



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4UD-4-00-L12-835U-L12-835D-AF-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  
 [ISSUE DATE] 07-NOV-2018  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 1-72 LED-UP 2-72 LED-DOWN 23.75"ARRAYS 4'LUMINAIRE  
 [MORE] WHITE ALUM BODY w/REFL & FLAT FROST LENSES-UP/DOWN  
 [MORE] 2 ADVANCE #XI036C100V054DSM5 @ 350mA-UP & 400mA-DWN  
 [LUMCAT] MX4UD-4-00-L12-835U-L12-835D-AF-DIM-UNV  
 [LAMPCAT] MX2472\_2835 REV A 10560314

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	9474
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	87.6
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)	4.00 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	12249	11980	11677
55	11160	10786	10413
65	9459	9178	8784
75	7171	6987	6987
85	3822	4095	3549

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
<b>0</b>	1747.877	1747.877	1747.877	1747.877	1747.877
<b>5</b>	1767.579	1742.248	1733.804	1728.175	1725.360
<b>10</b>	1730.989	1702.843	1697.214	1685.956	1685.956
<b>15</b>	1677.512	1649.366	1638.107	1629.663	1624.034
<b>20</b>	1598.702	1573.371	1562.112	1553.669	1545.225
<b>25</b>	1505.820	1480.488	1472.045	1457.972	1452.342
<b>30</b>	1393.235	1376.348	1367.904	1348.202	1331.314
<b>35</b>	1272.207	1269.392	1255.319	1232.802	1218.729
<b>40</b>	1153.993	1134.291	1131.476	1108.959	1097.701
<b>45</b>	1024.521	1010.447	1002.004	973.857	976.672
<b>50</b>	889.419	880.975	872.531	850.014	841.570
<b>55</b>	757.132	748.688	731.800	714.913	706.469
<b>60</b>	610.772	607.957	588.255	579.811	571.367
<b>65</b>	472.856	470.041	458.783	450.339	439.080
<b>70</b>	349.012	340.569	326.496	332.125	326.496
<b>75</b>	219.540	213.911	213.911	219.540	213.911
<b>80</b>	109.770	121.029	121.029	121.029	112.585
<b>85</b>	39.405	42.219	42.219	42.219	36.590
<b>90</b>	2.815	2.815	2.815	2.815	2.815
<b>95</b>	64.736	67.551	64.736	56.292	56.292
<b>100</b>	151.989	149.175	149.175	137.916	126.658
<b>105</b>	261.759	261.759	247.686	233.613	213.911
<b>110</b>	410.934	402.490	377.159	365.900	346.198
<b>115</b>	557.294	543.221	526.333	498.187	475.670
<b>120</b>	737.430	737.430	692.396	661.435	644.547
<b>125</b>	917.565	931.638	869.717	850.014	821.868
<b>130</b>	1111.774	1123.032	1069.554	1038.594	1016.077
<b>135</b>	1289.095	1272.207	1255.319	1241.246	1235.617
<b>140</b>	1455.157	1452.342	1443.898	1424.196	1429.825
<b>145</b>	1598.702	1601.517	1593.073	1579.000	1601.517
<b>150</b>	1730.989	1736.619	1733.804	1714.102	1742.248
<b>155</b>	1832.316	1840.759	1840.759	1826.686	1854.833
<b>160</b>	1911.125	1928.013	1919.569	1911.125	1928.013
<b>165</b>	1975.861	1992.749	1975.861	1975.861	1984.305
<b>170</b>	2012.451	2032.153	2015.266	2012.451	2006.822
<b>175</b>	2040.597	2057.485	2040.597	2037.783	2023.710
<b>180</b>	2046.226	2046.226	2046.226	2046.226	2046.226

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Zone	Lumens	%Lamp	%Fixt
0-20	627.08	N.A.	6.60
0-30	1304.58	N.A.	13.80
0-40	2085.98	N.A.	22.00
0-60	3509.13	N.A.	37.00
0-80	4198.68	N.A.	44.30
0-90	4254.12	N.A.	44.90
10-90	4089.52	N.A.	43.20
20-40	1458.9	N.A.	15.40
20-50	2228.42	N.A.	23.50
40-70	1879.34	N.A.	19.80
60-80	689.54	N.A.	7.30
70-80	233.36	N.A.	2.50
80-90	55.44	N.A.	0.60
90-110	341.65	N.A.	3.60
90-120	865.83	N.A.	9.10
90-130	1654.95	N.A.	17.50
90-150	3621.4	N.A.	38.20
90-180	5219.81	N.A.	55.10
110-180	4878.15	N.A.	51.50
0-180	9473.92	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	164.60
10-20	462.49
20-30	677.50
30-40	781.39
40-50	769.53
50-60	653.63
60-70	456.19
70-80	233.36
80-90	55.44
90-100	73.84
100-110	267.81
110-120	524.18
120-130	789.12
130-140	970.78
140-150	995.67
150-160	845.66
160-170	558.66
170-180	194.09

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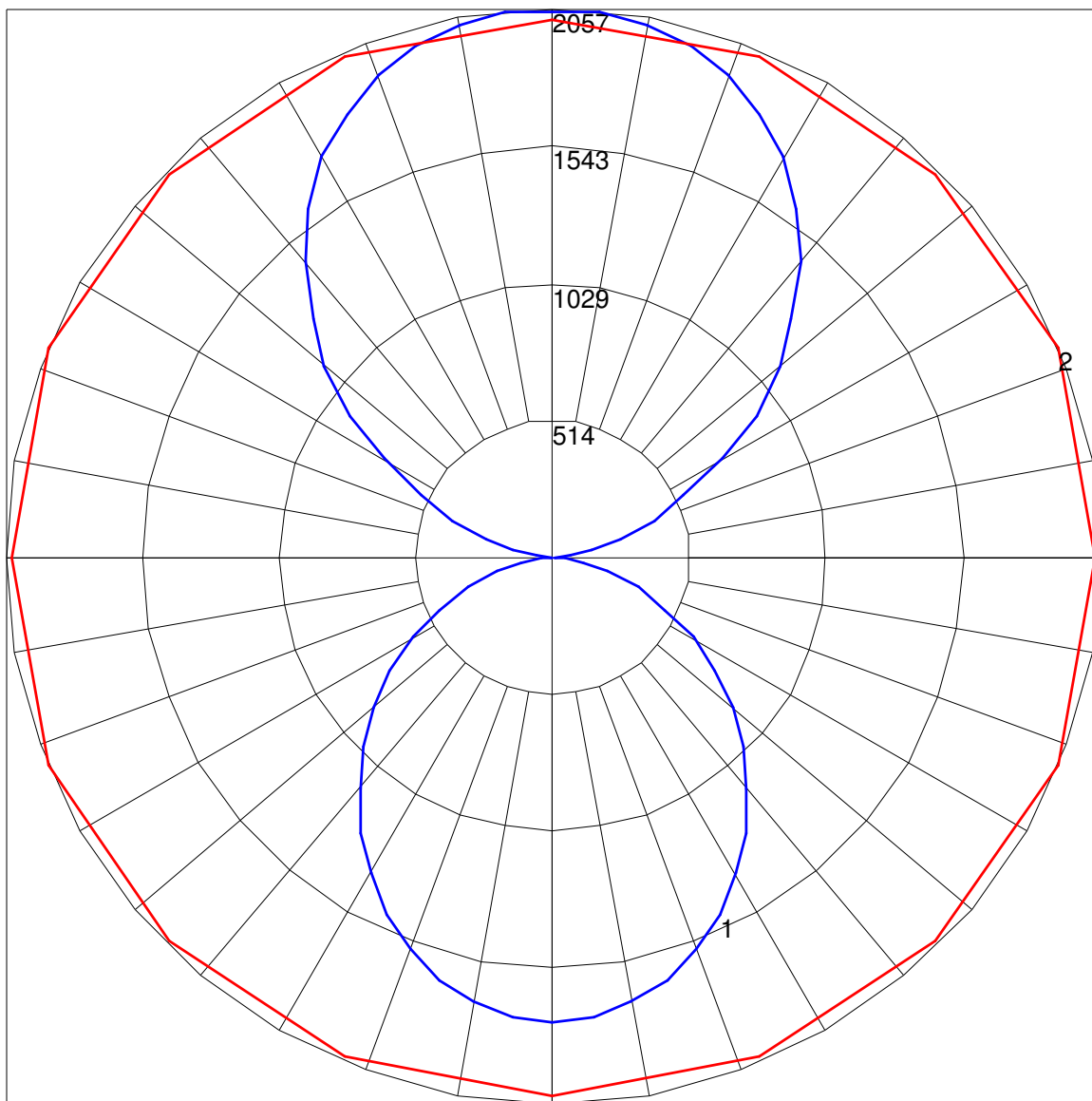
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	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

POLAR GRAPH



Maximum Candela = 2057.485 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.)