



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-6-00-L8-840-F-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] 12-DEC-2019  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 2-72 LED 23.75"ARRAYS 6'DOWNLIGHT LUMINAIRE  
 [MORE] WHITE ALUM BODY w/WHITE REFL & FLAT FROST LENS  
 [LUMCAT] MX4D-6-00-L8-840-F-AC-Dxx-DIM-UNV  
 [LAMPCAT] MX2472\_2835 REV A 10560314

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5091
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	116
Total Luminaire Watts	43.8
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	9747	9451	9304
55	8951	8587	8344
65	7619	7495	7248
75	5783	6052	5716
85	2796	3594	3395

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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>	2071.981	2071.981	2071.981	2071.981	2071.981
<b>5</b>	2081.245	2059.629	2050.366	2044.190	2044.190
<b>10</b>	2044.190	2022.574	2013.311	2007.135	2000.959
<b>15</b>	1973.168	1957.729	1942.289	1936.113	1926.850
<b>20</b>	1889.795	1868.179	1855.828	1837.300	1831.125
<b>25</b>	1781.718	1757.015	1744.663	1723.048	1719.960
<b>30</b>	1673.642	1645.851	1621.147	1614.972	1599.532
<b>35</b>	1522.335	1503.807	1482.192	1460.577	1460.577
<b>40</b>	1380.291	1361.764	1333.973	1327.797	1306.182
<b>45</b>	1222.808	1204.281	1185.754	1167.226	1167.226
<b>50</b>	1074.589	1049.886	1034.446	1022.095	1006.655
<b>55</b>	910.930	889.315	873.876	858.436	849.172
<b>60</b>	741.096	728.744	719.481	707.129	697.865
<b>65</b>	571.261	568.174	561.998	546.558	543.470
<b>70</b>	423.042	419.954	410.691	404.515	398.339
<b>75</b>	265.559	274.823	277.911	268.647	262.471
<b>80</b>	135.868	142.043	142.043	145.131	148.219
<b>85</b>	43.231	46.318	55.582	49.406	52.494
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	743.36	N.A.	14.60
0-30	1547.79	N.A.	30.40
0-40	2477.9	N.A.	48.70
0-60	4180.11	N.A.	82.10
0-80	5025.51	N.A.	98.70
0-90	5091.48	N.A.	100.00
10-90	4896.54	N.A.	96.20
20-40	1734.54	N.A.	34.10
20-50	2652.5	N.A.	52.10
40-70	2258.32	N.A.	44.40
60-80	845.40	N.A.	16.60
70-80	289.29	N.A.	5.70
80-90	65.97	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	5091.48	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	194.95
10-20	548.41
20-30	804.43
30-40	930.11
40-50	917.97
50-60	784.25
60-70	556.10
70-80	289.29
80-90	65.97
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	109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	87	82	77	83	79	75	80	77	74	72
3	91	81	73	67	89	80	72	67	77	70	65	74	69	64	71	67	63	61
4	84	72	64	57	82	71	63	57	68	62	56	66	60	55	64	59	55	53
5	77	65	56	50	75	64	56	49	62	54	49	60	53	48	58	52	48	46
6	72	59	50	44	70	58	49	43	56	48	43	54	48	43	53	47	42	40
7	66	53	45	39	65	52	44	39	51	44	38	49	43	38	48	42	38	36
8	62	49	40	35	60	48	40	35	47	39	34	45	39	34	44	38	34	32
9	58	45	37	31	57	44	36	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

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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	19.6	21.2	20.0	21.5	21.8	19.3	20.9	19.7	21.2	21.5
	3H	21.2	22.6	21.5	22.9	23.3	20.9	22.3	21.3	22.6	23.0
	4H	21.7	23.0	22.1	23.4	23.8	21.4	22.8	21.8	23.1	23.5
	6H	22.0	23.2	22.4	23.6	24.0	21.8	23.0	22.2	23.4	23.8
	8H	22.1	23.3	22.5	23.6	24.0	21.9	23.1	22.3	23.5	23.9
	12H	22.1	23.2	22.5	23.6	24.0	21.9	23.1	22.4	23.4	23.9

UGR Viewed Endwise

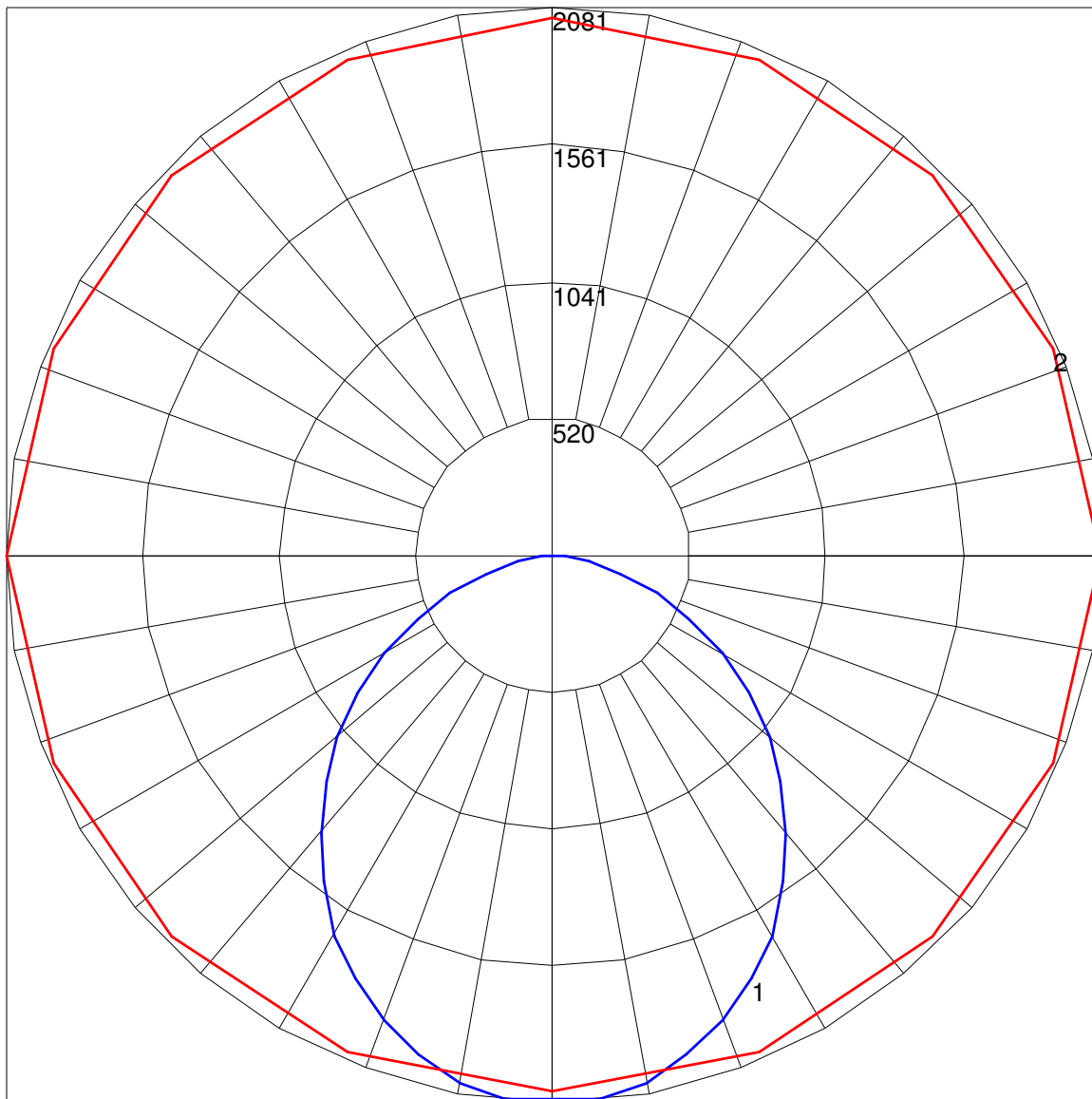
4H	2H	20.1	21.5	20.5	21.8	22.2	19.9	21.3	20.3	21.6	22.0
	3H	21.9	23.0	22.3	23.4	23.8	21.7	22.8	22.1	23.2	23.6
	4H	22.6	23.6	23.0	24.0	24.4	22.3	23.3	22.8	23.8	24.2
	6H	23.0	23.9	23.4	24.3	24.7	22.8	23.7	23.2	24.1	24.6
	8H	23.1	23.9	23.5	24.3	24.8	22.9	23.8	23.4	24.2	24.7
	12H	23.1	23.9	23.6	24.3	24.8	23.0	23.7	23.5	24.2	24.7

8H	4H	22.8	23.6	23.2	24.1	24.5	22.6	23.4	23.0	23.9	24.3
	6H	23.3	24.0	23.8	24.5	24.9	23.1	23.8	23.6	24.3	24.8
	8H	23.4	24.0	23.9	24.6	25.0	23.3	23.9	23.8	24.4	24.9
	12H	23.5	24.1	24.0	24.6	25.1	23.5	24.0	24.0	24.5	25.0

12H	4H	22.8	23.5	23.3	24.0	24.5	22.6	23.3	23.1	23.8	24.3
	6H	23.3	23.9	23.8	24.4	24.9	23.2	23.8	23.7	24.3	24.8
	8H	23.5	24.0	24.0	24.5	25.1	23.4	23.9	23.9	24.4	25.0

Maximum UGR = 25.1

POLAR GRAPH



Maximum Candela = 2081.245 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.)