IES INDOOR REPORT
PHOTOMETRIC FILENAME : MX4WD-8-00-P7-8TW-F-POE-UNV 4000K_.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-P7-8TW-F-PoE-UNV 4000k

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5623
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
Total Luminaire Watts	40
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)	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	16148	15658	15414
55	14830	14226	13824
65	12622	12417	12008
75	9581	10026	9469
85	4632	5955	5624

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2288.480	2288.480	2288.480	2288.480	2288.480
5	2298.712	2274.838	2264.607	2257.785	2257.785
10	2257.785	2233.912	2223.680	2216.859	2210.038
15	2179.343	2162.290	2145.237	2138.416	2128.184
20	2087.258	2063.384	2049.742	2029.278	2022.457
25	1967.889	1940.604	1926.962	1903.088	1899.677
30	1848.519	1817.824	1790.540	1783.719	1766.666
35	1681.402	1660.939	1637.065	1613.191	1613.191
40	1524.517	1504.053	1473.358	1466.537	1442.664
45	1350.579	1330.115	1309.652	1289.189	1289.189
50	1186.872	1159.588	1142.535	1128.893	1111.840
55	1006.113	982.239	965.186	948.133	937.902
60	818.532	804.890	794.659	781.016	770.785
65	630.952	627.542	620.720	603.668	600.257
70	467.246	463.835	453.603	446.782	439.961
75	293.307	303.539	306.950	296.718	289.897
80	150.064	156.885	156.885	160.296	163.706
85	47.748	51.158	61.390	54.569	57.979
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	821.03	N.A.	14.60
0-30	1709.52	N.A.	30.40
0-40	2736.81	N.A.	48.70
0-60	4616.89	N.A.	82.10
0-80	5550.63	N.A.	98.70
0-90	5623.49	N.A.	100.00
10-90	5408.17	N.A.	96.20
20-40	1915.78	N.A.	34.10
20-50	2929.66	N.A.	52.10
40-70	2494.29	N.A.	44.40
60-80	933.73	N.A.	16.60
70-80	319.52	N.A.	5.70
80-90	72.86	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	5623.49	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	215.32
10-20	605.72
20-30	888.48
30-40	1027.3
40-50	1013.88
50-60	866.20
60-70	614.21
70-80	319.52
80-90	72.86
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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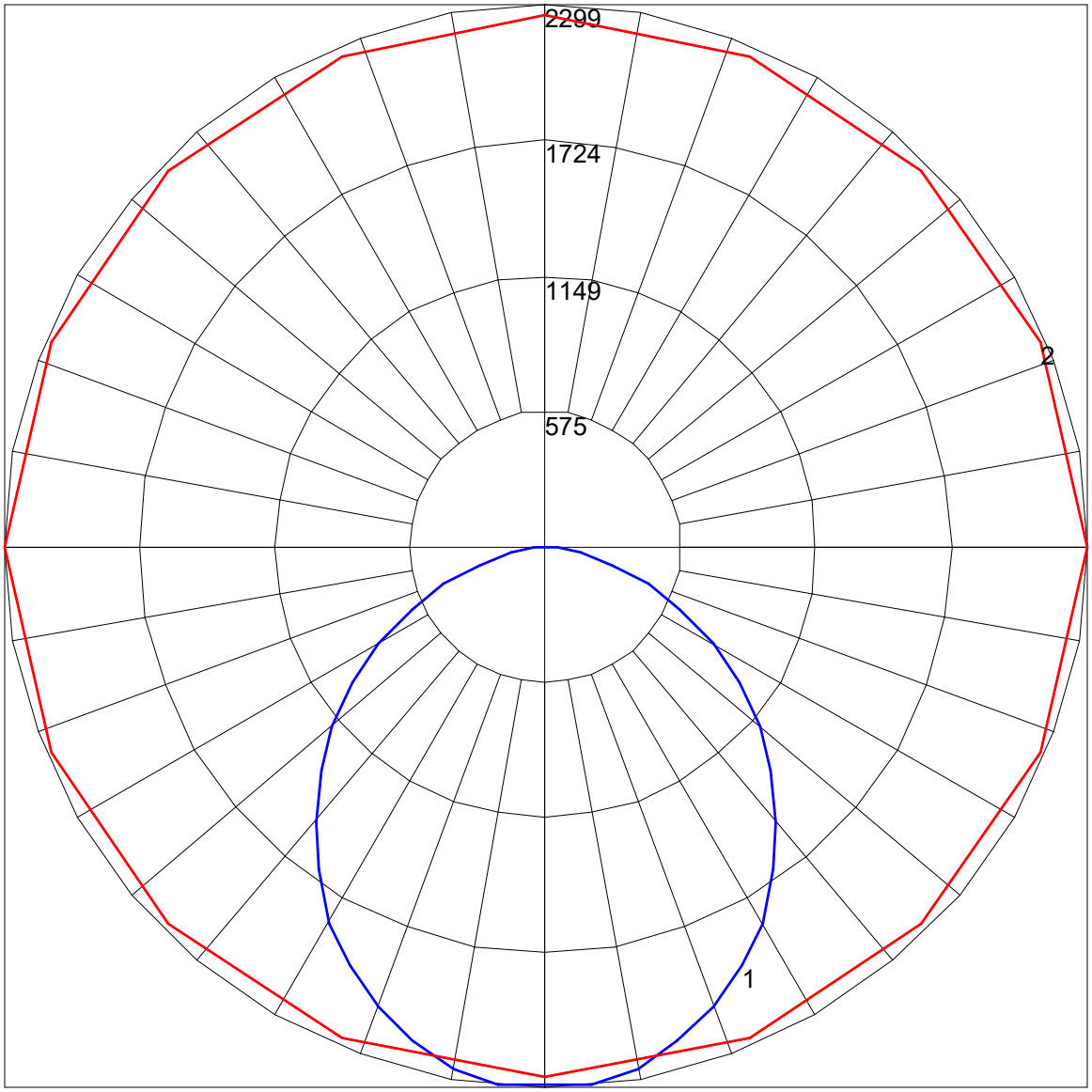
POLAR GRAPH



Maximum Candela = 2298.712 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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