



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 39-4-L52-840-A-DIM1-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 19011.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 01-18-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4' SURFACE MOUNT LED LUMINAIRE

[MORE] WITH FROSTED ACRYLIC RIBBED LENS

[LUMCAT] 39-4-L52-840-A-DIM1-UNV

[LAMPCAT]HLM 80 CRI, 4000K CCT

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] INDOOR, ARCHITECTURAL, COMMERCIAL, DIRECT, LINEAR

[_SEARCH_MOUNTING]SURFACE, SUSPENDED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5393
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	138
Total Luminaire Watts	39.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.01 ft
Luminous Width (90-270)	0.79 ft
Luminous Height	0.18 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5346	4837	4779
55	4460	3975	3996
65	3690	3254	3470
75	2691	2580	2995
85	1587	2149	2790

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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	2061.264	2061.264	2061.264	2061.264	2061.264
5	2072.710	2071.669	2070.629	2070.629	2071.669
10	2026.927	2025.887	2025.887	2026.927	2029.008
15	1955.131	1957.212	1960.334	1962.415	1964.496
20	1895.822	1896.862	1903.106	1904.146	1904.146
25	1736.623	1740.785	1745.987	1749.109	1749.109
30	1604.477	1609.680	1616.963	1621.125	1622.166
35	1493.142	1501.466	1512.912	1518.114	1521.236
40	1310.011	1320.416	1336.024	1345.388	1349.551
45	1164.338	1178.906	1199.716	1214.283	1219.486
50	972.883	987.451	1015.545	1037.395	1045.720
55	802.239	819.927	854.264	880.277	891.723
60	639.918	658.647	695.065	733.564	749.172
65	503.610	523.380	570.203	623.270	639.918
70	366.262	390.194	451.584	508.813	531.704
75	239.319	268.453	336.087	397.477	419.328
80	140.470	177.928	251.805	314.236	336.087
85	61.391	101.971	174.807	234.116	254.927
90	0.000	44.742	104.052	151.915	170.645
95	0.000	18.729	66.593	109.254	125.903
100	0.000	0.000	40.580	73.877	85.322
105	0.000	0.000	26.013	48.904	59.309
110	0.000	0.000	0.000	33.297	40.580
115	0.000	0.000	0.000	24.972	30.175
120	0.000	0.000	0.000	20.810	22.891
125	0.000	0.000	0.000	0.000	0.000
130	0.000	0.000	0.000	0.000	0.000
135	0.000	0.000	0.000	0.000	0.000
140	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
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	750.68	N.A.	13.90
0-30	1558.25	N.A.	28.90
0-40	2492.76	N.A.	46.20
0-60	4169.68	N.A.	77.30
0-80	5095.98	N.A.	94.50
0-90	5280.38	N.A.	97.90
10-90	5084.38	N.A.	94.30
20-40	1742.08	N.A.	32.30
20-50	2656.65	N.A.	49.30
40-70	2243.86	N.A.	41.60
60-80	926.30	N.A.	17.20
70-80	359.36	N.A.	6.70
80-90	184.40	N.A.	3.40
90-110	100.06	N.A.	1.90
90-120	110.38	N.A.	2.00
90-130	112.25	N.A.	2.10
90-150	112.25	N.A.	2.10
90-180	112.25	N.A.	2.10
110-180	12.19	N.A.	0.20
0-180	5392.62	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	196.00
10-20	554.68
20-30	807.57
30-40	934.51
40-50	914.57
50-60	762.34
60-70	566.95
70-80	359.36
80-90	184.40
90-100	72.22
100-110	27.84
110-120	10.32
120-130	1.86
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	98
1	108	103	99	95	105	101	97	93	96	93	90	92	89	86	88	86	83	81
2	98	90	83	77	95	88	82	76	84	79	74	80	76	72	77	74	70	68
3	90	79	71	65	87	78	70	64	74	68	63	71	66	61	69	64	60	58
4	82	71	62	55	80	69	61	55	66	59	54	64	58	53	61	56	52	50
5	76	63	54	48	74	62	54	48	60	52	47	58	51	46	55	50	45	43
6	70	57	48	42	68	56	48	42	54	47	41	52	46	41	50	45	40	38
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	46	40	36	34
8	61	48	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	36	30	55	43	35	30	42	35	30	41	34	30	39	34	29	27
10	53	40	33	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

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UGR TABLE - CORRECTED

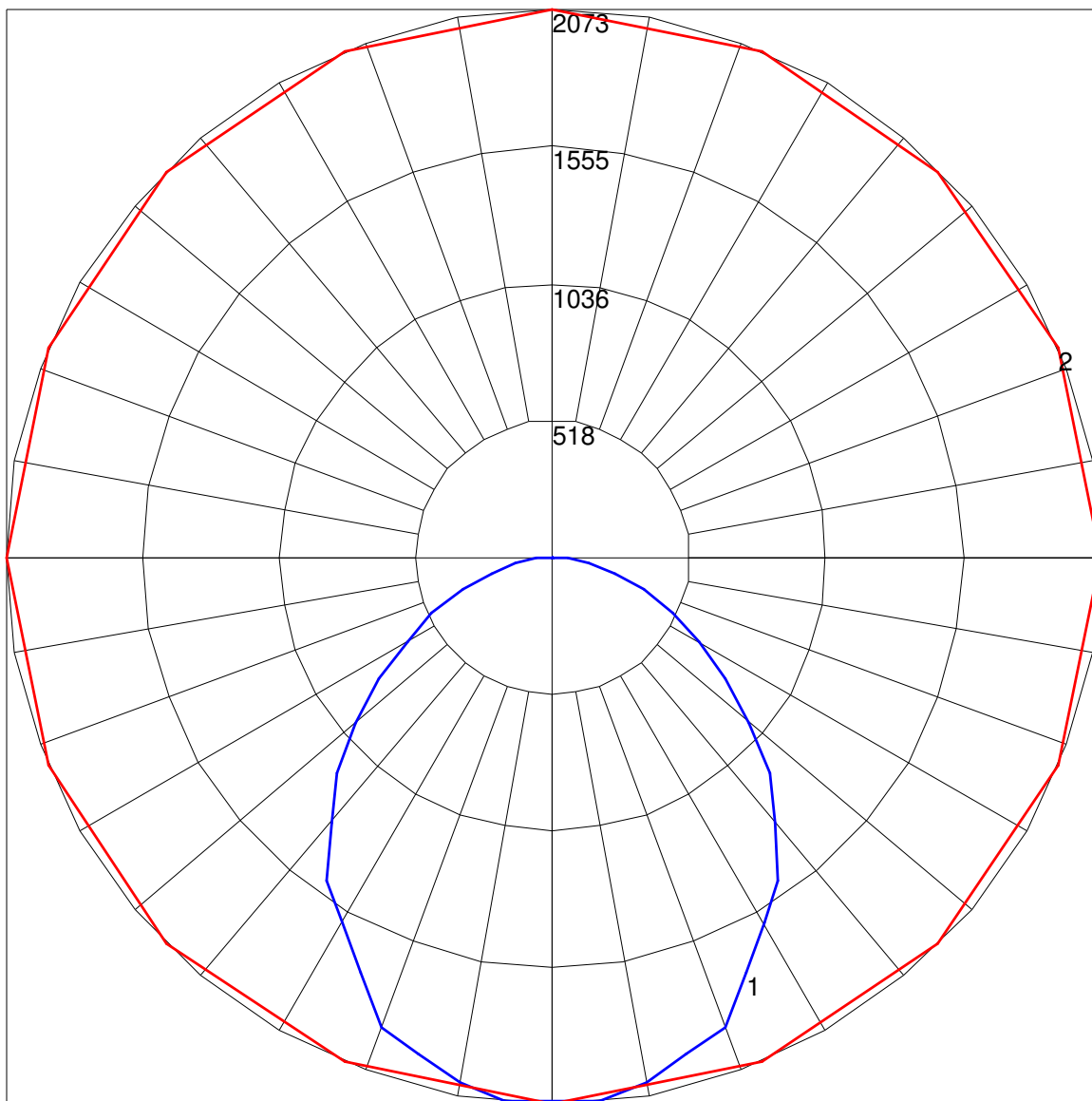
Reflectances

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	15.8	17.3	16.2	17.7	18.1	16.9	18.5	17.3	18.9	19.2
	3H	17.1	18.6	17.5	18.9	19.3	19.0	20.4	19.4	20.8	21.2
	4H	17.5	18.9	18.0	19.3	19.7	19.9	21.2	20.3	21.6	22.0
	6H	17.8	19.1	18.2	19.5	19.9	20.8	22.0	21.2	22.4	22.9
	8H	17.9	19.1	18.3	19.5	19.9	21.2	22.4	21.7	22.8	23.3
	12H	17.9	19.0	18.4	19.5	19.9	21.6	22.8	22.1	23.2	23.7
4H	2H	16.4	17.8	16.9	18.2	18.6	17.4	18.7	17.8	19.1	19.5
	3H	18.0	19.1	18.5	19.6	20.0	19.6	20.8	20.1	21.2	21.6
	4H	18.5	19.6	19.0	20.0	20.5	20.7	21.7	21.2	22.2	22.6
	6H	18.9	19.8	19.4	20.3	20.8	21.8	22.7	22.2	23.1	23.6
	8H	19.0	19.9	19.5	20.3	20.8	22.3	23.1	22.8	23.6	24.1
	12H	19.1	19.8	19.6	20.3	20.9	22.8	23.6	23.4	24.1	24.6
8H	4H	19.0	19.8	19.5	20.3	20.8	20.9	21.7	21.4	22.2	22.7
	6H	19.5	20.2	20.0	20.7	21.2	22.1	22.8	22.6	23.3	23.9
	8H	19.6	20.3	20.2	20.8	21.4	22.7	23.4	23.3	23.9	24.5
	12H	19.8	20.3	20.3	20.9	21.5	23.5	24.0	24.0	24.6	25.2
12H	4H	19.1	19.8	19.6	20.4	20.9	20.9	21.6	21.4	22.2	22.7
	6H	19.6	20.3	20.2	20.8	21.4	22.1	22.8	22.7	23.3	23.9
	8H	19.9	20.5	20.4	21.0	21.6	22.8	23.4	23.4	23.9	24.5

Maximum UGR = 25.2

POLAR GRAPH



Maximum Candela = 2072.71 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.)