



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-8-00-L12-835-X-A-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] 12-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-L12-835-x-DIM-UNV

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	9399
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
Total Luminaire Watts	86.4
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	15771	13666	12397
55	13058	10916	9928
65	9840	8274	7492
75	6755	5934	5295
85	3253	2711	2169

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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>	4467.968	4467.968	4467.968	4467.968	4467.968
<b>5</b>	4484.156	4435.591	4414.007	4387.026	4381.630
<b>10</b>	4397.818	4327.669	4279.104	4230.539	4208.955
<b>15</b>	4262.916	4198.163	4063.260	3998.507	3966.131
<b>20</b>	4095.637	3966.131	3820.436	3717.910	3674.742
<b>25</b>	3869.001	3717.910	3529.047	3437.313	3410.333
<b>30</b>	3604.592	3421.125	3232.262	3140.528	3097.359
<b>35</b>	3286.223	3091.963	2903.100	2811.366	2757.405
<b>40</b>	2930.080	2762.801	2536.165	2449.828	2390.471
<b>45</b>	2546.957	2390.471	2207.003	2061.309	2001.952
<b>50</b>	2126.062	1974.971	1791.504	1678.186	1661.998
<b>55</b>	1710.563	1591.848	1429.966	1370.608	1300.459
<b>60</b>	1354.420	1208.726	1106.200	1036.050	1003.674
<b>65</b>	949.713	868.771	798.622	750.057	723.077
<b>70</b>	679.908	593.571	561.194	518.025	507.233
<b>75</b>	399.311	377.727	350.746	329.162	312.974
<b>80</b>	221.240	210.448	199.656	183.467	172.675
<b>85</b>	64.753	64.753	53.961	53.961	43.169
<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	1569.02	N.A.	16.70
0-30	3217.17	N.A.	34.20
0-40	5064.07	N.A.	53.90
0-60	8103.53	N.A.	86.20
0-80	9313.97	N.A.	99.10
0-90	9398.58	N.A.	100.00
10-90	8981.04	N.A.	95.60
20-40	3495.05	N.A.	37.20
20-50	5212.39	N.A.	55.50
40-70	3861.97	N.A.	41.10
60-80	1210.44	N.A.	12.90
70-80	387.93	N.A.	4.10
80-90	84.61	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	9398.58	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	417.54
10-20	1151.48
20-30	1648.15
30-40	1846.9
40-50	1717.34
50-60	1322.12
60-70	822.51
70-80	387.93
80-90	84.61
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	174	174	174	174	170	170	170	170	162	162	162	155	155	155	149	149	149	146
1	161	155	149	144	157	151	146	142	145	141	137	140	136	133	134	132	129	126
2	148	137	128	121	144	134	126	119	129	122	116	125	119	114	120	116	111	108
3	136	122	111	102	132	120	110	102	115	107	100	112	104	98	108	102	96	94
4	125	109	97	88	122	107	96	88	104	94	87	100	92	86	97	90	84	81
5	116	98	86	77	113	97	85	77	94	84	76	91	82	75	88	81	75	72
6	108	89	77	68	105	88	76	68	85	75	67	83	74	67	81	73	66	64
7	100	82	69	61	98	80	69	61	78	68	60	76	67	60	74	66	60	57
8	93	75	63	55	91	74	63	55	72	62	54	70	61	54	68	60	54	51
9	88	69	58	50	86	68	57	50	66	56	49	65	56	49	63	55	49	46
10	82	64	53	46	80	63	53	45	62	52	45	60	51	45	59	51	45	42

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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	19.2	20.8	19.6	21.1	21.4	18.0	19.5	18.4	19.8	20.2
	3H	20.5	21.9	20.9	22.2	22.5	19.2	20.5	19.6	20.9	21.2
	4H	20.9	22.2	21.3	22.5	22.9	19.5	20.8	19.9	21.2	21.6
	6H	21.1	22.3	21.6	22.7	23.1	19.8	21.0	20.2	21.3	21.7
	8H	21.2	22.3	21.6	22.7	23.1	19.9	21.0	20.3	21.4	21.8
	12H	21.2	22.3	21.7	22.7	23.1	19.9	20.9	20.3	21.3	21.7

UGR Viewed Endwise

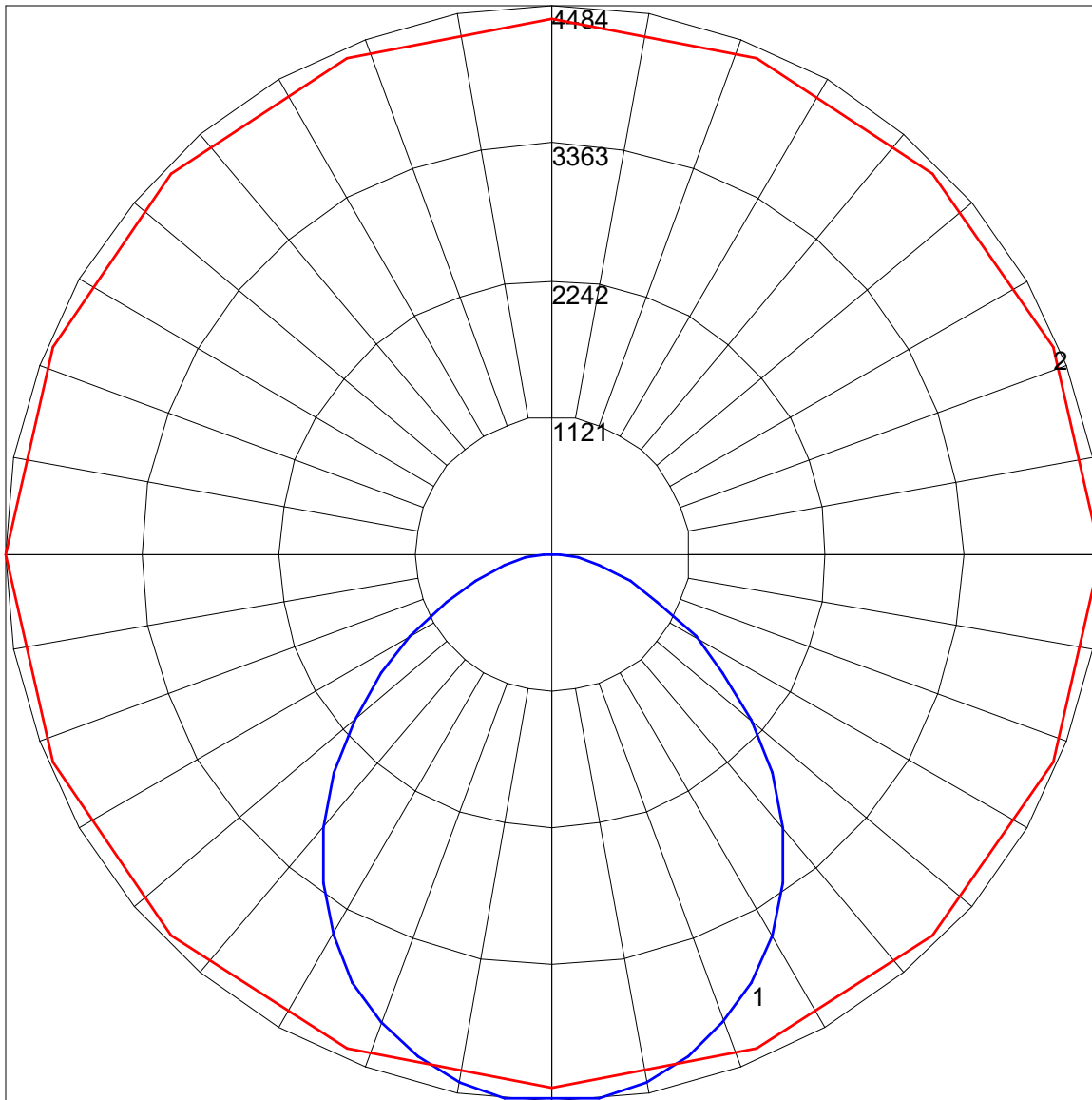
4H	2H	19.5	20.8	19.9	21.2	21.5	18.5	19.8	18.9	20.1	20.5
	3H	21.0	22.0	21.4	22.4	22.8	19.9	20.9	20.3	21.3	21.7
	4H	21.5	22.4	21.9	22.8	23.3	20.3	21.3	20.8	21.7	22.2
	6H	21.8	22.7	22.3	23.1	23.6	20.7	21.5	21.1	22.0	22.4
	8H	21.9	22.7	22.4	23.2	23.6	20.8	21.5	21.2	22.0	22.5
	12H	22.0	22.7	22.5	23.1	23.6	20.8	21.5	21.3	22.0	22.4

8H	4H	21.6	22.4	22.1	22.8	23.3	20.6	21.3	21.0	21.8	22.2
	6H	22.0	22.7	22.5	23.2	23.6	21.0	21.6	21.5	22.1	22.6
	8H	22.2	22.8	22.7	23.3	23.7	21.1	21.7	21.6	22.2	22.7
	12H	22.3	22.8	22.8	23.3	23.8	21.2	21.7	21.7	22.2	22.7

12H	4H	21.6	22.3	22.1	22.8	23.2	20.6	21.3	21.1	21.7	22.2
	6H	22.1	22.6	22.6	23.1	23.6	21.0	21.6	21.5	22.1	22.6
	8H	22.2	22.7	22.7	23.2	23.8	21.2	21.7	21.7	22.2	22.7

Maximum UGR = 23.8

POLAR GRAPH



Maximum Candela = 4484.156 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.)