2946.897	2946.897	2946.897	2946.897	2946.897
5	2882.062	2895.183	2926.057	2912.936	2898.271
10	2852.732	2849.645	2838.067	2831.120	2810.281
15	2746.990	2748.533	2758.567	2742.358	2729.237
20	2646.650	2652.825	2625.038	2651.281	2655.912
25	2495.369	2506.946	2516.208	2480.704	2477.616
30	2410.466	2361.840	2358.752	2360.296	2352.578
35	2253.010	2196.665	2194.350	2171.966	2158.845
40	2076.258	2016.054	2012.967	1978.234	1970.515
45	1838.530	1785.273	1736.647	1661.778	1640.938
50	1488.113	1457.240	1370.793	1359.987	1312.905
55	1092.930	1091.386	1018.833	966.348	911.547
60	737.882	734.023	693.887	661.470	652.979
65	507.101	498.611	489.349	489.349	516.363
70	342.698	336.524	352.732	370.485	401.358
75	240.043	227.694	257.024	273.232	287.897
80	155.912	164.403	195.276	232.325	276.320
85	73.325	97.252	128.126	196.820	198.364
90	3.087	19.296	63.291	111.917	136.616
95	0.000	14.665	63.291	86.446	86.446
100	0.000	19.296	55.573	58.660	67.922
105	1.544	20.840	39.364	51.713	55.573
110	8.490	24.699	40.908	50.170	55.573
115	10.034	24.699	40.908	50.170	51.713
120	10.034	26.243	43.995	55.573	57.116
125	13.121	27.786	43.995	51.713	57.116
130	19.296	32.417	50.170	61.747	61.747
135	19.296	30.874	50.170	58.660	63.291
140	19.296	30.874	45.539	58.660	61.747
145	20.840	30.874	43.995	51.713	57.116
150	26.243	30.874	39.364	45.539	45.539
155	26.243	30.874	39.364	40.908	39.364
160	26.243	27.786	32.417	33.961	32.417
165	27.786	27.786	30.874	32.417	32.417
170	27.786	27.786	27.786	27.786	27.786
175	26.243	30.874	30.874	27.786	27.786
180	29.330	29.330	29.330	29.330	29.330

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1051.08	N.A.	15.00
0-30	2205.9	N.A.	31.40
0-40	3577.79	N.A.	50.90
0-60	5824.19	N.A.	82.90
0-80	6613.62	N.A.	94.20
0-90	6762.72	N.A.	96.30
10-90	6487.28	N.A.	92.40
20-40	2526.71	N.A.	36.00
20-50	3850.98	N.A.	54.80
40-70	2753.08	N.A.	39.20
60-80	789.43	N.A.	11.20
70-80	282.76	N.A.	4.00
80-90	149.10	N.A.	2.10
90-110	97.23	N.A.	1.40
90-120	134.47	N.A.	1.90
90-130	171.51	N.A.	2.40
90-150	232.41	N.A.	3.30
90-180	260.00	N.A.	3.70
110-180	162.77	N.A.	2.30
0-180	7022.72	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	275.44
10-20	775.64
20-30	1154.81
30-40	1371.89
40-50	1324.27
50-60	922.13
60-70	506.68
70-80	282.76
80-90	149.10
90-100	57.79
100-110	39.44
110-120	37.24
120-130	37.05
130-140	34.99
140-150	25.91
150-160	16.37
160-170	8.49
170-180	2.74

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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

X=2H	Y=2H	14.9	16.3	15.3	16.7	17.2	14.3	15.7	14.7	16.1	16.5
	3H	15.7	17.0	16.2	17.5	17.9	15.6	16.9	16.0	17.3	17.7
	4H	16.0	17.3	16.5	17.7	18.2	16.1	17.3	16.6	17.8	18.3
	6H	16.3	17.4	16.8	17.9	18.3	16.9	18.0	17.4	18.4	18.9
	8H	16.4	17.4	16.9	17.9	18.4	17.3	18.3	17.8	18.8	19.3
	12H	16.4	17.4	16.9	17.9	18.4	17.7	18.7	18.2	19.2	19.7

UGR Viewed Endwise

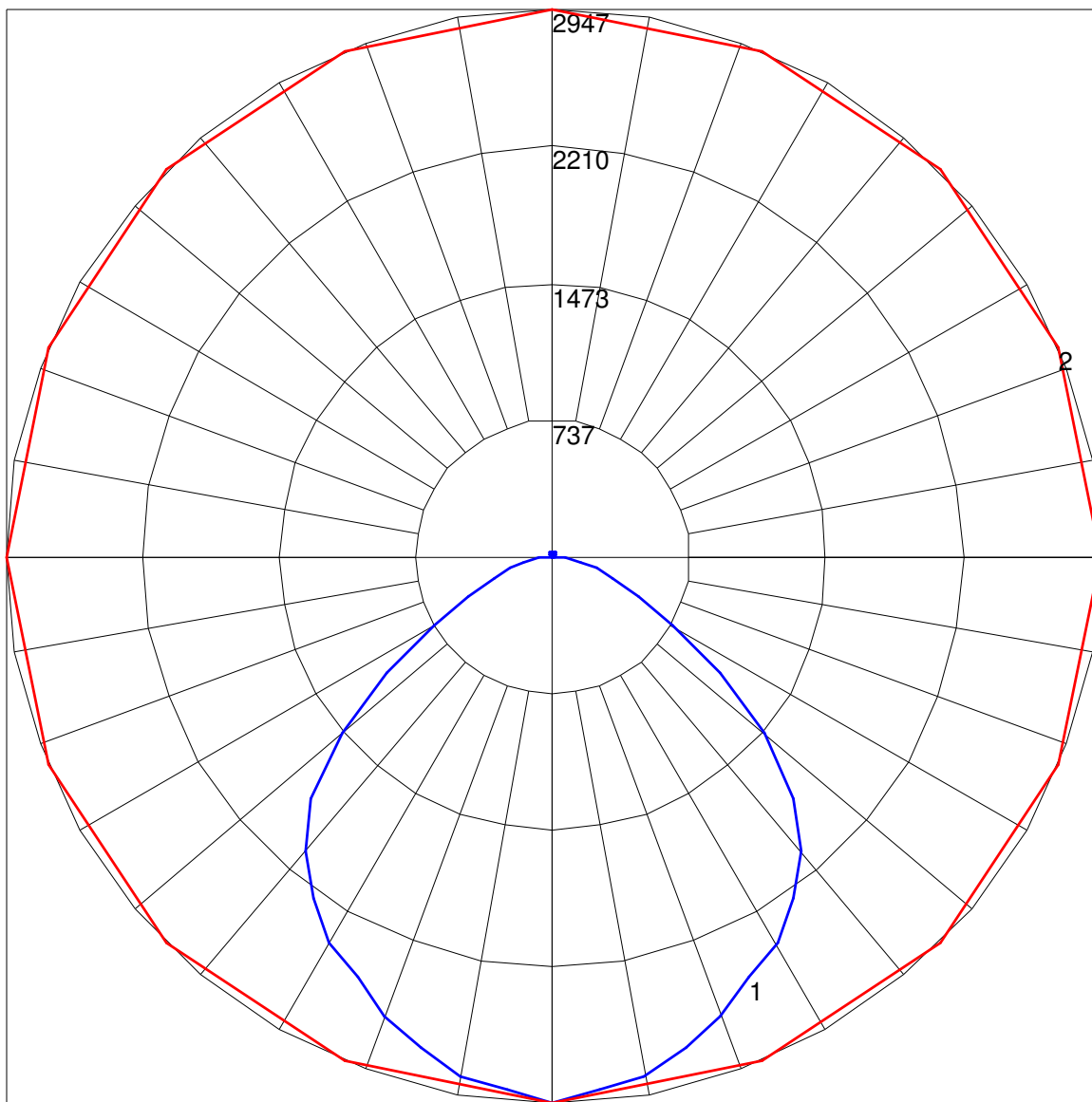
4H	2H	15.2	16.4	15.6	16.8	17.3	14.6	15.8	15.1	16.3	16.7
	3H	16.2	17.2	16.7	17.7	18.2	16.1	17.1	16.6	17.6	18.1
	4H	16.6	17.5	17.1	18.0	18.5	16.8	17.7	17.3	18.2	18.7
	6H	17.0	17.8	17.5	18.3	18.8	17.8	18.5	18.3	19.0	19.6
	8H	17.1	17.8	17.6	18.3	18.9	18.3	19.0	18.8	19.5	20.1
	12H	17.2	17.8	17.7	18.4	18.9	18.8	19.5	19.4	20.0	20.6

8H	4H	16.8	17.5	17.3	18.0	18.6	17.0	17.7	17.5	18.2	18.8
	6H	17.3	17.9	17.8	18.5	19.0	18.1	18.7	18.6	19.3	19.8
	8H	17.5	18.0	18.1	18.6	19.2	18.7	19.3	19.3	19.9	20.4
	12H	17.6	18.1	18.2	18.7	19.3	19.5	20.0	20.0	20.5	21.2

12H	4H	16.8	17.5	17.4	18.0	18.6	17.0	17.7	17.5	18.2	18.8
	6H	17.4	17.9	18.0	18.5	19.1	18.1	18.7	18.7	19.2	19.8
	8H	17.6	18.1	18.2	18.7	19.3	18.8	19.3	19.4	19.9	20.5

Maximum UGR = 21.2

POLAR GRAPH



Maximum Candela = 2946.897 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.)