



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 39-4-L30-840-A-DIM-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] 05-28-2020

[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-L30-840-A-DIM-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	3117
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
Total Luminaire Watts	23.7
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	3090	2795	2762
55	2578	2297	2309
65	2133	1880	2006
75	1555	1491	1731
85	917	1242	1612

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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	1191.352	1191.352	1191.352	1191.352	1191.352
5	1197.967	1197.366	1196.765	1196.765	1197.366
10	1171.506	1170.905	1170.905	1171.506	1172.709
15	1130.010	1131.213	1133.017	1134.220	1135.423
20	1095.731	1096.333	1099.941	1100.542	1100.542
25	1003.719	1006.124	1009.131	1010.935	1010.935
30	927.342	930.349	934.559	936.964	937.566
35	862.994	867.805	874.420	877.427	879.231
40	757.149	763.163	772.184	777.596	780.002
45	672.955	681.374	693.402	701.821	704.828
50	562.299	570.718	586.956	599.585	604.396
55	463.671	473.895	493.741	508.775	515.391
60	369.854	380.679	401.728	423.979	433.000
65	291.072	302.499	329.561	360.232	369.854
70	211.689	225.521	261.003	294.079	307.310
75	138.320	155.158	194.249	229.731	242.360
80	81.188	102.838	145.536	181.620	194.249
85	35.482	58.936	101.033	135.313	147.340
90	0.000	25.860	60.139	87.803	98.628
95	0.000	10.825	38.489	63.146	72.768
100	0.000	0.000	23.454	42.699	49.314
105	0.000	0.000	15.035	28.265	34.279
110	0.000	0.000	0.000	19.244	23.454
115	0.000	0.000	0.000	14.433	17.440
120	0.000	0.000	0.000	12.028	13.231
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	433.87	N.A.	13.90
0-30	900.63	N.A.	28.90
0-40	1440.75	N.A.	46.20
0-60	2409.96	N.A.	77.30
0-80	2945.33	N.A.	94.50
0-90	3051.91	N.A.	97.90
10-90	2938.63	N.A.	94.30
20-40	1006.87	N.A.	32.30
20-50	1535.47	N.A.	49.30
40-70	1296.89	N.A.	41.60
60-80	535.38	N.A.	17.20
70-80	207.70	N.A.	6.70
80-90	106.58	N.A.	3.40
90-110	57.83	N.A.	1.90
90-120	63.80	N.A.	2.00
90-130	64.88	N.A.	2.10
90-150	64.88	N.A.	2.10
90-180	64.88	N.A.	2.10
110-180	7.04	N.A.	0.20
0-180	3116.78	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	113.28
10-20	320.59
20-30	466.75
30-40	540.12
40-50	528.60
50-60	440.61
60-70	327.68
70-80	207.70
80-90	106.58
90-100	41.74
100-110	16.09
110-120	5.97
120-130	1.08
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

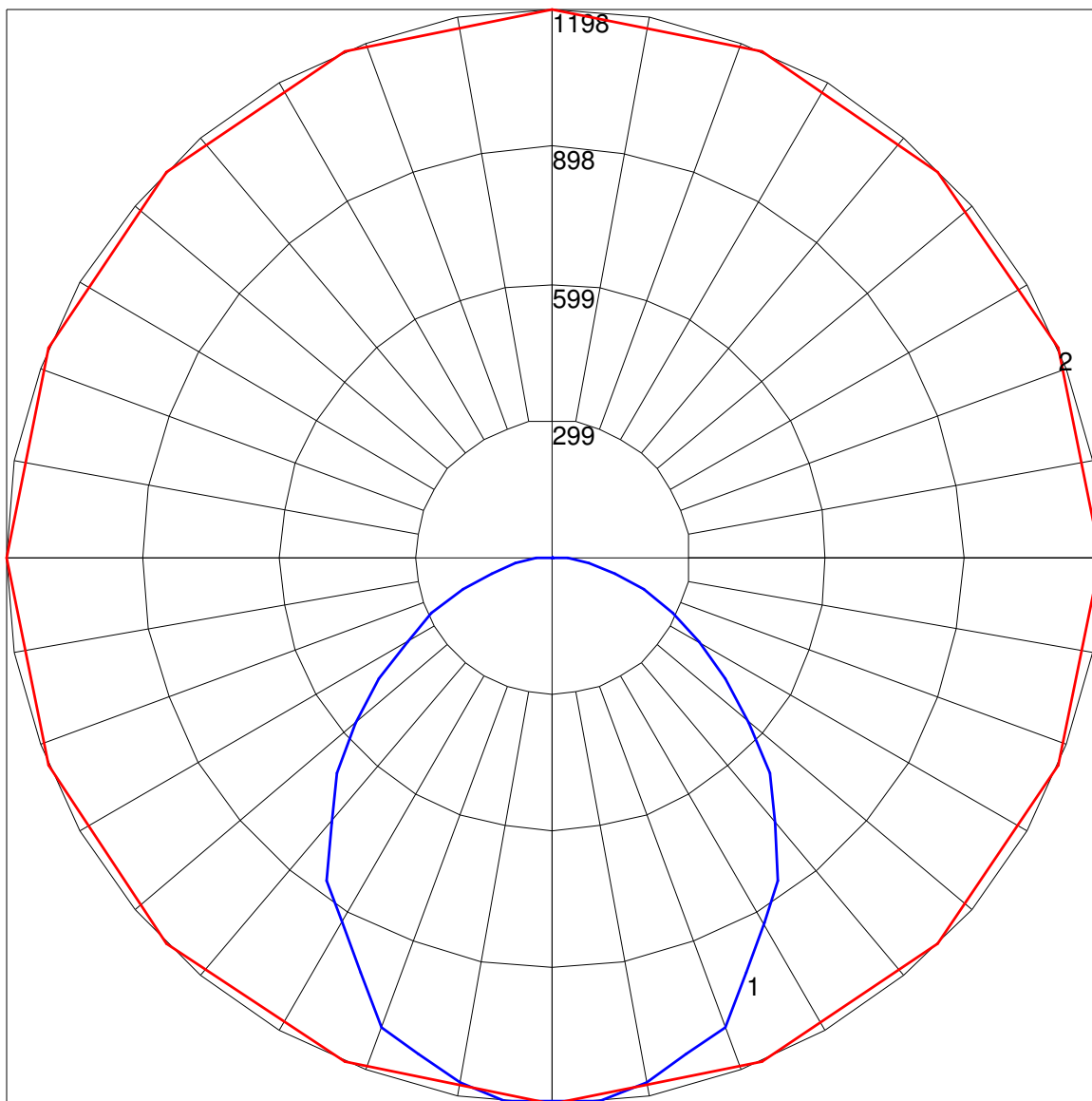
Reflectances

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	13.8	15.3	14.2	15.7	16.1	14.9	16.5	15.3	16.9	17.2
	3H	15.1	16.6	15.5	16.9	17.3	17.0	18.4	17.4	18.8	19.2
	4H	15.5	16.9	16.0	17.3	17.7	17.9	19.2	18.3	19.6	20.0
	6H	15.8	17.1	16.2	17.5	17.9	18.8	20.0	19.2	20.4	20.8
	8H	15.9	17.1	16.3	17.5	17.9	19.2	20.4	19.7	20.8	21.3
	12H	15.9	17.0	16.4	17.5	17.9	19.6	20.8	20.1	21.2	21.7
4H	2H	14.4	15.8	14.9	16.2	16.6	15.4	16.7	15.8	17.1	17.5
	3H	16.0	17.1	16.5	17.6	18.0	17.6	18.8	18.1	19.2	19.6
	4H	16.5	17.6	17.0	18.0	18.5	18.7	19.7	19.1	20.2	20.6
	6H	16.9	17.8	17.4	18.3	18.8	19.8	20.6	20.2	21.1	21.6
	8H	17.0	17.8	17.5	18.3	18.8	20.3	21.1	20.8	21.6	22.1
	12H	17.1	17.8	17.6	18.3	18.9	20.8	21.6	21.4	22.1	22.6
8H	4H	17.0	17.8	17.5	18.3	18.8	18.9	19.7	19.4	20.2	20.7
	6H	17.5	18.2	18.0	18.7	19.2	20.1	20.8	20.6	21.3	21.9
	8H	17.6	18.3	18.2	18.8	19.4	20.7	21.4	21.3	21.9	22.5
	12H	17.8	18.3	18.3	18.9	19.5	21.5	22.0	22.0	22.6	23.2
12H	4H	17.1	17.8	17.6	18.4	18.9	18.9	19.6	19.4	20.2	20.7
	6H	17.6	18.3	18.2	18.8	19.4	20.1	20.8	20.7	21.3	21.9
	8H	17.9	18.5	18.4	19.0	19.6	20.8	21.4	21.4	21.9	22.5

Maximum UGR = 23.2

POLAR GRAPH



Maximum Candela = 1197.967 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.)