



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-8-00-L8-835-F-(L7.5)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20649.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 23-JUL-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 8' DIRECT SUSPENDED LUMINAIRE
 [MORE] WITH FROSTED ACRYLIC LENS
 [LUMCAT] MX4D-8-00-L8-835-F-(L7.5)-DIM-UNV
 [LAMPCAT] HLM 80 CRI, 3500K CCT
 [SEARCH_SOURCETYPE] LED
 [SEARCH_APPLICATION] Indoor, Architectural, Classroom, Direct
 [SEARCH_MOUNTING] Suspended

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6088
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	130
Total Luminaire Watts	47
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.06
Spacing Criterion (Diagonal)	1.20
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	8.00 ft
Luminous Width (90-270)	0.31 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10216	8853	8030
55	8459	7071	6431
65	6374	5360	4853
75	4376	3844	3430
85	2107	1756	1405

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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	2894.198	2894.198	2894.198	2894.198	2894.198
5	2904.684	2873.225	2859.244	2841.767	2838.271
10	2848.758	2803.317	2771.859	2740.400	2726.418
15	2761.372	2719.427	2632.042	2590.097	2569.125
20	2653.015	2569.125	2474.749	2408.336	2380.373
25	2506.208	2408.336	2285.997	2226.575	2209.098
30	2334.933	2216.089	2093.749	2034.327	2006.364
35	2128.704	2002.869	1880.530	1821.108	1786.154
40	1898.007	1789.649	1642.842	1586.915	1548.466
45	1649.833	1548.466	1429.622	1335.246	1296.796
50	1377.191	1279.319	1160.475	1087.072	1076.586
55	1108.044	1031.145	926.283	887.834	842.393
60	877.347	782.971	716.559	671.118	650.146
65	615.192	562.761	517.320	485.862	468.385
70	440.421	384.495	363.522	335.559	328.568
75	258.660	244.679	227.202	213.220	202.734
80	143.312	136.321	129.330	118.844	111.853
85	41.945	41.945	34.954	34.954	27.963
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1016.36	N.A.	16.70
0-30	2083.97	N.A.	34.20
0-40	3280.33	N.A.	53.90
0-60	5249.19	N.A.	86.20
0-80	6033.27	N.A.	99.10
0-90	6088.08	N.A.	100.00
10-90	5817.61	N.A.	95.60
20-40	2263.98	N.A.	37.20
20-50	3376.41	N.A.	55.50
40-70	2501.65	N.A.	41.10
60-80	784.08	N.A.	12.90
70-80	251.29	N.A.	4.10
80-90	54.81	N.A.	0.90
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	6088.08	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	270.47
10-20	745.89
20-30	1067.62
30-40	1196.36
40-50	1112.44
50-60	856.42
60-70	532.79
70-80	251.29
80-90	54.81
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
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	177	177	177	177	173	173	173	173	165	165	165	158	158	158	152	152	152	149
1	164	158	152	147	160	154	149	145	148	144	140	142	139	136	137	134	132	129
2	150	140	130	123	147	137	128	121	132	125	119	127	121	116	122	118	113	110
3	138	124	113	104	135	122	112	103	118	109	102	114	106	100	110	104	98	95
4	128	111	99	90	124	109	98	89	106	96	88	102	94	87	99	92	86	83
5	118	100	88	79	115	99	87	78	96	85	77	93	84	77	90	82	76	73
6	109	91	79	70	107	90	78	69	87	77	69	85	75	68	82	74	68	65
7	102	83	71	62	99	82	70	62	80	69	61	78	68	61	76	67	61	58
8	95	76	64	56	93	75	64	56	73	63	55	71	62	55	70	61	55	52
9	89	70	59	51	87	69	58	51	68	58	50	66	57	50	65	56	50	47
10	84	65	54	46	82	64	54	46	63	53	46	61	52	46	60	52	46	43

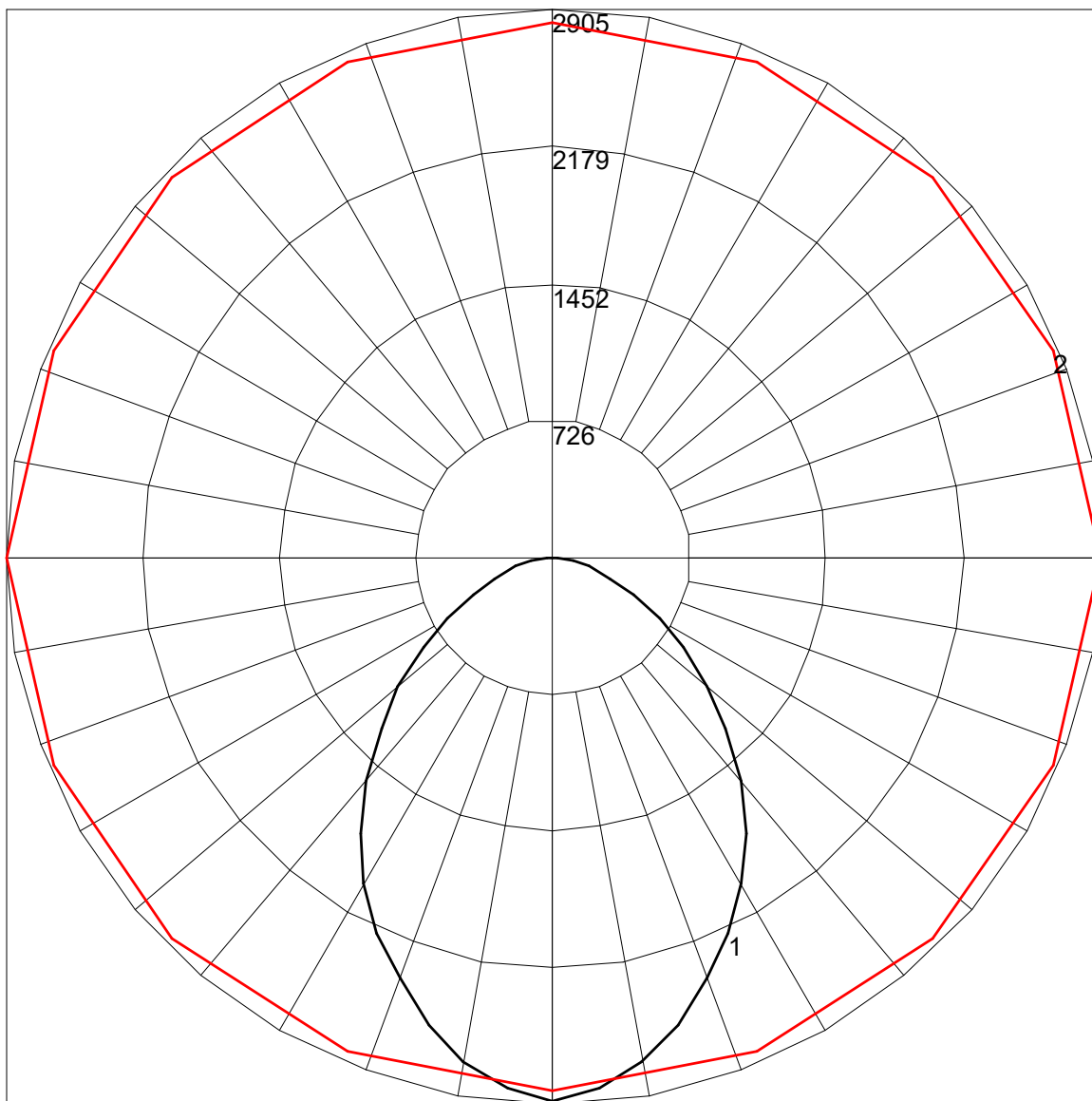
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UGR TABLE - CORRECTED

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	17.6	19.2	18.0	19.5	19.8	16.4	17.9	16.8	18.2	18.6
	3H	18.9	20.3	19.3	20.6	20.9	17.6	18.9	18.0	19.3	19.6
	4H	19.3	20.6	19.7	20.9	21.3	17.9	19.2	18.3	19.6	20.0
	6H	19.5	20.7	20.0	21.1	21.5	18.2	19.4	18.6	19.7	20.1
	8H	19.6	20.7	20.0	21.1	21.5	18.3	19.4	18.7	19.8	20.2
	12H	19.6	20.7	20.1	21.1	21.5	18.3	19.3	18.7	19.7	20.1
4H	2H	17.9	19.2	18.3	19.6	19.9	16.9	18.2	17.3	18.5	18.9
	3H	19.4	20.4	19.8	20.8	21.2	18.3	19.3	18.7	19.7	20.1
	4H	19.9	20.8	20.3	21.2	21.7	18.7	19.7	19.2	20.1	20.6
	6H	20.2	21.1	20.7	21.5	22.0	19.1	19.9	19.5	20.4	20.8
	8H	20.3	21.1	20.8	21.6	22.0	19.2	19.9	19.6	20.4	20.9
	12H	20.4	21.1	20.9	21.5	22.0	19.2	19.9	19.7	20.4	20.8
8H	4H	20.0	20.8	20.5	21.2	21.7	19.0	19.7	19.4	20.2	20.6
	6H	20.4	21.1	20.9	21.6	22.0	19.4	20.0	19.9	20.5	21.0
	8H	20.6	21.2	21.1	21.7	22.1	19.5	20.1	20.0	20.6	21.1
	12H	20.7	21.2	21.2	21.7	22.2	19.6	20.1	20.1	20.6	21.1
12H	4H	20.0	20.7	20.5	21.2	21.6	19.0	19.7	19.5	20.1	20.6
	6H	20.5	21.0	21.0	21.5	22.0	19.4	20.0	19.9	20.5	21.0
	8H	20.6	21.1	21.1	21.6	22.2	19.6	20.1	20.1	20.6	21.1

Maximum UGR = 22.2

POLAR GRAPH



Maximum Candela = 2904.684 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)