

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 39-4-L84-940-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

[ISSUE DATE] 11-15-2023

[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-L84-940-A-DIM-UNV

[LAMPCAT] HLM 90 CRI, 4000K CCT

[_SEARCH_SOURCE TYPE] 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	7222
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
Total Luminaire Watts	66
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	7160	6478	6401
55	5974	5324	5351
65	4942	4358	4648
75	3604	3455	4011
85	2125	2879	3737

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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	2760.710	2760.710	2760.710	2760.710	2760.710
5	2776.039	2774.646	2773.252	2773.252	2774.646
10	2714.721	2713.328	2713.328	2714.721	2717.508
15	2618.563	2621.350	2625.531	2628.318	2631.106
20	2539.128	2540.522	2548.883	2550.277	2550.277
25	2325.908	2331.483	2338.451	2342.632	2342.632
30	2148.922	2155.890	2165.645	2171.219	2172.613
35	1999.807	2010.956	2026.286	2033.254	2037.434
40	1754.535	1768.471	1789.375	1801.917	1807.491
45	1559.432	1578.942	1606.814	1626.324	1633.292
50	1303.010	1322.521	1360.148	1389.413	1400.562
55	1074.461	1098.152	1144.141	1178.981	1194.310
60	857.060	882.145	930.921	982.484	1003.388
65	674.500	700.978	763.690	834.763	857.060
70	490.545	522.598	604.820	681.467	712.127
75	320.527	359.547	450.131	532.353	561.618
80	188.135	238.305	337.250	420.865	450.131
85	82.222	136.572	234.124	313.559	341.431
90	0.000	59.925	139.359	203.465	228.549
95	0.000	25.085	89.190	146.327	168.625
100	0.000	0.000	54.350	98.945	114.275
105	0.000	0.000	34.840	65.499	79.435
110	0.000	0.000	0.000	44.595	54.350
115	0.000	0.000	0.000	33.446	40.414
120	0.000	0.000	0.000	27.872	30.659
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	1005.41	N.A.	13.90
0-30	2087.01	N.A.	28.90
0-40	3338.63	N.A.	46.20
0-60	5584.57	N.A.	77.30
0-80	6825.19	N.A.	94.50
0-90	7072.16	N.A.	97.90
10-90	6809.65	N.A.	94.30
20-40	2333.22	N.A.	32.30
20-50	3558.13	N.A.	49.30
40-70	3005.27	N.A.	41.60
60-80	1240.62	N.A.	17.20
70-80	481.30	N.A.	6.70
80-90	246.97	N.A.	3.40
90-110	134.01	N.A.	1.90
90-120	147.84	N.A.	2.00
90-130	150.34	N.A.	2.10
90-150	150.34	N.A.	2.10
90-180	150.34	N.A.	2.10
110-180	16.32	N.A.	0.20
0-180	7222.5	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	262.51
10-20	742.90
20-30	1081.61
30-40	1251.62
40-50	1224.91
50-60	1021.03
60-70	759.33
70-80	481.30
80-90	246.97
90-100	96.73
100-110	37.29
110-120	13.83
120-130	2.50
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	84	81
2	98	90	83	77	96	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	83	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	56	50	45	43
6	70	57	48	42	68	56	48	42	54	47	41	52	46	41	51	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	54	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

X=2H	Y=2H	16.8	18.3	17.2	18.7	19.1	UGR Viewed Endwise			
	3H	18.1	19.6	18.5	19.9	20.3	17.9	19.5	18.3	19.9
	4H	18.5	19.9	19.0	20.3	20.7	20.0	21.4	20.4	21.8
	6H	18.8	20.1	19.2	20.5	20.9	20.9	22.2	21.3	22.6
	8H	18.9	20.1	19.3	20.5	20.9	21.8	23.0	22.2	23.4
	12H	18.9	20.0	19.4	20.5	20.9	22.2	23.4	22.7	23.8

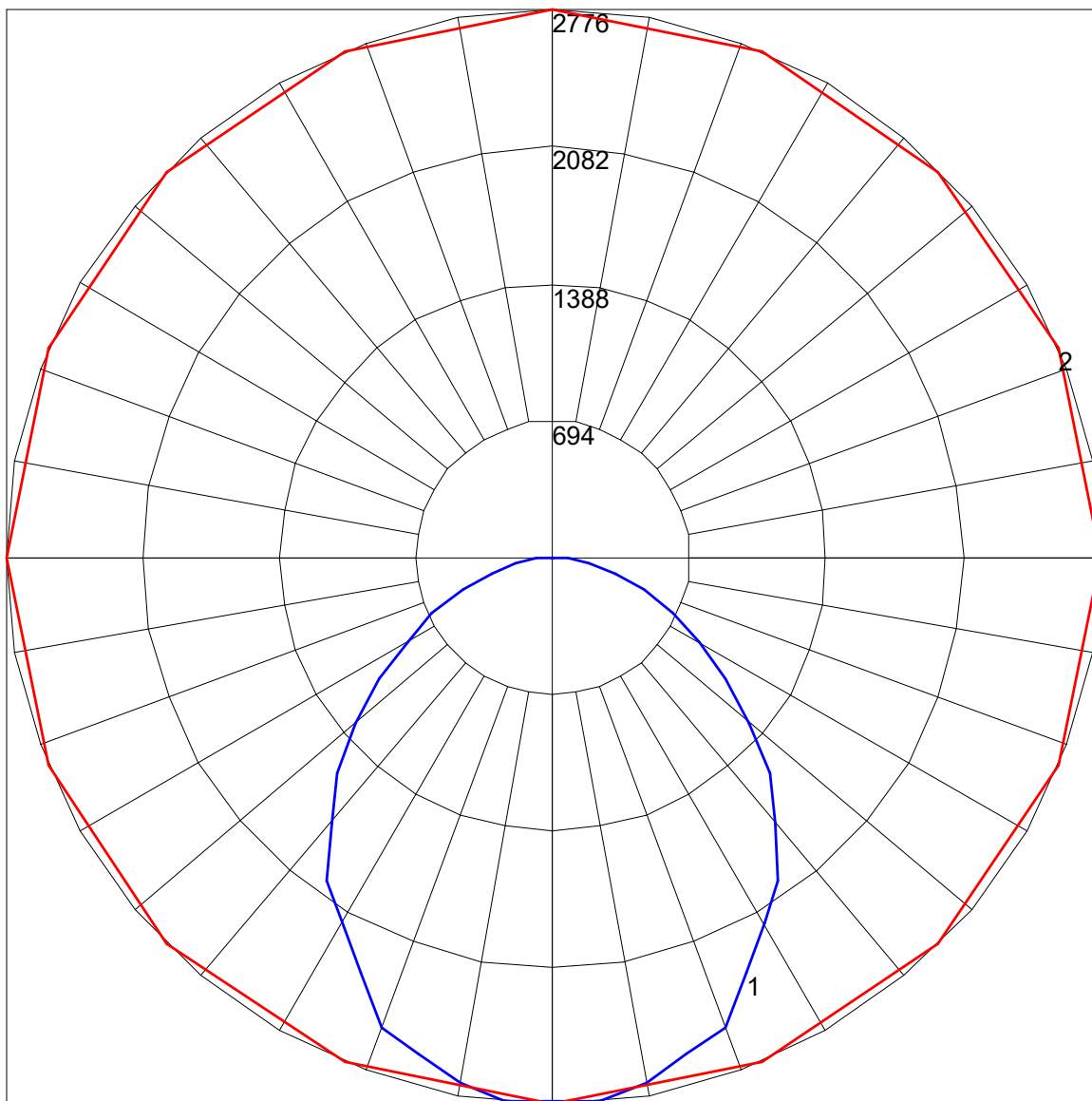
4H	2H	17.4	18.8	17.9	19.2	19.6	22.6	23.8	23.1	24.2
	3H	19.0	20.1	19.5	20.6	21.0	23.8	24.6	24.4	25.1
	4H	19.5	20.6	20.0	21.0	21.5	24.4	25.0	25.0	25.6
	6H	19.9	20.8	20.4	21.3	21.8	25.0	25.6	25.6	26.2
	8H	20.0	20.9	20.5	21.3	21.8				
	12H	20.1	20.8	20.6	21.3	21.9				

8H	4H	20.0	20.8	20.5	21.3	21.8				
	6H	20.5	21.2	21.0	21.7	22.2				
	8H	20.6	21.3	21.2	21.8	22.4				
	12H	20.8	21.3	21.3	21.9	22.5				

12H	4H	20.1	20.8	20.6	21.4	21.9				
	6H	20.6	21.3	21.2	21.8	22.4				
	8H	20.9	21.5	21.4	22.0	22.6				

Maximum UGR = 26.2

POLAR GRAPH



Maximum Candela = 2776.039 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.)