



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-8-00-L8-8TW-F-A-DIM-UNV 4000K\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 29653.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 13-MAR-2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 2-72 LED 23.75" ARRAYS 8' DOWNLIGHT LUMINAIRE  
 [MORE] WHITE ALUM BODY w/WHITE REFL & FLAT FROST LENS  
 [LUMCAT] MX4D-8-00-L8-8TW-F-A-DIM-UNV 4000k

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6658
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	53.6
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)	8.00 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	9559	9270	9125
55	8779	8422	8184
65	7472	7351	7108
75	5672	5936	5606
85	2742	3525	3329

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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>	2709.498	2709.498	2709.498	2709.498	2709.498
<b>5</b>	2721.612	2693.346	2681.232	2673.156	2673.156
<b>10</b>	2673.156	2644.890	2632.776	2624.700	2616.624
<b>15</b>	2580.282	2560.092	2539.902	2531.826	2519.712
<b>20</b>	2471.256	2442.990	2426.838	2402.610	2394.534
<b>25</b>	2329.926	2297.622	2281.470	2253.204	2249.166
<b>30</b>	2188.596	2152.254	2119.950	2111.874	2091.684
<b>35</b>	1990.734	1966.506	1938.240	1909.974	1909.974
<b>40</b>	1804.986	1780.758	1744.416	1736.340	1708.074
<b>45</b>	1599.048	1574.820	1550.592	1526.364	1526.364
<b>50</b>	1405.224	1372.920	1352.730	1336.578	1316.388
<b>55</b>	1191.210	1162.944	1142.754	1122.564	1110.450
<b>60</b>	969.120	952.968	940.854	924.702	912.588
<b>65</b>	747.030	742.992	734.916	714.726	710.688
<b>70</b>	553.206	549.168	537.054	528.978	520.902
<b>75</b>	347.268	359.382	363.420	351.306	343.230
<b>80</b>	177.672	185.748	185.748	189.786	193.824
<b>85</b>	56.532	60.570	72.684	64.608	68.646
<b>90</b>	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : MX4D-8-00-L8-8TW-F-A-DIM-UNV 4000K\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	972.08	N.A.	14.60
0-30	2024.02	N.A.	30.40
0-40	3240.31	N.A.	48.70
0-60	5466.27	N.A.	82.10
0-80	6571.79	N.A.	98.70
0-90	6658.06	N.A.	100.00
10-90	6403.13	N.A.	96.20
20-40	2268.23	N.A.	34.10
20-50	3468.64	N.A.	52.10
40-70	2953.17	N.A.	44.40
60-80	1105.52	N.A.	16.60
70-80	378.31	N.A.	5.70
80-90	86.27	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	6658.06	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	254.93
10-20	717.15
20-30	1051.94
30-40	1216.29
40-50	1200.41
50-60	1025.55
60-70	727.21
70-80	378.31
80-90	86.27
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	241	241	241	241	236	236	236	236	225	225	225	216	216	216	207	207	207	203
1	222	213	204	197	216	208	201	194	199	193	188	192	187	182	184	180	177	172
2	203	187	173	162	197	183	171	160	176	165	157	169	160	153	163	156	150	145
3	185	165	149	136	180	162	147	135	156	143	132	150	139	130	145	136	128	124
4	170	147	129	116	166	144	128	115	139	125	114	134	122	112	130	119	111	106
5	157	131	114	101	153	129	113	100	125	110	99	121	108	98	117	106	97	93
6	145	119	101	88	141	117	100	88	113	98	87	110	97	86	107	95	86	82
7	135	108	91	78	131	106	90	78	103	88	78	100	87	77	98	86	76	72
8	126	99	82	70	122	97	81	70	95	80	70	92	79	69	90	78	69	65
9	117	91	74	63	115	90	74	63	87	73	63	85	72	63	83	71	62	59
10	110	84	68	58	108	83	68	58	81	67	57	79	66	57	77	65	57	53

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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

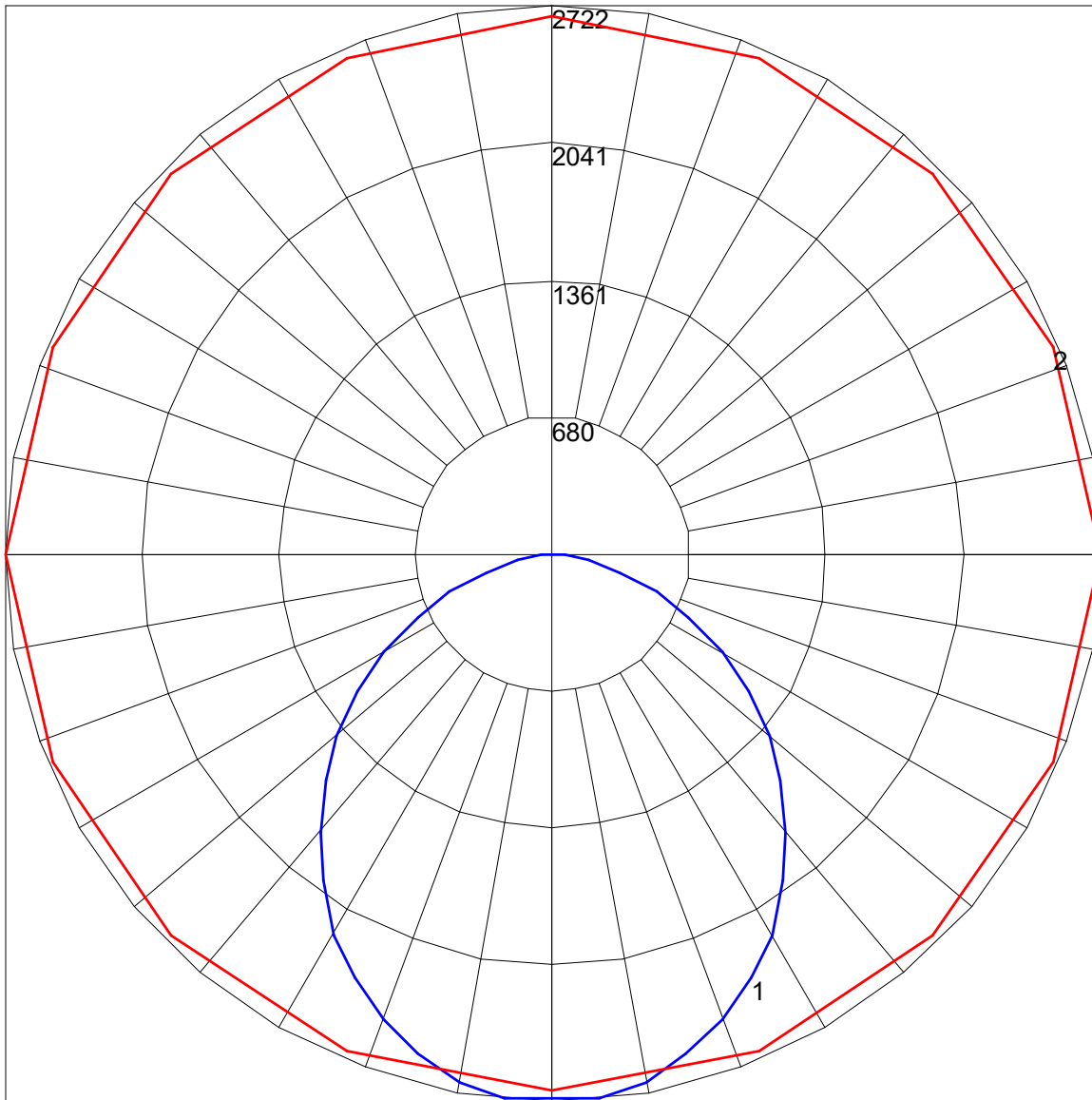
X=2H	Y=2H	19.4	21.0	19.8	21.3	21.6	19.1	20.7	19.5	21.0	21.4
	3H	21.0	22.4	21.4	22.7	23.1	20.7	22.1	21.1	22.4	22.8
	4H	21.5	22.8	21.9	23.2	23.6	21.2	22.6	21.6	22.9	23.3
	6H	21.8	23.1	22.2	23.4	23.8	21.6	22.8	22.0	23.2	23.6
	8H	21.9	23.1	22.3	23.5	23.9	21.7	22.9	22.1	23.3	23.7
	12H	21.9	23.0	22.3	23.4	23.9	21.7	22.9	22.2	23.3	23.7

### UGR Viewed Endwise

4H	2H	19.9	21.3	20.3	21.6	22.0	19.7	21.1	20.1	21.4	21.8
	3H	21.7	22.9	22.1	23.3	23.7	21.5	22.6	21.9	23.0	23.4
	4H	22.4	23.4	22.8	23.8	24.2	22.1	23.2	22.6	23.6	24.0
	6H	22.8	23.7	23.2	24.1	24.6	22.6	23.5	23.1	23.9	24.4
	8H	22.9	23.7	23.3	24.1	24.6	22.7	23.6	23.2	24.0	24.5
	12H	22.9	23.7	23.4	24.1	24.6	22.8	23.6	23.3	24.0	24.5
8H	4H	22.6	23.4	23.1	23.9	24.3	22.4	23.2	22.9	23.7	24.1
	6H	23.1	23.8	23.6	24.3	24.7	23.0	23.6	23.4	24.1	24.6
	8H	23.2	23.9	23.7	24.4	24.9	23.1	23.7	23.6	24.3	24.7
	12H	23.3	23.9	23.9	24.4	24.9	23.3	23.8	23.8	24.3	24.9
12H	4H	22.6	23.4	23.1	23.8	24.3	22.4	23.2	22.9	23.6	24.1
	6H	23.1	23.7	23.6	24.2	24.7	23.0	23.6	23.5	24.1	24.6
	8H	23.3	23.9	23.8	24.3	24.9	23.2	23.7	23.7	24.2	24.8

Maximum UGR = 24.9

POLAR GRAPH



Maximum Candela = 2721.612 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.)