



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4UD-8-00-L8-835U-L8-835D-AF-(L4U-L4D)-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 20659.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 06-JAN-2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836  
 [LUMINAIRE] 8' DIRECT/INDIRECT SUSPENDED LUMINAIRE  
 [MORE] WITH FROSTED ACRYLIC LENS TOP/BTM  
 [LUMCAT] MX4UD-8-00-L8-835U-L8-835D-AF-(L4U-L4D)-DIM-UNV  
 [LAMPCAT] HLM 80 CRI, 3500K CCT  
 [ \_SEARCH\_SOURCETYPE] LED  
 [ \_SEARCH\_APPLICATION] Indoor, Architectural, Classroom, Direct-Indirect  
 [ \_SEARCH\_MOUNTING] Suspended

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6486
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	154
Total Luminaire Watts	42
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
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	4193	4101	3997
55	3820	3692	3564
65	3238	3142	3007
75	2455	2392	2392
85	1308	1402	1215

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : MX4UD-8-00-L8-835U-L8-835D-AF-(L4U-L4D)-DIM-UNV\_.IES****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>	1196.605	1196.605	1196.605	1196.605	1196.605
<b>5</b>	1210.093	1192.751	1186.970	1183.117	1181.190
<b>10</b>	1185.044	1165.775	1161.921	1154.213	1154.213
<b>15</b>	1148.432	1129.163	1121.456	1115.675	1111.821
<b>20</b>	1094.479	1077.137	1069.430	1063.649	1057.868
<b>25</b>	1030.892	1013.549	1007.769	998.134	994.280
<b>30</b>	953.816	942.254	936.473	922.985	911.424
<b>35</b>	870.959	869.032	859.397	843.982	834.348
<b>40</b>	790.029	776.541	774.614	759.199	751.491
<b>45</b>	701.392	691.757	685.976	666.707	668.634
<b>50</b>	608.900	603.120	597.339	581.924	576.143
<b>55</b>	518.336	512.555	500.994	489.433	483.652
<b>60</b>	418.137	416.210	402.722	396.941	391.161
<b>65</b>	323.719	321.792	314.085	308.304	300.596
<b>70</b>	238.936	233.155	223.520	227.374	223.520
<b>75</b>	150.298	146.444	146.444	150.298	146.444
<b>80</b>	75.149	82.857	82.857	82.857	77.076
<b>85</b>	26.977	28.904	28.904	28.904	25.050
<b>90</b>	1.927	1.927	1.927	1.927	1.927
<b>95</b>	44.319	46.246	44.319	38.538	38.538
<b>100</b>	104.053	102.126	102.126	94.418	86.711
<b>105</b>	179.202	179.202	169.567	159.933	146.444
<b>110</b>	281.327	275.547	258.205	250.497	237.009
<b>115</b>	381.526	371.892	360.330	341.061	325.646
<b>120</b>	504.848	504.848	474.017	452.822	441.260
<b>125</b>	628.169	637.804	595.412	581.924	562.655
<b>130</b>	761.126	768.833	732.222	711.026	695.611
<b>135</b>	882.520	870.959	859.397	849.763	845.909
<b>140</b>	996.207	994.280	988.500	975.011	978.865
<b>145</b>	1094.479	1096.406	1090.625	1080.991	1096.406
<b>150</b>	1185.044	1188.897	1186.970	1173.482	1192.751
<b>155</b>	1254.412	1260.193	1260.193	1250.558	1269.827
<b>160</b>	1308.365	1319.927	1314.146	1308.365	1319.927
<b>165</b>	1352.684	1364.245	1352.684	1352.684	1358.465
<b>170</b>	1377.734	1391.222	1379.660	1377.734	1373.880
<b>175</b>	1397.003	1408.564	1397.003	1395.076	1385.441
<b>180</b>	1400.856	1400.856	1400.856	1400.856	1400.856

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : MX4UD-8-00-L8-835U-L8-835D-AF-(L4U-L4D)-DIM-UNV\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	429.30	N.A.	6.60
0-30	893.13	N.A.	13.80
0-40	1428.07	N.A.	22.00
0-60	2402.37	N.A.	37.00
0-80	2874.43	N.A.	44.30
0-90	2912.39	N.A.	44.90
10-90	2799.71	N.A.	43.20
20-40	998.77	N.A.	15.40
20-50	1525.59	N.A.	23.50
40-70	1286.61	N.A.	19.80
60-80	472.07	N.A.	7.30
70-80	159.76	N.A.	2.50
80-90	37.96	N.A.	0.60
90-110	233.90	N.A.	3.60
90-120	592.75	N.A.	9.10
90-130	1132.99	N.A.	17.50
90-150	2479.23	N.A.	38.20
90-180	3573.5	N.A.	55.10
110-180	3339.61	N.A.	51.50
0-180	6485.89	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	112.68
10-20	316.62
20-30	463.82
30-40	534.94
40-50	526.82
50-60	447.48
60-70	312.31
70-80	159.76
80-90	37.96
90-100	50.55
100-110	183.34
110-120	358.85
120-130	540.24
130-140	664.60
140-150	681.64
150-160	578.94
160-170	382.46
170-180	132.88

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4UD-8-00-L8-835U-L8-835D-AF-(L4U-L4D)-DIM-UNV\_.IES

## 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	106	106	106	106	97	97	97	97	81	81	81	65	65	65	51	51	51	45
1	97	93	89	85	89	85	82	79	71	69	66	58	56	55	46	45	44	38
2	88	81	75	70	81	75	69	65	62	59	55	51	48	46	40	39	37	32
3	81	71	64	58	74	66	59	54	55	50	47	45	42	39	36	34	32	27
4	74	63	55	50	67	58	51	46	49	44	40	40	37	34	32	30	27	24
5	68	56	48	42	62	52	45	40	44	38	34	36	32	29	29	26	24	21
6	62	51	43	37	57	47	40	35	39	34	30	33	29	26	26	23	21	18
7	58	46	38	32	53	42	35	30	36	30	26	30	26	23	24	21	19	16
8	54	41	34	29	49	38	32	27	33	27	23	27	23	20	22	19	17	14
9	50	38	30	25	46	35	28	24	30	25	21	25	21	18	20	17	15	13
10	47	35	28	23	43	32	26	21	28	22	19	23	19	16	19	16	14	12

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4UD-8-00-L8-835U-L8-835D-AF-(L4U-L4D)-DIM-UNV\_.IES

## 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	12.3	13.1	13.3	14.1	15.5	11.9	12.7	12.9	13.8	15.1
	3H	13.8	14.5	14.8	15.5	16.9	13.4	14.1	14.4	15.2	16.5
	4H	14.2	14.9	15.3	15.9	17.3	13.9	14.6	14.9	15.6	17.0
	6H	14.5	15.1	15.5	16.1	17.5	14.2	14.8	15.2	15.9	17.2
	8H	14.5	15.1	15.6	16.2	17.6	14.3	14.9	15.3	15.9	17.3
	12H	14.5	15.1	15.6	16.2	17.6	14.3	14.8	15.3	15.9	17.3

### UGR Viewed Endwise

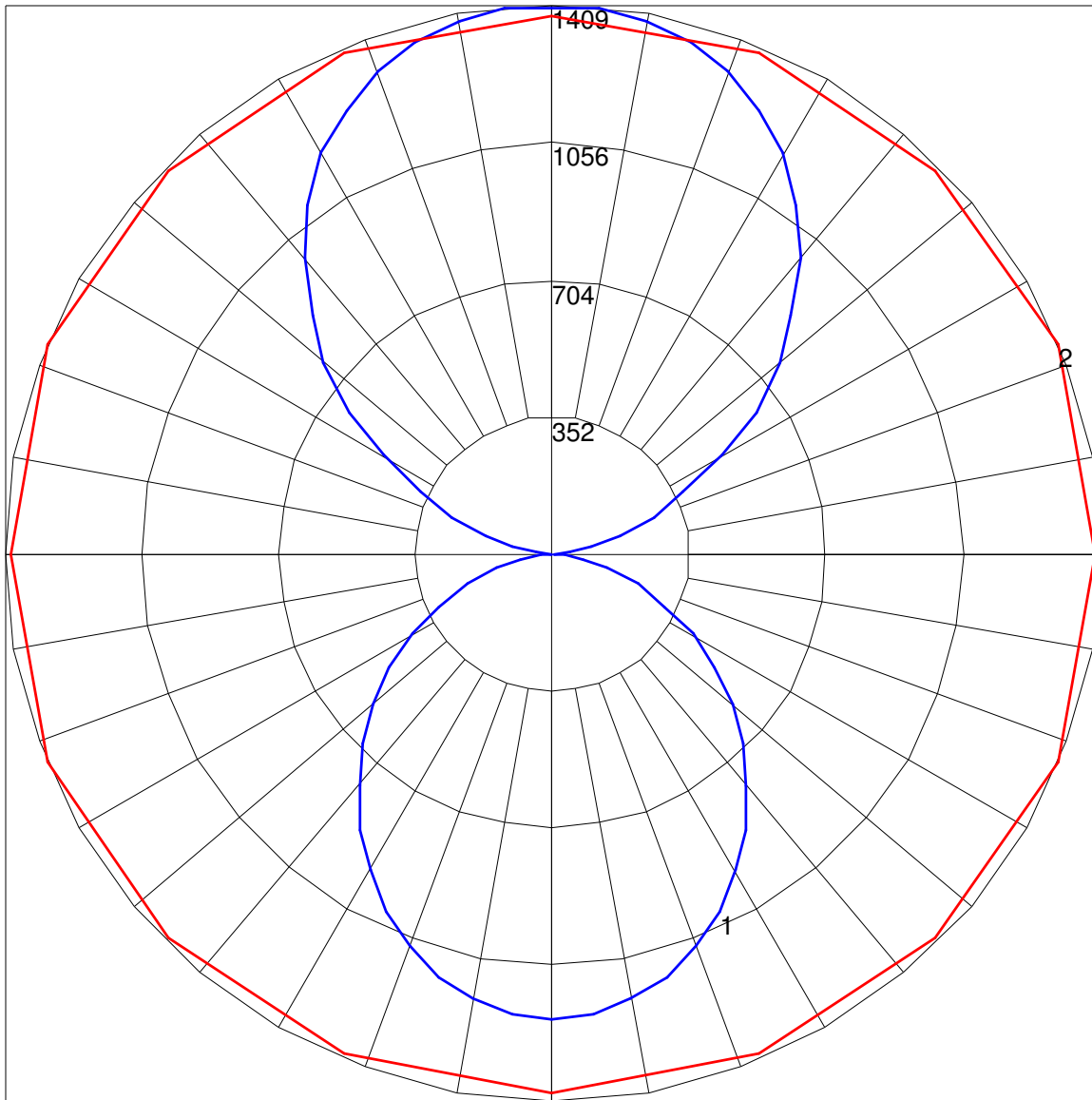
4H	2H	12.7	13.4	13.7	14.4	15.8	12.4	13.1	13.5	14.1	15.5
	3H	14.4	14.9	15.4	16.0	17.4	14.1	14.7	15.1	15.7	17.1
	4H	14.9	15.5	16.0	16.5	17.9	14.7	15.2	15.8	16.3	17.7
	6H	15.3	15.8	16.4	16.8	18.2	15.1	15.6	16.2	16.6	18.0
	8H	15.4	15.8	16.4	16.9	18.3	15.2	15.6	16.3	16.7	18.1
	12H	15.4	15.8	16.5	16.9	18.3	15.2	15.6	16.3	16.7	18.1
8H	4H	15.1	15.5	16.1	16.6	18.0	14.9	15.3	15.9	16.4	17.8
	6H	15.6	15.9	16.6	17.0	18.4	15.4	15.7	16.5	16.8	18.3
	8H	15.7	16.0	16.8	17.1	18.5	15.6	15.9	16.6	16.9	18.4
	12H	15.8	16.1	16.9	17.1	18.6	15.6	15.9	16.7	17.0	18.5
12H	4H	15.1	15.5	16.1	16.5	17.9	14.9	15.2	15.9	16.3	17.7
	6H	15.6	15.9	16.7	17.0	18.4	15.4	15.7	16.5	16.8	18.2
	8H	15.8	16.0	16.9	17.1	18.6	15.6	15.9	16.7	17.0	18.4

Maximum UGR = 18.6

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4UD-8-00-L8-835U-L8-835D-AF-(L4U-L4D)-DIM-UNV\_.IES

## POLAR GRAPH



Maximum Candela = 1408.564 Located At Horizontal Angle = 22.5, Vertical Angle = 175

# 1 - Vertical Plane Through Horizontal Angles (22.5 - 202.5) (Through Max. Cd.)

# 2 - Horizontal Cone Through Vertical Angle (175) (Through Max. Cd.)