



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-8-00-L8-835-F-(L5)-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  
 [ISSUE DATE] 07-06-2020  
 [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-(L5)-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	4095
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	127
Total Luminaire Watts	32.3
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	6872	5955	5402
55	5690	4757	4326
65	4288	3605	3264
75	2944	2586	2307
85	1418	1181	945

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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>
<b>0</b>	1946.893	1946.893	1946.893	1946.893	1946.893
<b>5</b>	1953.947	1932.785	1923.380	1911.623	1909.272
<b>10</b>	1916.326	1885.759	1864.597	1843.435	1834.030
<b>15</b>	1857.543	1829.327	1770.544	1742.328	1728.220
<b>20</b>	1784.652	1728.220	1664.735	1620.059	1601.249
<b>25</b>	1685.896	1620.059	1537.763	1497.791	1486.034
<b>30</b>	1570.682	1490.737	1408.441	1368.468	1349.658
<b>35</b>	1431.954	1347.306	1265.010	1225.038	1201.525
<b>40</b>	1276.767	1203.876	1105.120	1067.499	1041.635
<b>45</b>	1109.823	1041.635	961.690	898.204	872.340
<b>50</b>	926.420	860.583	780.638	731.261	724.207
<b>55</b>	745.368	693.639	623.100	597.235	566.668
<b>60</b>	590.181	526.696	482.021	451.453	437.346
<b>65</b>	413.832	378.563	347.995	326.833	315.077
<b>70</b>	296.266	258.645	244.537	225.727	221.024
<b>75</b>	173.998	164.592	152.836	143.431	136.377
<b>80</b>	96.404	91.701	86.999	79.945	75.242
<b>85</b>	28.216	28.216	23.513	23.513	18.811
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	683.69	N.A.	16.70
0-30	1401.86	N.A.	34.20
0-40	2206.64	N.A.	53.90
0-60	3531.07	N.A.	86.20
0-80	4058.51	N.A.	99.10
0-90	4095.38	N.A.	100.00
10-90	3913.44	N.A.	95.60
20-40	1522.95	N.A.	37.20
20-50	2271.27	N.A.	55.50
40-70	1682.83	N.A.	41.10
60-80	527.44	N.A.	12.90
70-80	169.04	N.A.	4.10
80-90	36.87	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	4095.38	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	181.94
10-20	501.75
20-30	718.17
30-40	804.78
40-50	748.32
50-60	576.11
60-70	358.40
70-80	169.04
80-90	36.87
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	107	104	100	97	100	97	94	96	93	91	92	90	89	87
2	101	94	88	83	99	92	86	82	89	84	80	85	81	78	82	79	76	74
3	93	84	76	70	91	82	75	70	79	73	68	76	71	67	74	70	66	64
4	86	75	67	61	84	74	66	60	71	65	59	69	63	59	67	62	58	56
5	79	67	59	53	77	66	59	53	64	57	52	62	56	52	61	55	51	49
6	74	61	53	47	72	60	52	47	59	51	46	57	51	46	55	50	45	44
7	69	56	48	42	67	55	47	42	54	46	41	52	46	41	51	45	41	39
8	64	51	43	38	63	51	43	38	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	43	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	40	35	31	29

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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	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

### UGR Viewed Endwise

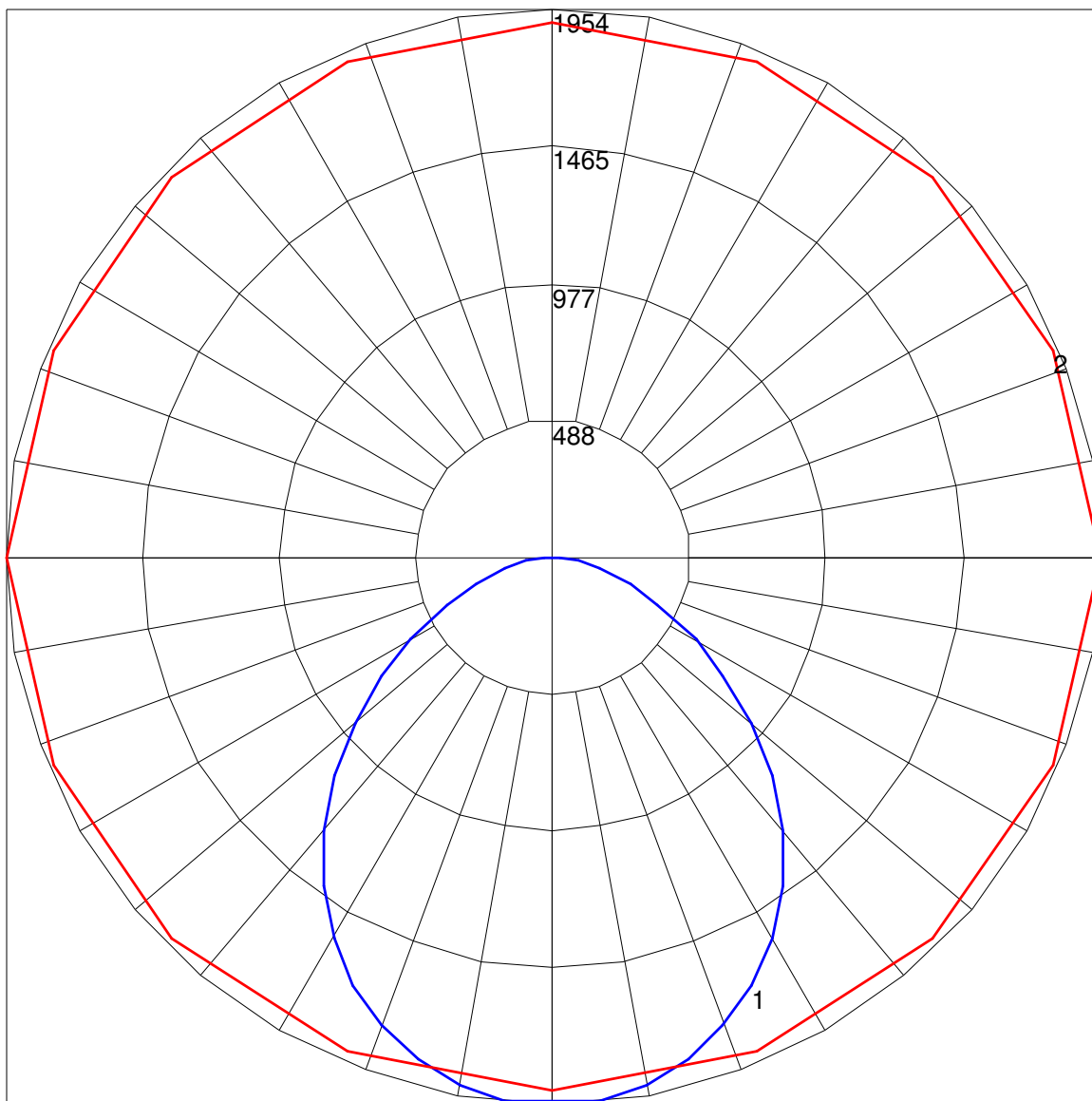
4H	2H	17.9	19.2	18.3	19.6	19.9	16.9	18.2	17.3	18.5	18.9
	3H	19.4	20.4	19.8	20.8	21.2	18.3	19.3	18.7	19.7	20.1
	4H	19.9	20.8	20.3	21.2	21.7	18.7	19.7	19.2	20.1	20.6
	6H	20.2	21.1	20.7	21.5	22.0	19.1	19.9	19.5	20.4	20.8
	8H	20.3	21.1	20.8	21.6	22.0	19.2	19.9	19.6	20.4	20.9
	12H	20.4	21.1	20.9	21.5	22.0	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 = 1953.947 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.)