



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-6-00-L8-835-F-(L7)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 29653.0
 [TESTLABV] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 23-JUL-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 6' DIRECT SUSPENDED LUMINAIRE
 [MORE] WITH FROSTED ACRYLIC LENS
 [LUMCAT] MX4D-6-00-L8-835-F-(L7)-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	4305
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	129
Total Luminaire Watts	33.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	6.00 ft
Luminous Width (90-270)	0.32 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	8240	7991	7866
55	7568	7260	7055
65	6441	6337	6128
75	4889	5117	4832
85	2364	3039	2870

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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	1751.762	1751.762	1751.762	1751.762	1751.762
5	1759.594	1741.319	1733.487	1728.265	1728.265
10	1728.265	1709.991	1702.159	1696.937	1691.716
15	1668.220	1655.167	1642.113	1636.892	1629.060
20	1597.732	1579.457	1569.014	1553.350	1548.129
25	1506.358	1485.473	1475.030	1456.756	1454.145
30	1414.985	1391.489	1370.603	1365.382	1352.329
35	1287.062	1271.398	1253.123	1234.848	1234.848
40	1166.971	1151.307	1127.811	1122.589	1104.315
45	1033.826	1018.162	1002.498	986.834	986.834
50	908.514	887.629	874.575	864.133	851.079
55	770.149	751.874	738.820	725.767	717.935
60	626.562	616.119	608.287	597.844	590.012
65	482.974	480.364	475.142	462.089	459.478
70	357.662	355.052	347.220	341.998	336.777
75	224.518	232.350	234.961	227.129	221.907
80	114.870	120.091	120.091	122.702	125.312
85	36.549	39.160	46.992	41.771	44.381
90	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : MX4D-6-00-L8-835-F-(L7)-DIM-UNV_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	628.48	N.A.	14.60
0-30	1308.58	N.A.	30.40
0-40	2094.95	N.A.	48.70
0-60	3534.09	N.A.	82.10
0-80	4248.83	N.A.	98.70
0-90	4304.61	N.A.	100.00
10-90	4139.79	N.A.	96.20
20-40	1466.47	N.A.	34.10
20-50	2242.57	N.A.	52.10
40-70	1909.3	N.A.	44.40
60-80	714.75	N.A.	16.60
70-80	244.59	N.A.	5.70
80-90	55.77	N.A.	1.30
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	4304.61	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	164.82
10-20	463.66
20-30	680.10
30-40	786.36
40-50	776.10
50-60	663.05
60-70	470.16
70-80	244.59
80-90	55.77
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 RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	90	90	90	90	88	88	88	88	84	84	84	80	80	80	77	77	77	75
1	82	79	76	73	80	77	74	72	74	72	70	71	69	68	68	67	66	64
2	75	69	64	60	73	68	63	60	65	61	58	63	60	57	60	58	56	54
3	69	61	55	51	67	60	54	50	58	53	49	56	52	48	54	50	48	46
4	63	54	48	43	61	53	47	43	52	46	42	50	45	42	48	44	41	40
5	58	49	42	37	57	48	42	37	46	41	37	45	40	36	44	39	36	34
6	54	44	38	33	52	43	37	33	42	36	32	41	36	32	40	35	32	30
7	50	40	34	29	49	39	33	29	38	33	29	37	32	29	36	32	28	27
8	47	37	30	26	45	36	30	26	35	30	26	34	29	26	33	29	26	24
9	44	34	28	24	43	33	27	23	32	27	23	32	27	23	31	26	23	22
10	41	31	25	21	40	31	25	21	30	25	21	29	25	21	29	24	21	20

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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

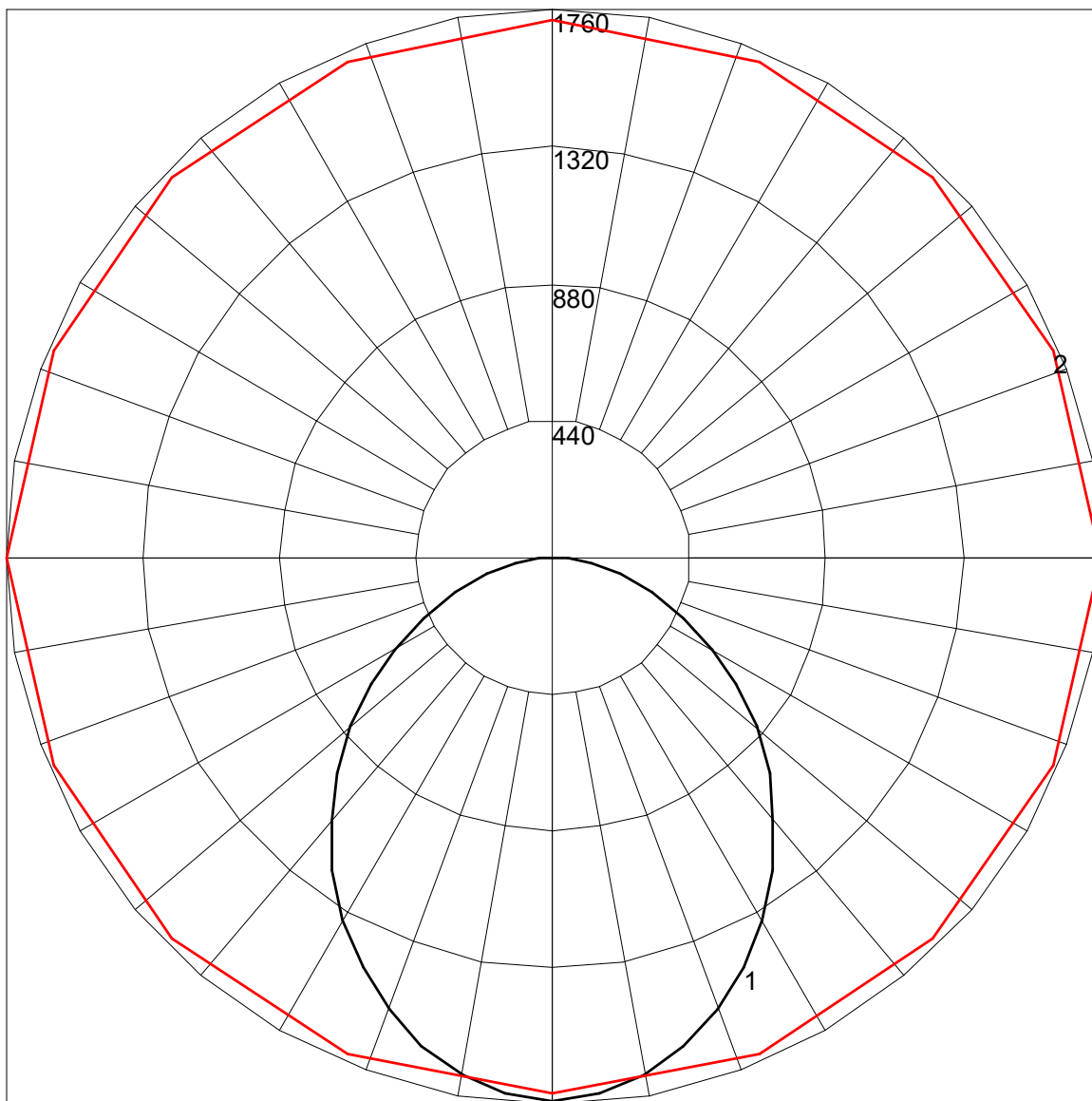
X=2H	Y=2H	20.0	21.6	20.4	21.9	22.2	19.7	21.3	20.1	21.6	21.9
	3H	21.6	23.0	21.9	23.3	23.7	21.3	22.7	21.7	23.0	23.4
	4H	22.1	23.4	22.5	23.8	24.2	21.8	23.2	22.2	23.5	23.9
	6H	22.4	23.6	22.8	24.0	24.4	22.2	23.4	22.6	23.8	24.2
	8H	22.5	23.7	22.9	24.0	24.4	22.3	23.5	22.7	23.9	24.3
	12H	22.5	23.6	22.9	24.0	24.4	22.3	23.5	22.8	23.8	24.3

UGR Viewed Endwise

4H	2H	20.5	21.9	20.9	22.2	22.6	20.3	21.7	20.7	22.0	22.4
	3H	22.3	23.4	22.7	23.8	24.2	22.1	23.2	22.5	23.6	24.0
	4H	23.0	24.0	23.4	24.4	24.8	22.7	23.7	23.2	24.2	24.6
	6H	23.4	24.3	23.8	24.7	25.1	23.2	24.1	23.6	24.5	25.0
	8H	23.5	24.3	23.9	24.7	25.2	23.3	24.2	23.8	24.6	25.1
	12H	23.5	24.3	24.0	24.7	25.2	23.4	24.1	23.9	24.6	25.1
8H	4H	23.2	24.0	23.6	24.5	24.9	23.0	23.8	23.4	24.3	24.7
	6H	23.7	24.4	24.2	24.9	25.3	23.5	24.2	24.0	24.7	25.2
	8H	23.8	24.4	24.3	25.0	25.4	23.7	24.3	24.2	24.8	25.3
	12H	23.9	24.5	24.4	25.0	25.5	23.9	24.4	24.4	24.9	25.4
12H	4H	23.2	23.9	23.7	24.4	24.9	23.0	23.7	23.5	24.2	24.7
	6H	23.7	24.3	24.2	24.8	25.3	23.6	24.2	24.1	24.7	25.2
	8H	23.9	24.4	24.4	24.9	25.5	23.8	24.3	24.3	24.8	25.4

Maximum UGR = 25.5

POLAR GRAPH



Maximum Candela = 1759.594 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.)