



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 39-8-L60-835-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] 08-NOV-2019

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4-56 LED 22" ARRAYS 8' PENDANT MOUNT LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED LENS

[LUMCAT] 39-8-L60-835-A-DIM-UNV

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Architectural, Commercial, Direct, Linear

[_SEARCH_MOUNTING] Pendant, Surface

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5882
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	139
Total Luminaire Watts	42.3
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)	8.01 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	2980	2674	2608
55	2508	2208	2180
65	2105	1819	1894
75	1580	1458	1634
85	1040	1243	1522

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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	2248.166	2248.166	2248.166	2248.166	2248.166
5	2260.649	2259.514	2258.379	2258.379	2259.514
10	2210.715	2209.580	2209.580	2210.715	2212.985
15	2132.409	2134.679	2138.084	2140.353	2142.623
20	2067.722	2068.857	2075.666	2076.801	2076.801
25	1894.088	1898.627	1904.302	1907.706	1907.706
30	1749.960	1755.635	1763.579	1768.118	1769.253
35	1628.530	1637.609	1650.092	1655.767	1659.171
40	1428.794	1440.142	1457.165	1467.379	1471.919
45	1269.913	1285.801	1308.498	1324.386	1330.061
50	1061.098	1076.986	1107.627	1131.459	1140.538
55	874.980	894.273	931.723	960.095	972.578
60	697.941	718.369	758.089	800.079	817.102
65	549.274	570.837	621.905	679.784	697.941
70	399.472	425.574	492.531	554.948	579.915
75	261.019	292.795	366.561	433.518	457.350
80	153.207	194.062	274.637	342.729	366.561
85	66.957	111.217	190.657	255.344	278.042
90	0.000	48.799	113.486	165.690	186.118
95	0.000	20.428	72.631	119.161	137.319
100	0.000	0.000	44.260	80.575	93.059
105	0.000	0.000	28.372	53.339	64.687
110	0.000	0.000	0.000	36.316	44.260
115	0.000	0.000	0.000	27.237	32.911
120	0.000	0.000	0.000	22.697	24.967
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	818.75	N.A.	13.90
0-30	1699.55	N.A.	28.90
0-40	2718.79	N.A.	46.20
0-60	4547.76	N.A.	77.30
0-80	5558.05	N.A.	94.50
0-90	5759.17	N.A.	97.90
10-90	5545.39	N.A.	94.30
20-40	1900.04	N.A.	32.30
20-50	2897.54	N.A.	49.30
40-70	2447.32	N.A.	41.60
60-80	1010.29	N.A.	17.20
70-80	391.94	N.A.	6.70
80-90	201.12	N.A.	3.40
90-110	109.13	N.A.	1.90
90-120	120.39	N.A.	2.00
90-130	122.43	N.A.	2.10
90-150	122.43	N.A.	2.10
90-180	122.43	N.A.	2.10
110-180	13.29	N.A.	0.20
0-180	5881.59	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	213.77
10-20	604.98
20-30	880.80
30-40	1019.25
40-50	997.50
50-60	831.47
60-70	618.35
70-80	391.94
80-90	201.12
90-100	78.77
100-110	30.36
110-120	11.26
120-130	2.03
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	134	134	134	134	131	131	131	131	124	124	124	118	118	118	113	113	113	111
1	122	116	111	107	119	114	109	105	108	105	101	103	100	98	99	97	94	92
2	111	102	94	87	108	99	92	86	95	89	84	91	86	82	87	83	79	77
3	102	90	81	73	99	88	79	72	84	77	71	81	74	69	77	72	68	65
4	93	80	70	62	90	78	69	62	75	67	61	72	65	60	69	64	59	56
5	86	72	62	54	83	70	61	54	67	59	53	65	58	52	63	56	51	49
6	79	65	55	47	77	63	54	47	61	53	47	59	52	46	57	51	45	43
7	74	59	49	42	72	58	48	42	56	47	41	54	47	41	52	46	41	38
8	69	54	44	38	67	53	44	38	51	43	37	50	42	37	48	41	36	34
9	64	49	40	34	63	49	40	34	47	39	34	46	39	33	45	38	33	31
10	60	46	37	31	59	45	37	31	44	36	31	43	35	30	41	35	30	28

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UGR TABLE - CORRECTED

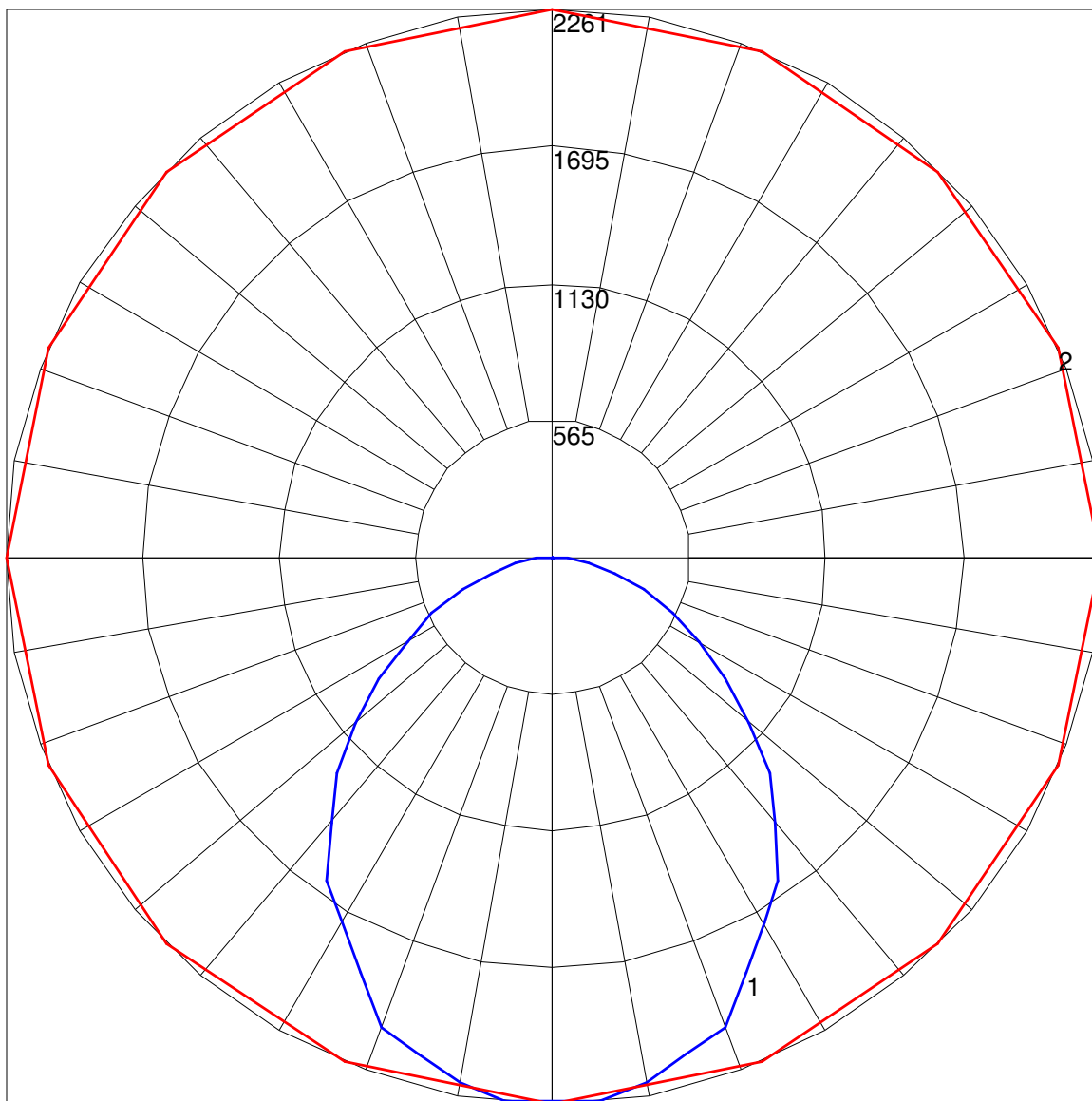
Reflectances

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	16.7	18.3	17.1	18.7	19.0
	3H	17.6	19.0	18.0	19.4	19.8	18.8	20.2	19.2	20.6	21.0
	4H	18.1	19.4	18.5	19.8	20.2	19.7	21.0	20.1	21.4	21.8
	6H	18.4	19.7	18.9	20.1	20.5	20.6	21.8	21.0	22.2	22.7
	8H	18.5	19.7	19.0	20.1	20.6	21.0	22.2	21.5	22.6	23.1
	12H	18.6	19.7	19.0	20.2	20.6	21.4	22.6	21.9	23.0	23.5
4H	2H	16.6	18.0	17.1	18.4	18.8	17.2	18.5	17.6	18.9	19.3
	3H	18.3	19.5	18.8	19.9	20.4	19.4	20.6	19.9	21.0	21.4
	4H	19.0	20.0	19.4	20.4	20.9	20.5	21.5	21.0	22.0	22.4
	6H	19.4	20.3	19.9	20.8	21.3	21.6	22.5	22.0	22.9	23.4
	8H	19.6	20.4	20.1	20.9	21.4	22.1	22.9	22.6	23.4	23.9
	12H	19.7	20.4	20.2	21.0	21.5	22.6	23.4	23.2	23.9	24.4
8H	4H	19.3	20.1	19.8	20.6	21.1	20.7	21.5	21.2	22.0	22.5
	6H	19.9	20.6	20.4	21.1	21.7	21.9	22.6	22.4	23.1	23.7
	8H	20.1	20.8	20.7	21.3	21.8	22.5	23.2	23.1	23.7	24.3
	12H	20.3	20.9	20.8	21.4	22.0	23.3	23.8	23.8	24.4	25.0
12H	4H	19.4	20.1	19.9	20.6	21.2	20.7	21.4	21.2	22.0	22.5
	6H	20.0	20.7	20.6	21.2	21.7	21.9	22.6	22.5	23.1	23.7
	8H	20.3	20.9	20.9	21.4	22.0	22.6	23.2	23.2	23.7	24.3

Maximum UGR = 25.0

POLAR GRAPH



Maximum Candela = 2260.649 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.)