



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 17-8-L110-835-AF-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 20112.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 12-NOV-2019

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 8-28 LED 22"ARRAYS 8' NARROW LOW PROFILE WRAP LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED PRISMATIC ACRYLIC DIFFUSER

[LUMCAT] 17-8-L110-835-AF-DIM-UNV

[_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	11065
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
Total Luminaire Watts	78.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	8.00 ft
Luminous Width (90-270)	0.88 ft
Luminous Height	0.15 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5060	4684	4715
55	4219	3997	4115
65	3342	3263	3445
75	2573	2534	2863
85	1373	1704	2272

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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	3964.256	3964.256	3964.256	3964.256	3964.256
5	4009.371	3958.372	3926.987	3917.179	3911.295
10	3946.602	3895.603	3866.180	3860.295	3842.641
15	3854.410	3809.295	3779.872	3773.988	3762.218
20	3715.142	3670.026	3642.565	3660.219	3638.642
25	3534.681	3503.296	3473.873	3503.296	3483.681
30	3313.028	3293.412	3269.874	3301.258	3299.297
35	3042.336	3050.182	3018.798	3075.682	3085.490
40	2718.683	2732.414	2726.529	2803.029	2826.568
45	2371.492	2391.108	2438.184	2493.107	2532.338
50	1990.955	2014.493	2114.531	2157.685	2208.685
55	1616.302	1645.725	1771.263	1843.840	1902.686
60	1267.150	1310.303	1447.611	1522.149	1596.687
65	955.266	1016.074	1149.458	1227.919	1286.765
70	690.459	753.228	876.805	968.997	1012.151
75	462.922	515.883	635.536	747.344	782.651
80	266.768	321.691	429.576	539.421	572.767
85	94.154	147.115	241.268	366.806	374.653
90	0.000	45.115	133.384	231.461	254.999
95	0.000	45.115	129.461	211.845	241.268
100	0.000	47.077	127.500	202.038	225.576
105	0.000	45.115	125.538	188.307	209.884
110	0.000	51.000	121.615	180.461	198.115
115	0.000	47.077	115.730	170.653	188.307
120	0.000	52.961	109.846	156.923	174.576
125	0.000	47.077	100.038	143.192	158.884
130	0.000	45.115	88.269	125.538	141.230
135	0.000	43.154	82.384	111.807	123.577
140	0.000	41.192	72.577	100.038	111.807
145	0.000	0.000	62.769	90.230	98.077
150	0.000	0.000	56.884	72.577	84.346
155	0.000	0.000	51.000	66.692	62.769
160	0.000	0.000	45.115	54.923	54.923
165	0.000	0.000	0.000	43.154	51.000
170	0.000	0.000	0.000	0.000	43.154
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	1443.77	N.A.	13.00
0-30	3053.99	N.A.	27.60
0-40	4957.8	N.A.	44.80
0-60	8411.7	N.A.	76.00
0-80	10210.73	N.A.	92.30
0-90	10498.68	N.A.	94.90
10-90	10124.43	N.A.	91.50
20-40	3514.03	N.A.	31.80
20-50	5394.68	N.A.	48.80
40-70	4579.6	N.A.	41.40
60-80	1799.03	N.A.	16.30
70-80	673.33	N.A.	6.10
80-90	287.95	N.A.	2.60
90-110	262.82	N.A.	2.40
90-120	369.23	N.A.	3.30
90-130	452.13	N.A.	4.10
90-150	543.65	N.A.	4.90
90-180	566.63	N.A.	5.10
110-180	303.81	N.A.	2.70
0-180	11065.3	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	374.24
10-20	1069.52
20-30	1610.23
30-40	1903.81
40-50	1880.65
50-60	1573.25
60-70	1125.7
70-80	673.33
80-90	287.95
90-100	139.19
100-110	123.63
110-120	106.41
120-130	82.90
130-140	58.09
140-150	33.43
150-160	17.40
160-170	5.38
170-180	0.19

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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	219	219	219	219	213	213	213	213	201	201	201	191	191	191	181	181	181	177
1	200	191	183	176	194	186	179	172	176	171	165	168	163	158	159	156	152	148
2	182	167	155	144	177	163	152	142	155	145	137	147	139	133	140	134	128	124
3	167	147	133	121	161	144	130	119	137	125	116	131	121	112	125	116	109	105
4	153	131	115	103	148	128	113	102	122	109	99	117	106	97	112	102	94	90
5	141	117	101	89	136	115	99	88	110	96	86	105	93	84	101	91	83	78
6	130	106	90	78	126	104	88	77	99	86	76	95	83	74	92	81	73	69
7	121	96	80	69	117	94	79	68	90	77	67	87	75	66	84	73	65	61
8	113	88	72	62	109	86	71	61	83	70	60	80	68	59	77	66	58	55
9	105	81	66	55	102	79	65	55	76	63	54	74	62	54	71	61	53	49
10	99	74	60	50	96	73	59	50	71	58	49	68	57	49	66	56	48	45

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UGR TABLE - CORRECTED

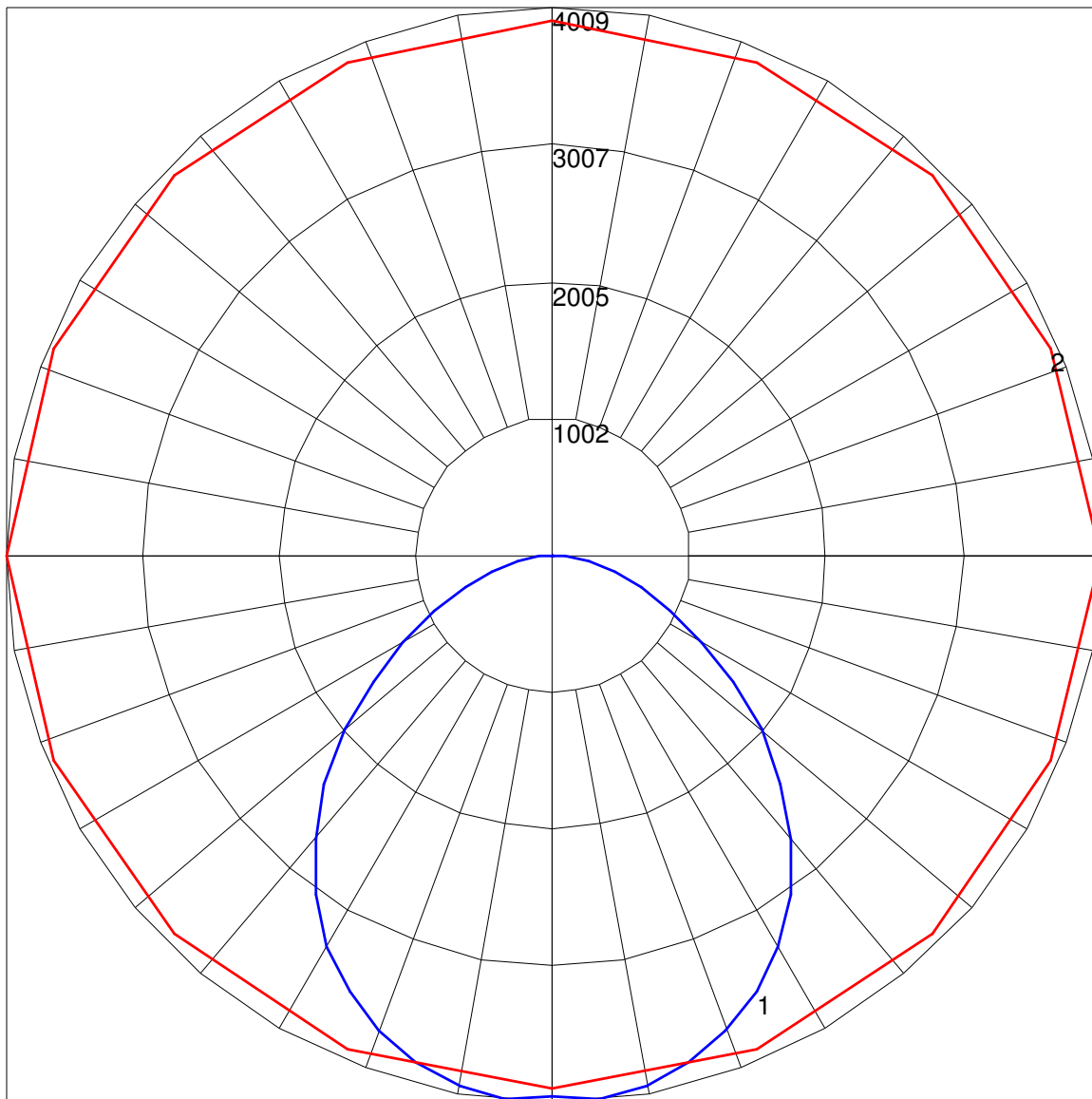
Reflectances

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	16.1	17.6	16.5	18.0	18.4	17.1	18.6	17.5	19.0	19.4
	3H	17.5	18.8	17.9	19.2	19.7	18.9	20.2	19.3	20.6	21.1
	4H	17.9	19.2	18.4	19.7	20.2	19.6	20.9	20.1	21.4	21.9
	6H	18.3	19.4	18.8	19.9	20.4	20.4	21.5	20.8	22.0	22.5
	8H	18.3	19.5	18.9	20.0	20.5	20.7	21.8	21.2	22.3	22.8
	12H	18.4	19.5	18.9	20.0	20.5	21.0	22.0	21.5	22.5	23.1
4H	2H	16.7	17.9	17.1	18.4	18.9	17.5	18.7	18.0	19.2	19.7
	3H	18.3	19.3	18.8	19.8	20.4	19.5	20.6	20.0	21.1	21.6
	4H	18.8	19.8	19.4	20.3	20.9	20.4	21.4	20.9	21.9	22.4
	6H	19.3	20.1	19.8	20.7	21.2	21.3	22.1	21.8	22.7	23.2
	8H	19.4	20.2	19.9	20.7	21.3	21.7	22.5	22.2	23.0	23.6
	12H	19.5	20.2	20.0	20.8	21.3	22.1	22.8	22.6	23.4	23.9
8H	4H	19.2	20.0	19.7	20.5	21.1	20.6	21.4	21.1	21.9	22.5
	6H	19.7	20.4	20.3	21.0	21.6	21.6	22.3	22.2	22.8	23.4
	8H	19.9	20.5	20.5	21.1	21.7	22.1	22.7	22.7	23.3	23.9
	12H	20.0	20.6	20.6	21.1	21.8	22.6	23.2	23.2	23.7	24.4
12H	4H	19.2	19.9	19.8	20.5	21.1	20.6	21.3	21.2	21.9	22.5
	6H	19.8	20.4	20.4	21.0	21.6	21.6	22.2	22.2	22.8	23.4
	8H	20.0	20.6	20.6	21.2	21.8	22.2	22.7	22.8	23.3	24.0

Maximum UGR = 24.4

POLAR GRAPH



Maximum Candela = 4009.371 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)