



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4S-8-00-L8-8TW-F-DIM-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] MX4S-8-00-L8-8TW-F-DIM-UNV 4000k

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6567
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	53.6
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	9429	9143	9000
55	8659	8307	8072
65	7370	7251	7012
75	5594	5855	5529
85	2705	3477	3284

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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>
0	2672.606	2672.606	2672.606	2672.606	2672.606
5	2684.556	2656.674	2644.725	2636.759	2636.759
10	2636.759	2608.878	2596.929	2588.963	2580.997
15	2545.150	2525.235	2505.320	2497.354	2485.405
20	2437.608	2409.727	2393.795	2369.897	2361.931
25	2298.203	2266.338	2250.406	2222.525	2218.542
30	2158.797	2122.950	2091.086	2083.119	2063.204
35	1963.629	1939.731	1911.850	1883.968	1883.968
40	1780.410	1756.512	1720.665	1712.699	1684.817
45	1577.276	1553.378	1529.480	1505.582	1505.582
50	1386.091	1354.227	1334.312	1318.380	1298.465
55	1174.991	1147.110	1127.195	1107.280	1095.331
60	955.925	939.993	928.044	912.112	900.163
65	736.859	732.876	724.910	704.995	701.012
70	545.674	541.691	529.742	521.776	513.810
75	342.540	354.489	358.472	346.523	338.557
80	175.253	183.219	183.219	187.202	191.185
85	55.762	59.745	71.694	63.728	67.711
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	958.85	N.A.	14.60
0-30	1996.46	N.A.	30.40
0-40	3196.19	N.A.	48.70
0-60	5391.85	N.A.	82.10
0-80	6482.31	N.A.	98.70
0-90	6567.4	N.A.	100.00
10-90	6315.95	N.A.	96.20
20-40	2237.34	N.A.	34.10
20-50	3421.41	N.A.	52.10
40-70	2912.96	N.A.	44.40
60-80	1090.46	N.A.	16.60
70-80	373.16	N.A.	5.70
80-90	85.09	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	6567.4	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	251.46
10-20	707.39
20-30	1037.61
30-40	1199.73
40-50	1184.07
50-60	1011.59
60-70	717.31
70-80	373.16
80-90	85.09
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

X=2H	Y=2H	19.4	21.0	19.8	21.3	21.6	19.1	20.7	19.5	21.0	21.4
	3H	21.0	22.4	21.4	22.7	23.1	20.7	22.1	21.1	22.4	22.8
	4H	21.5	22.8	21.9	23.2	23.6	21.2	22.6	21.6	22.9	23.3
	6H	21.8	23.1	22.2	23.4	23.8	21.6	22.8	22.0	23.2	23.6
	8H	21.9	23.1	22.3	23.5	23.9	21.7	22.9	22.1	23.3	23.7
	12H	21.9	23.0	22.3	23.4	23.9	21.7	22.9	22.2	23.3	23.7

UGR Viewed Endwise

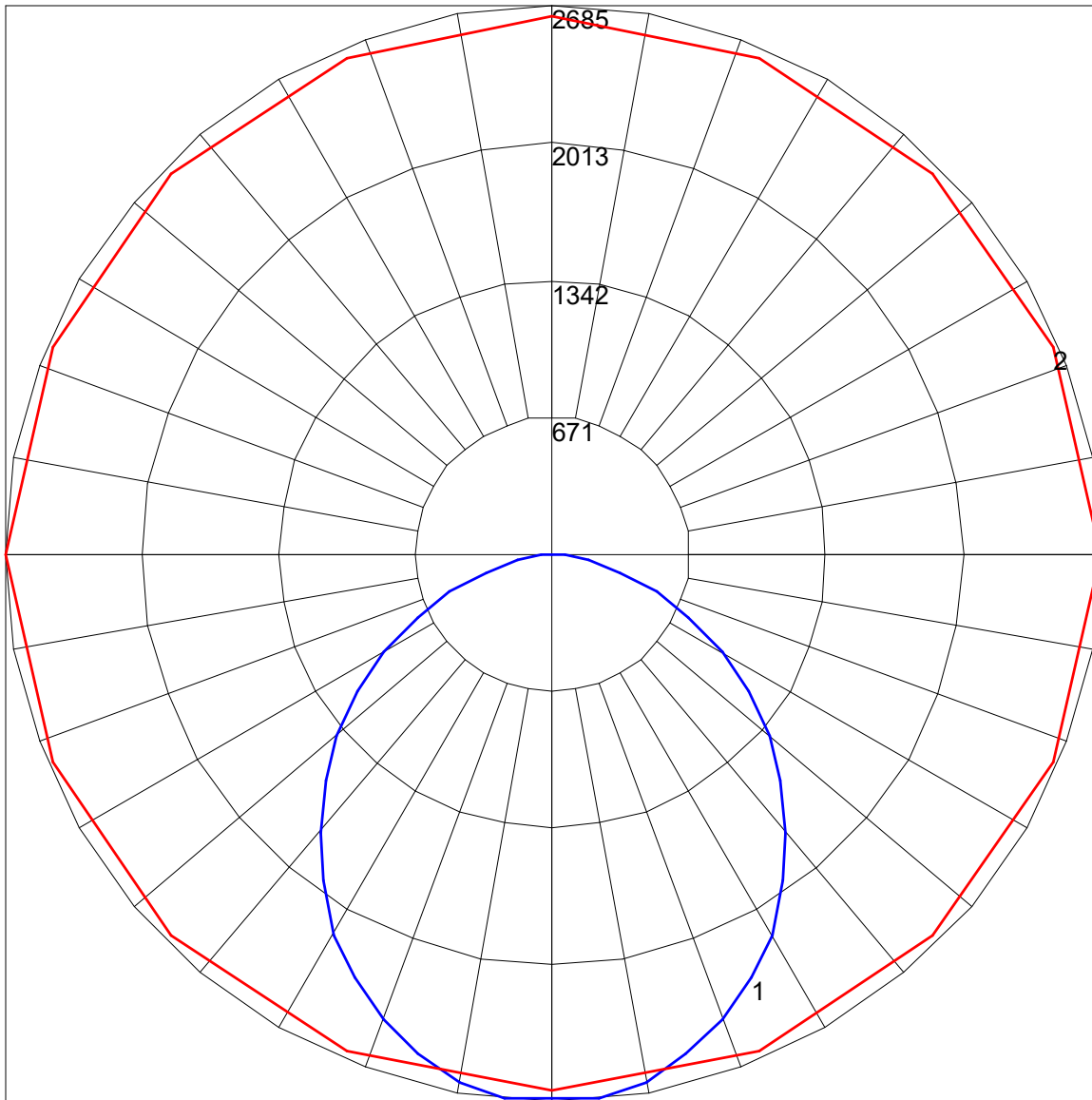
4H	2H	19.9	21.3	20.3	21.6	22.0	19.7	21.1	20.1	21.4	21.8
	3H	21.7	22.9	22.1	23.3	23.7	21.5	22.6	21.9	23.0	23.4
	4H	22.4	23.4	22.8	23.8	24.2	22.1	23.2	22.6	23.6	24.0
	6H	22.8	23.7	23.2	24.1	24.6	22.6	23.5	23.1	23.9	24.4
	8H	22.9	23.7	23.3	24.1	24.6	22.7	23.6	23.2	24.0	24.5
	12H	22.9	23.7	23.4	24.1	24.6	22.8	23.6	23.3	24.0	24.5

8H	4H	22.6	23.4	23.1	23.9	24.3	22.4	23.2	22.9	23.7	24.1
	6H	23.1	23.8	23.6	24.3	24.7	23.0	23.6	23.4	24.1	24.6
	8H	23.2	23.9	23.7	24.4	24.9	23.1	23.7	23.6	24.3	24.7
	12H	23.3	23.9	23.9	24.4	24.9	23.3	23.8	23.8	24.3	24.9

12H	4H	22.6	23.4	23.1	23.8	24.3	22.4	23.2	22.9	23.6	24.1
	6H	23.1	23.7	23.6	24.2	24.7	23.0	23.6	23.5	24.1	24.6
	8H	23.3	23.9	23.8	24.3	24.9	23.2	23.7	23.7	24.2	24.8

Maximum UGR = 24.9

POLAR GRAPH



Maximum Candela = 2684.556 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.)