



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 17-4-L55-840-AF-(L28)-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] 10/20/2022

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4' NARROW LOW PROFILE WRAP LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED PRISMATIC ACRYLIC DIFFUSER

[LUMCAT] 17-4-L55-840-AF-(L28)-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	2890
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	145
Total Luminaire Watts	20
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)	4.00 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	2597	2419	2463
55	2149	2056	2150
65	1682	1668	1799
75	1263	1282	1495
85	612	840	1187

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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	1035.400	1035.400	1035.400	1035.400	1035.400
5	1047.183	1033.863	1025.666	1023.104	1021.567
10	1030.789	1017.469	1009.784	1008.247	1003.636
15	1006.710	994.926	987.242	985.705	982.631
20	970.335	958.552	951.379	955.990	950.355
25	923.202	915.004	907.320	915.004	909.881
30	865.309	860.186	854.038	862.235	861.723
35	794.609	796.658	788.461	803.319	805.880
40	710.076	713.662	712.126	732.106	738.254
45	619.396	624.519	636.814	651.159	661.406
50	520.005	526.153	552.282	563.553	576.873
55	422.152	429.837	462.625	481.581	496.951
60	330.959	342.230	378.093	397.561	417.029
65	249.500	265.382	300.220	320.713	336.082
70	180.337	196.731	229.007	253.086	264.357
75	120.908	134.740	165.992	195.194	204.416
80	69.676	84.021	112.198	140.888	149.598
85	24.591	38.424	63.015	95.804	97.853
90	0.000	11.783	34.838	60.454	66.602
95	0.000	11.783	33.813	55.331	63.015
100	0.000	12.296	33.301	52.769	58.917
105	0.000	11.783	32.789	49.183	54.818
110	0.000	13.320	31.764	47.133	51.744
115	0.000	12.296	30.227	44.572	49.183
120	0.000	13.833	28.690	40.986	45.597
125	0.000	12.296	26.128	37.399	41.498
130	0.000	11.783	23.054	32.789	36.887
135	0.000	11.271	21.517	29.202	32.276
140	0.000	10.759	18.956	26.128	29.202
145	0.000	0.000	16.394	23.567	25.616
150	0.000	0.000	14.857	18.956	22.030
155	0.000	0.000	13.320	17.419	16.394
160	0.000	0.000	11.783	14.345	14.345
165	0.000	0.000	0.000	11.271	13.320
170	0.000	0.000	0.000	0.000	11.271
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	377.09	N.A.	13.00
0-30	797.65	N.A.	27.60
0-40	1294.9	N.A.	44.80
0-60	2197.00	N.A.	76.00
0-80	2666.88	N.A.	92.30
0-90	2742.09	N.A.	94.90
10-90	2644.34	N.A.	91.50
20-40	917.81	N.A.	31.80
20-50	1409.00	N.A.	48.80
40-70	1196.12	N.A.	41.40
60-80	469.88	N.A.	16.30
70-80	175.86	N.A.	6.10
80-90	75.21	N.A.	2.60
90-110	68.64	N.A.	2.40
90-120	96.44	N.A.	3.30
90-130	118.09	N.A.	4.10
90-150	141.99	N.A.	4.90
90-180	147.99	N.A.	5.10
110-180	79.35	N.A.	2.70
0-180	2890.08	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	97.75
10-20	279.34
20-30	420.57
30-40	497.24
40-50	491.20
50-60	410.91
60-70	294.02
70-80	175.86
80-90	75.21
90-100	36.35
100-110	32.29
110-120	27.79
120-130	21.65
130-140	15.17
140-150	8.73
150-160	4.54
160-170	1.41
170-180	0.05

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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	103	103	103	97	97	97	95
1	108	103	99	95	104	100	96	93	95	92	89	90	88	85	86	84	82	79
2	98	90	83	78	95	88	81	76	83	78	74	79	75	71	75	72	69	67
3	90	79	71	65	87	77	70	64	74	67	62	70	65	60	67	63	59	56
4	82	70	62	55	79	69	61	55	66	59	53	63	57	52	60	55	51	48
5	76	63	54	48	73	62	53	47	59	52	46	56	50	45	54	49	44	42
6	70	57	48	42	68	56	47	41	53	46	41	51	45	40	49	44	39	37
7	65	52	43	37	63	51	42	37	49	41	36	47	40	35	45	39	35	33
8	60	47	39	33	59	46	38	33	45	37	32	43	37	32	41	36	31	29
9	57	43	35	30	55	43	35	30	41	34	29	40	33	29	38	33	28	27
10	53	40	32	27	51	39	32	27	38	31	27	37	31	26	36	30	26	24

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UGR TABLE - CORRECTED

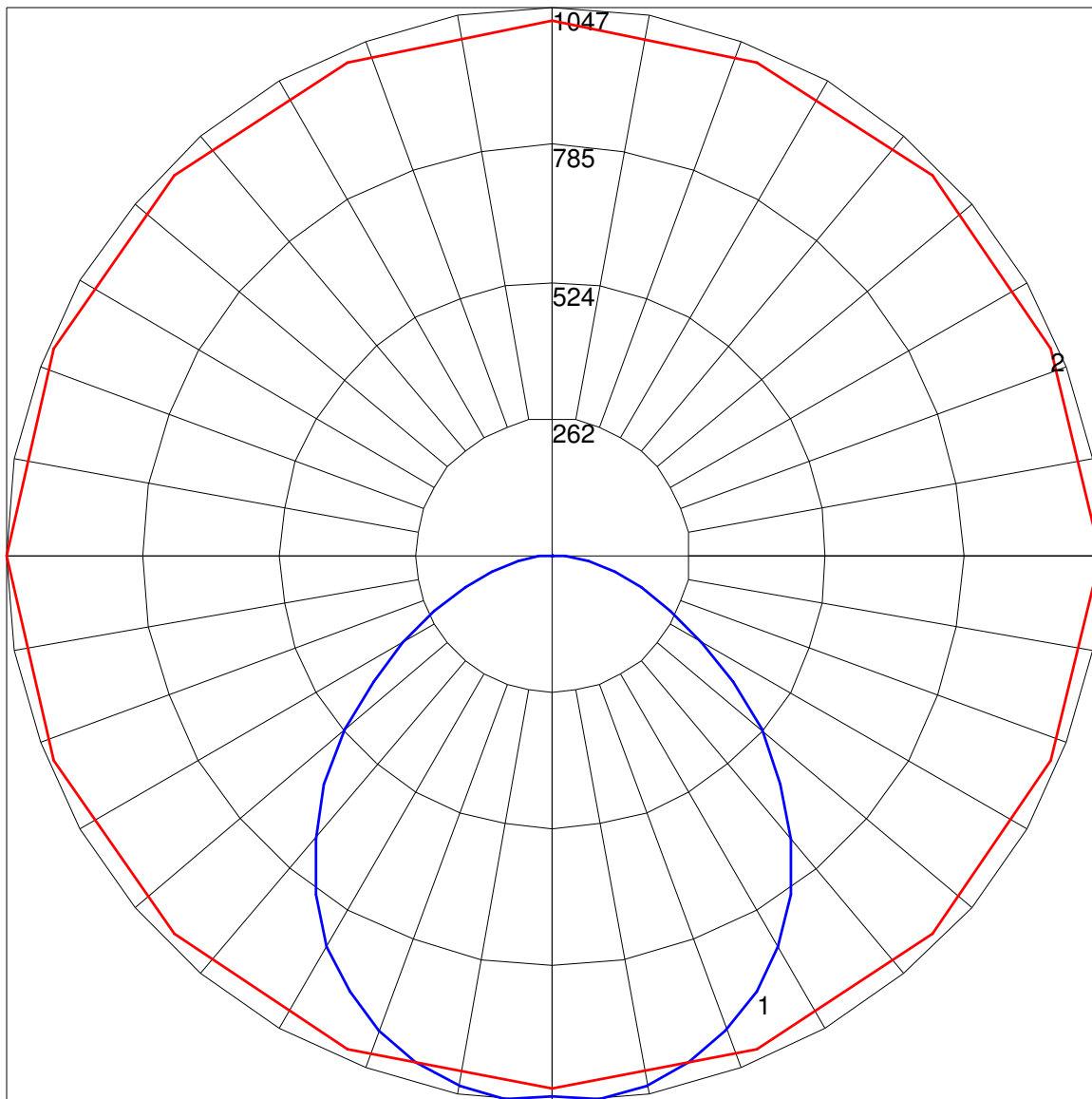
Reflectances

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	13.2	14.7	13.6	15.1	15.5	14.6	16.1	15.0	16.5	16.9
	3H	14.5	15.8	14.9	16.3	16.7	16.4	17.7	16.8	18.1	18.6
	4H	14.9	16.2	15.4	16.6	17.1	17.1	18.4	17.6	18.9	19.4
	6H	15.1	16.3	15.6	16.8	17.3	17.9	19.0	18.3	19.5	20.0
	8H	15.2	16.3	15.7	16.8	17.3	18.2	19.3	18.7	19.8	20.3
	12H	15.2	16.3	15.7	16.8	17.3	18.5	19.5	19.0	20.0	20.6
4H	2H	13.9	15.1	14.3	15.6	16.1	15.0	16.2	15.5	16.7	17.2
	3H	15.4	16.4	15.9	16.9	17.5	17.0	18.1	17.5	18.6	19.1
	4H	15.9	16.8	16.4	17.4	17.9	17.9	18.9	18.4	19.4	19.9
	6H	16.2	17.1	16.8	17.6	18.2	18.8	19.6	19.3	20.2	20.7
	8H	16.3	17.1	16.9	17.6	18.2	19.2	20.0	19.7	20.5	21.1
	12H	16.4	17.1	16.9	17.6	18.2	19.6	20.3	20.1	20.9	21.4
8H	4H	16.3	17.1	16.8	17.6	18.2	18.1	18.9	18.6	19.4	20.0
	6H	16.7	17.4	17.3	18.0	18.6	19.1	19.8	19.7	20.3	20.9
	8H	16.9	17.5	17.5	18.1	18.7	19.6	20.2	20.2	20.8	21.4
	12H	17.0	17.5	17.5	18.1	18.7	20.1	20.7	20.7	21.2	21.9
12H	4H	16.4	17.1	16.9	17.6	18.2	18.1	18.8	18.7	19.4	20.0
	6H	16.9	17.5	17.5	18.0	18.7	19.1	19.7	19.7	20.3	20.9
	8H	17.1	17.6	17.6	18.2	18.8	19.7	20.2	20.3	20.8	21.5

Maximum UGR = 21.9

POLAR GRAPH



Maximum Candela = 1047.183 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.)