



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 17-2-L27-835-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] 2-28 LED 22" ARRAYS 2' NARROW LOW PROFILE WRAP LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED PRISMATIC ACRYLIC DIFFUSER

[LUMCAT] 17-2-L27-835-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	2915
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	137
Total Luminaire Watts	21.3
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)	2.00 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	4773	4969
55	4131	4024	4337
65	3164	3229	3630
75	2276	2434	3017
85	953	1525	2394

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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	1044.356	1044.356	1044.356	1044.356	1044.356
5	1056.242	1042.806	1034.538	1031.954	1030.404
10	1039.706	1026.270	1018.519	1016.969	1012.318
15	1015.418	1003.533	995.782	994.231	991.131
20	978.729	966.844	959.609	964.260	958.576
25	931.188	922.920	915.168	922.920	917.752
30	872.795	867.627	861.426	869.694	869.177
35	801.483	803.550	795.282	810.268	812.851
40	716.219	719.836	718.286	738.439	744.640
45	624.754	629.921	642.323	656.792	667.127
50	524.504	530.705	557.059	568.428	581.863
55	425.804	433.555	466.627	485.747	501.250
60	333.822	345.191	381.363	401.000	420.636
65	251.658	267.678	302.817	323.487	338.990
70	181.897	198.433	230.988	255.276	266.644
75	121.954	135.906	167.428	196.883	206.184
80	70.278	84.747	113.169	142.107	150.892
85	24.804	38.756	63.561	96.633	98.700
90	0.000	11.885	35.139	60.977	67.178
95	0.000	11.885	34.106	55.809	63.561
100	0.000	12.402	33.589	53.225	59.427
105	0.000	11.885	33.072	49.608	55.292
110	0.000	13.436	32.039	47.541	52.192
115	0.000	12.402	30.488	44.957	49.608
120	0.000	13.952	28.938	41.340	45.991
125	0.000	12.402	26.354	37.723	41.857
130	0.000	11.885	23.254	33.072	37.206
135	0.000	11.369	21.704	29.455	32.555
140	0.000	10.852	19.120	26.354	29.455
145	0.000	0.000	16.536	23.771	25.838
150	0.000	0.000	14.986	19.120	22.220
155	0.000	0.000	13.436	17.570	16.536
160	0.000	0.000	11.885	14.469	14.469
165	0.000	0.000	0.000	11.369	13.436
170	0.000	0.000	0.000	0.000	11.369
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	380.35	N.A.	13.00
0-30	804.55	N.A.	27.60
0-40	1306.1	N.A.	44.80
0-60	2216.01	N.A.	76.00
0-80	2689.95	N.A.	92.30
0-90	2765.81	N.A.	94.90
10-90	2667.21	N.A.	91.50
20-40	925.75	N.A.	31.80
20-50	1421.19	N.A.	48.80
40-70	1206.47	N.A.	41.40
60-80	473.94	N.A.	16.30
70-80	177.38	N.A.	6.10
80-90	75.86	N.A.	2.60
90-110	69.24	N.A.	2.40
90-120	97.27	N.A.	3.30
90-130	119.11	N.A.	4.10
90-150	143.22	N.A.	4.90
90-180	149.27	N.A.	5.10
110-180	80.04	N.A.	2.70
0-180	2915.08	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	98.59
10-20	281.76
20-30	424.20
30-40	501.54
40-50	495.44
50-60	414.46
60-70	296.56
70-80	177.38
80-90	75.86
90-100	36.67
100-110	32.57
110-120	28.03
120-130	21.84
130-140	15.30
140-150	8.81
150-160	4.58
160-170	1.42
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	58	58	58	58	56	56	56	56	53	53	53	50	50	50	48	48	48	47
1	53	50	48	46	51	49	47	45	46	45	44	44	43	42	42	41	40	39
2	48	44	41	38	47	43	40	37	41	38	36	39	37	35	37	35	34	33
3	44	39	35	32	42	38	34	31	36	33	30	34	32	30	33	31	29	28
4	40	35	30	27	39	34	30	27	32	29	26	31	28	25	29	27	25	24
5	37	31	27	23	36	30	26	23	29	25	23	28	25	22	27	24	22	21
6	34	28	24	20	33	27	23	20	26	23	20	25	22	20	24	21	19	18
7	32	25	21	18	31	25	21	18	24	20	18	23	20	17	22	19	17	16
8	30	23	19	16	29	23	19	16	22	18	16	21	18	16	20	17	15	14
9	28	21	17	15	27	21	17	15	20	17	14	19	16	14	19	16	14	13
10	26	20	16	13	25	19	16	13	19	15	13	18	15	13	17	15	13	12

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UGR TABLE - CORRECTED

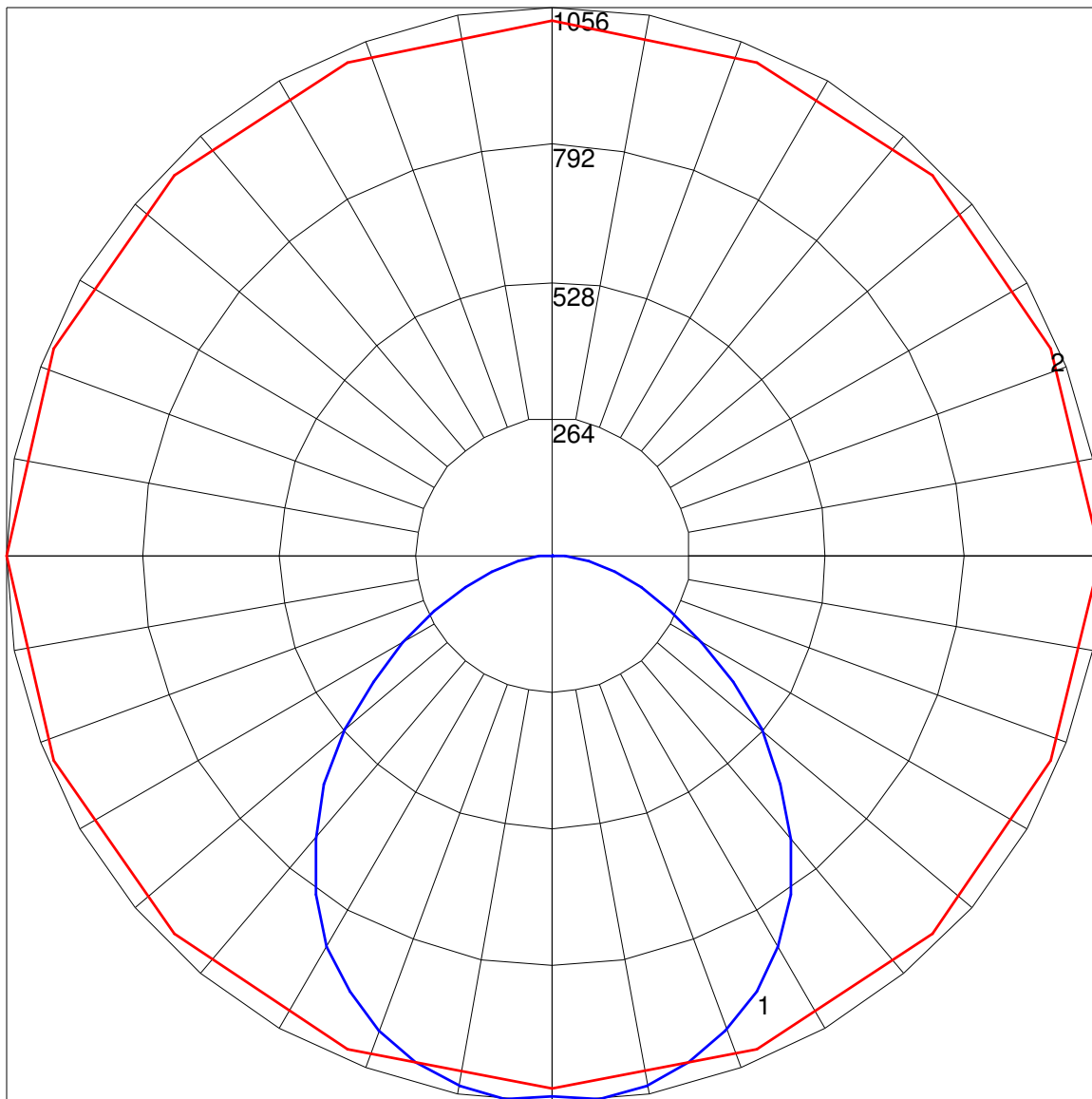
Reflectances

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 = 1056.242 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.)