



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 17-2-L27-840-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] 03-16-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2' NARROW LOW PROFILE WRAP LED LUMINAIRE

[MORE] WITH FROSTED PRISMATIC ACRYLIC DIFFUSER

[LUMCAT] 17-2-L27-840-AF-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	3002
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
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	5211	4915	5117
55	4254	4145	4466
65	3258	3325	3738
75	2343	2507	3107
85	982	1571	2465

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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	1075.526	1075.526	1075.526	1075.526	1075.526
5	1087.766	1073.929	1065.415	1062.754	1061.157
10	1070.736	1056.900	1048.917	1047.321	1042.531
15	1045.724	1033.484	1025.501	1023.905	1020.712
20	1007.940	995.700	988.249	993.039	987.185
25	958.980	950.465	942.482	950.465	945.143
30	898.844	893.522	887.136	895.651	895.119
35	825.404	827.532	819.018	834.451	837.111
40	737.595	741.320	739.723	760.478	766.864
45	643.400	648.721	661.494	676.395	687.038
50	540.158	546.544	573.685	585.393	599.229
55	438.512	446.495	480.554	500.245	516.210
60	343.785	355.493	392.745	412.968	433.191
65	259.169	275.667	311.855	333.142	349.107
70	187.326	204.355	237.882	262.895	274.602
75	125.593	139.962	172.425	202.759	212.338
80	72.376	87.277	116.546	146.348	155.395
85	25.544	39.913	65.458	99.517	101.645
90	0.000	12.240	36.188	62.797	69.183
95	0.000	12.240	35.124	57.475	65.458
100	0.000	12.772	34.591	54.814	61.200
105	0.000	12.240	34.059	51.089	56.943
110	0.000	13.837	32.995	48.960	53.750
115	0.000	12.772	31.398	46.299	51.089
120	0.000	14.369	29.802	42.574	47.364
125	0.000	12.772	27.141	38.849	43.106
130	0.000	12.240	23.948	34.059	38.317
135	0.000	11.708	22.351	30.334	33.527
140	0.000	11.176	19.690	27.141	30.334
145	0.000	0.000	17.030	24.480	26.609
150	0.000	0.000	15.433	19.690	22.884
155	0.000	0.000	13.837	18.094	17.030
160	0.000	0.000	12.240	14.901	14.901
165	0.000	0.000	0.000	11.708	13.837
170	0.000	0.000	0.000	0.000	11.708
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	391.70	N.A.	13.00
0-30	828.57	N.A.	27.60
0-40	1345.08	N.A.	44.80
0-60	2282.14	N.A.	76.00
0-80	2770.23	N.A.	92.30
0-90	2848.35	N.A.	94.90
10-90	2746.82	N.A.	91.50
20-40	953.38	N.A.	31.80
20-50	1463.61	N.A.	48.80
40-70	1242.47	N.A.	41.40
60-80	488.09	N.A.	16.30
70-80	182.68	N.A.	6.10
80-90	78.12	N.A.	2.60
90-110	71.30	N.A.	2.40
90-120	100.18	N.A.	3.30
90-130	122.67	N.A.	4.10
90-150	147.50	N.A.	4.90
90-180	153.73	N.A.	5.10
110-180	82.42	N.A.	2.70
0-180	3002.08	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	101.53
10-20	290.17
20-30	436.86
30-40	516.51
40-50	510.23
50-60	426.83
60-70	305.41
70-80	182.68
80-90	78.12
90-100	37.76
100-110	33.54
110-120	28.87
120-130	22.49
130-140	15.76
140-150	9.07
150-160	4.72
160-170	1.46
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

X=2H	Y=2H	15.6	17.1	16.1	17.6	18.0	16.9	18.4	17.4	18.8	19.3
	3H	16.9	18.3	17.4	18.7	19.2	18.7	20.0	19.1	20.4	20.9
	4H	17.3	18.6	17.8	19.1	19.6	19.4	20.7	19.9	21.1	21.6
	6H	17.6	18.8	18.1	19.2	19.8	20.1	21.3	20.6	21.7	22.2
	8H	17.7	18.8	18.2	19.3	19.8	20.4	21.5	20.9	22.0	22.5
	12H	17.7	18.8	18.2	19.2	19.8	20.6	21.7	21.1	22.2	22.7

UGR Viewed Endwise

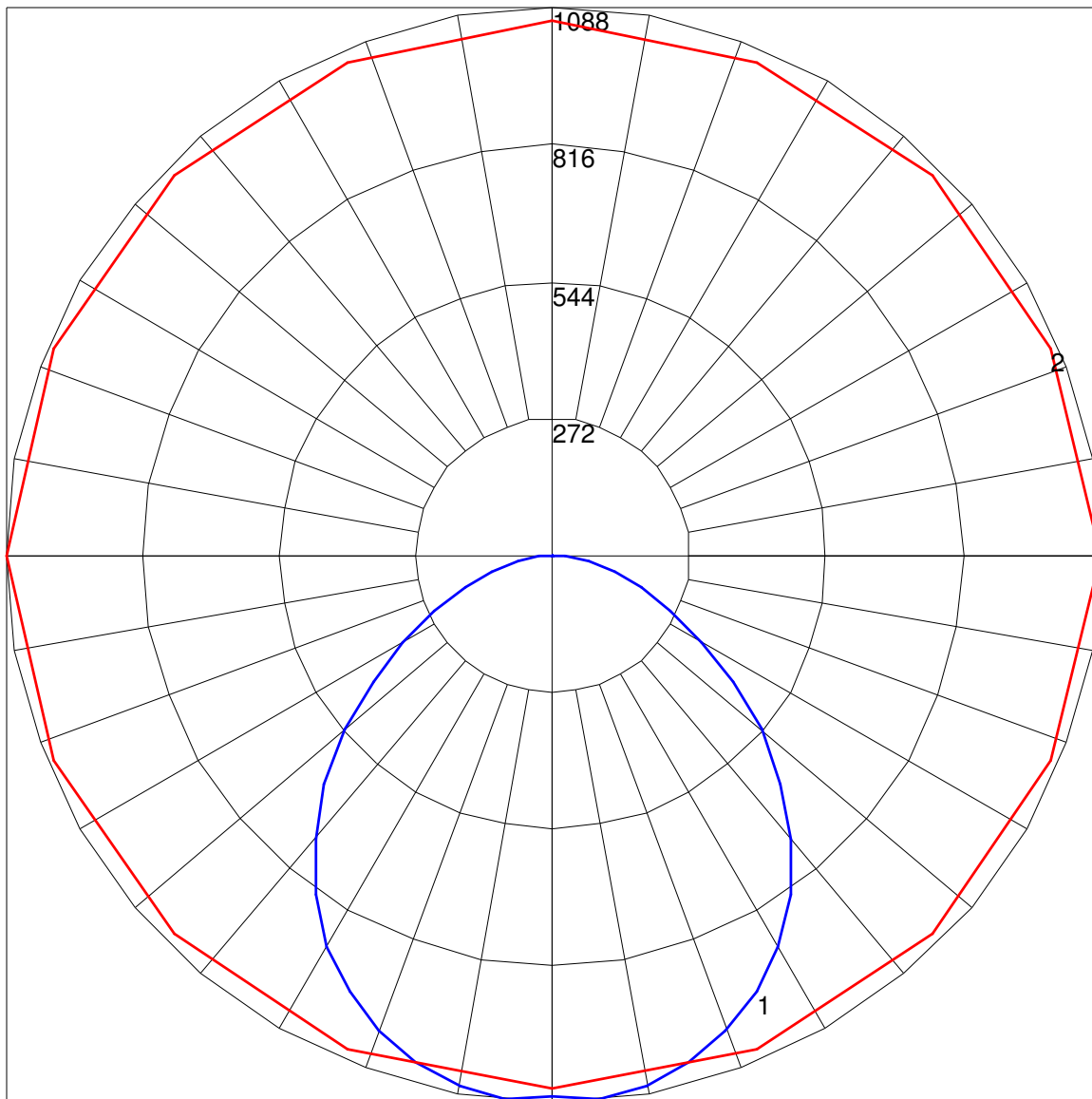
4H	2H	16.3	17.6	16.8	18.0	18.5	17.3	18.6	17.8	19.0	19.5
	3H	17.8	18.9	18.3	19.4	19.9	19.3	20.4	19.8	20.9	21.4
	4H	18.3	19.3	18.8	19.8	20.3	20.2	21.2	20.7	21.7	22.2
	6H	18.7	19.5	19.2	20.1	20.6	21.0	21.9	21.6	22.4	23.0
	8H	18.8	19.6	19.3	20.1	20.7	21.4	22.2	21.9	22.7	23.3
	12H	18.8	19.5	19.4	20.1	20.7	21.7	22.4	22.3	23.0	23.6

8H	4H	18.7	19.5	19.2	20.0	20.6	20.4	21.2	20.9	21.7	22.3
	6H	19.1	19.8	19.7	20.4	21.0	21.3	22.0	21.9	22.6	23.2
	8H	19.3	19.9	19.9	20.5	21.1	21.8	22.4	22.4	23.0	23.6
	12H	19.4	19.9	20.0	20.5	21.1	22.3	22.8	22.9	23.4	24.0

12H	4H	18.8	19.5	19.3	20.0	20.6	20.4	21.1	20.9	21.6	22.2
	6H	19.3	19.9	19.9	20.4	21.1	21.4	22.0	22.0	22.5	23.2
	8H	19.5	20.0	20.0	20.6	21.2	21.9	22.4	22.5	23.0	23.6

Maximum UGR = 24.0

POLAR GRAPH



Maximum Candela = 1087.766 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.)