IES INDOOR REPORT
PHOTOMETRIC FILENAME : MX4WD-8-00-P7-835-F-POE-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] 15-MAR-2020
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4-72 LED 23.75" ARRAYS 8' DOWNLIGHT LUMINAIRE
[MORE] WHITE ALUM BODY w/WHITE REFL & FLAT FROST LENS
[LUMCAT] MX4D-8-00-P7-835-F-PoE-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5655
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
Total Luminaire Watts	48
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	8120	7874	7751
55	7457	7154	6951
65	6347	6244	6038
75	4818	5042	4762
85	2329	2994	2828

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2301.502	2301.502	2301.502	2301.502	2301.502
5	2311.792	2287.782	2277.492	2270.632	2270.632
10	2270.632	2246.623	2236.333	2229.473	2222.613
15	2191.743	2174.593	2157.444	2150.584	2140.294
20	2099.134	2075.125	2061.405	2040.825	2033.965
25	1979.086	1951.646	1937.926	1913.917	1910.487
30	1859.037	1828.168	1800.728	1793.868	1776.718
35	1690.969	1670.390	1646.380	1622.370	1622.370
40	1533.191	1512.612	1481.742	1474.882	1450.872
45	1358.263	1337.684	1317.104	1296.524	1296.524
50	1193.625	1166.186	1149.036	1135.316	1118.166
55	1011.838	987.828	970.678	953.528	943.238
60	823.190	809.470	799.180	785.460	775.171
65	634.542	631.112	624.252	607.103	603.673
70	469.904	466.474	456.184	449.325	442.465
75	294.976	305.266	308.696	298.406	291.546
80	150.918	157.778	157.778	161.208	164.638
85	48.019	51.449	61.739	54.879	58.309
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	825.71	N.A.	14.60
0-30	1719.24	N.A.	30.40
0-40	2752.38	N.A.	48.70
0-60	4643.16	N.A.	82.10
0-80	5582.21	N.A.	98.70
0-90	5655.49	N.A.	100.00
10-90	5438.94	N.A.	96.20
20-40	1926.68	N.A.	34.10
20-50	2946.33	N.A.	52.10
40-70	2508.48	N.A.	44.40
60-80	939.05	N.A.	16.60
70-80	321.34	N.A.	5.70
80-90	73.28	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	5655.49	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	216.54
10-20	609.16
20-30	893.54
30-40	1033.14
40-50	1019.65
50-60	871.12
60-70	617.71
70-80	321.34
80-90	73.28
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	238	238	238	238	233	233	233	233	222	222	222	213	213	213	204	204	204	200
1	219	210	202	194	213	205	198	191	197	191	185	189	184	179	182	178	174	170
2	200	184	171	160	195	180	168	158	173	163	154	167	158	151	161	154	148	143
3	183	162	147	134	178	159	145	133	153	141	131	148	137	128	143	134	126	122
4	168	145	128	115	163	142	126	114	137	123	112	132	120	111	128	118	109	105
5	155	130	112	99	150	127	111	99	123	109	98	119	107	97	116	105	96	91
6	143	117	100	87	139	115	99	87	112	97	86	108	95	85	105	94	84	80
7	133	106	89	77	129	105	89	77	102	87	76	99	86	76	96	84	75	71
8	124	97	81	69	121	96	80	69	93	79	69	91	78	68	89	77	68	64
9	116	90	73	63	113	88	73	62	86	72	62	84	71	62	82	70	61	58
10	109	83	67	57	106	82	67	57	80	66	57	78	65	56	76	64	56	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					UGR Viewed Endwise				
X=2H	Y=2H	18.9	20.5	19.3	20.8	21.1	18.6	20.2	19.0	20.5	20.9
	3H	20.5	21.9	20.9	22.2	22.6	20.2	21.6	20.6	21.9	22.3
	4H	21.0	22.3	21.4	22.7	23.1	20.7	22.1	21.1	22.4	22.8
	6H	21.3	22.6	21.7	22.9	23.3	21.1	22.3	21.5	22.7	23.1
	8H	21.4	22.6	21.8	23.0	23.4	21.2	22.4	21.6	22.8	23.2
	12H	21.4	22.5	21.8	22.9	23.4	21.2	22.4	21.7	22.8	23.2
4H	2H	19.4	20.8	19.8	21.1	21.5	19.2	20.6	19.6	20.9	21.3
	3H	21.2	22.4	21.6	22.8	23.2	21.0	22.1	21.4	22.5	22.9
	4H	21.9	22.9	22.3	23.3	23.7	21.6	22.7	22.1	23.1	23.5
	6H	22.3	23.2	22.7	23.6	24.1	22.1	23.0	22.6	23.4	23.9
	8H	22.4	23.2	22.8	23.6	24.1	22.2	23.1	22.7	23.5	24.0
	12H	22.4	23.2	22.9	23.6	24.1	22.3	23.1	22.8	23.5	24.0
8H	4H	22.1	22.9	22.6	23.4	23.8	21.9	22.7	22.4	23.2	23.6
	6H	22.6	23.3	23.1	23.8	24.2	22.5	23.1	22.9	23.6	24.1
	8H	22.7	23.4	23.2	23.9	24.4	22.6	23.2	23.1	23.8	24.2
	12H	22.8	23.4	23.4	23.9	24.4	22.8	23.3	23.3	23.8	24.4
12H	4H	22.1	22.9	22.6	23.3	23.8	21.9	22.7	22.4	23.1	23.6
	6H	22.6	23.2	23.1	23.7	24.2	22.5	23.1	23.0	23.6	24.1
	8H	22.8	23.4	23.3	23.8	24.4	22.7	23.2	23.2	23.7	24.3

Maximum UGR = 24.4

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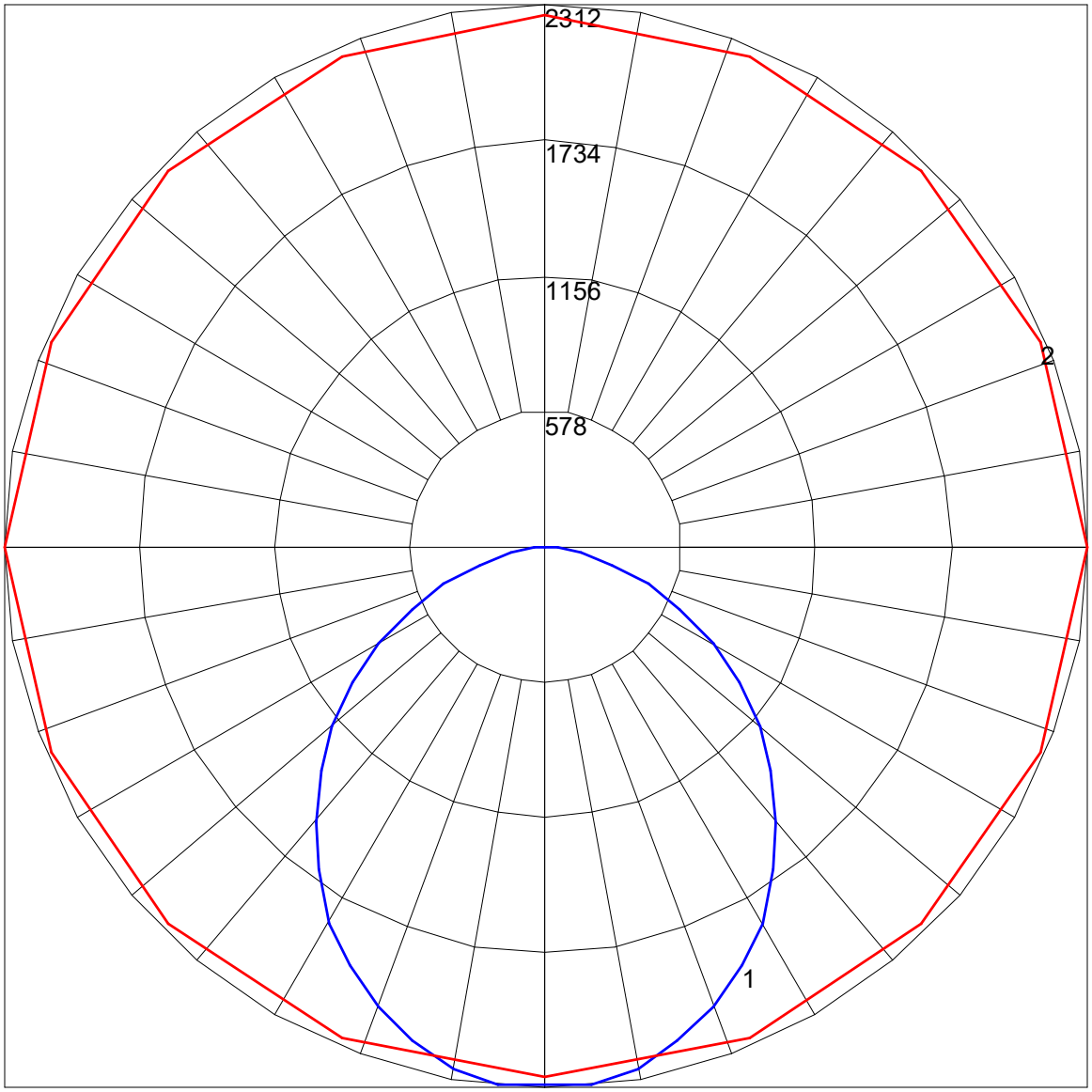
POLAR GRAPH



Maximum Candela = 2311.792 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.)

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