



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4RG-8-00-L8-935-F-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20647.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 31 MARCH 2020

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 2-72 LED 23.75"ARRAYS 2'RECESSED GRID LUMINAIRE

[MORE] WHITE ALUM BODY w/WHITE REFL & FLAT FROST LENS

[MORE] ADVANCE #XI036C100V054DSM5

[LUMCAT] MX4RG-8-00-L8-935-F-DIM-UNV

[LAMPCAT] MX2472_2835 REV A 10560314

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5804
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	99
Total Luminaire Watts	58.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.30
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	8380	8201	7863
55	7760	7295	7173
65	6545	6313	6113
75	4883	4828	4883
85	2255	2255	2255

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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	2375.008	2375.008	2375.008	2375.008	2375.008
5	2388.295	2361.722	2345.113	2341.792	2341.792
10	2345.113	2318.540	2298.610	2295.288	2291.966
15	2278.679	2245.462	2222.211	2218.889	2208.924
20	2162.420	2139.168	2132.525	2119.238	2102.630
25	2036.196	2016.266	2002.979	1983.049	1973.084
30	1896.685	1873.433	1850.181	1836.895	1823.608
35	1747.209	1733.922	1694.062	1700.705	1664.167
40	1581.124	1571.159	1557.873	1518.012	1498.082
45	1401.753	1388.466	1371.858	1331.998	1315.389
50	1219.060	1212.417	1179.200	1159.270	1145.983
55	1052.976	1029.724	989.864	989.864	973.255
60	830.423	837.066	807.171	797.206	777.275
65	654.373	647.730	631.121	617.834	611.191
70	484.967	471.680	455.072	448.428	445.106
75	298.952	292.309	295.630	288.987	298.952
80	152.798	146.154	152.798	166.085	152.798
85	46.504	46.504	46.504	56.469	46.504
90	3.322	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	852.21	N.A.	14.70
0-30	1773.74	N.A.	30.60
0-40	2841.64	N.A.	49.00
0-60	4790.76	N.A.	82.50
0-80	5735.4	N.A.	98.80
0-90	5804.22	N.A.	100.00
10-90	5580.94	N.A.	96.20
20-40	1989.43	N.A.	34.30
20-50	3042.6	N.A.	52.40
40-70	2576.69	N.A.	44.40
60-80	944.65	N.A.	16.30
70-80	317.08	N.A.	5.50
80-90	68.81	N.A.	1.20
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	5804.22	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	223.27
10-20	628.94
20-30	921.53
30-40	1067.9
40-50	1053.17
50-60	895.95
60-70	627.57
70-80	317.08
80-90	68.81
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	77	84	79	76	81	77	74	72
3	92	81	74	67	89	80	73	67	77	71	66	74	69	64	72	67	63	61
4	84	72	64	58	82	71	63	57	69	62	56	66	60	56	64	59	55	53
5	77	65	56	50	75	64	56	50	62	55	49	60	54	49	58	52	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	42	40
7	67	53	45	39	65	53	44	39	51	44	38	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	26

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UGR TABLE - CORRECTED

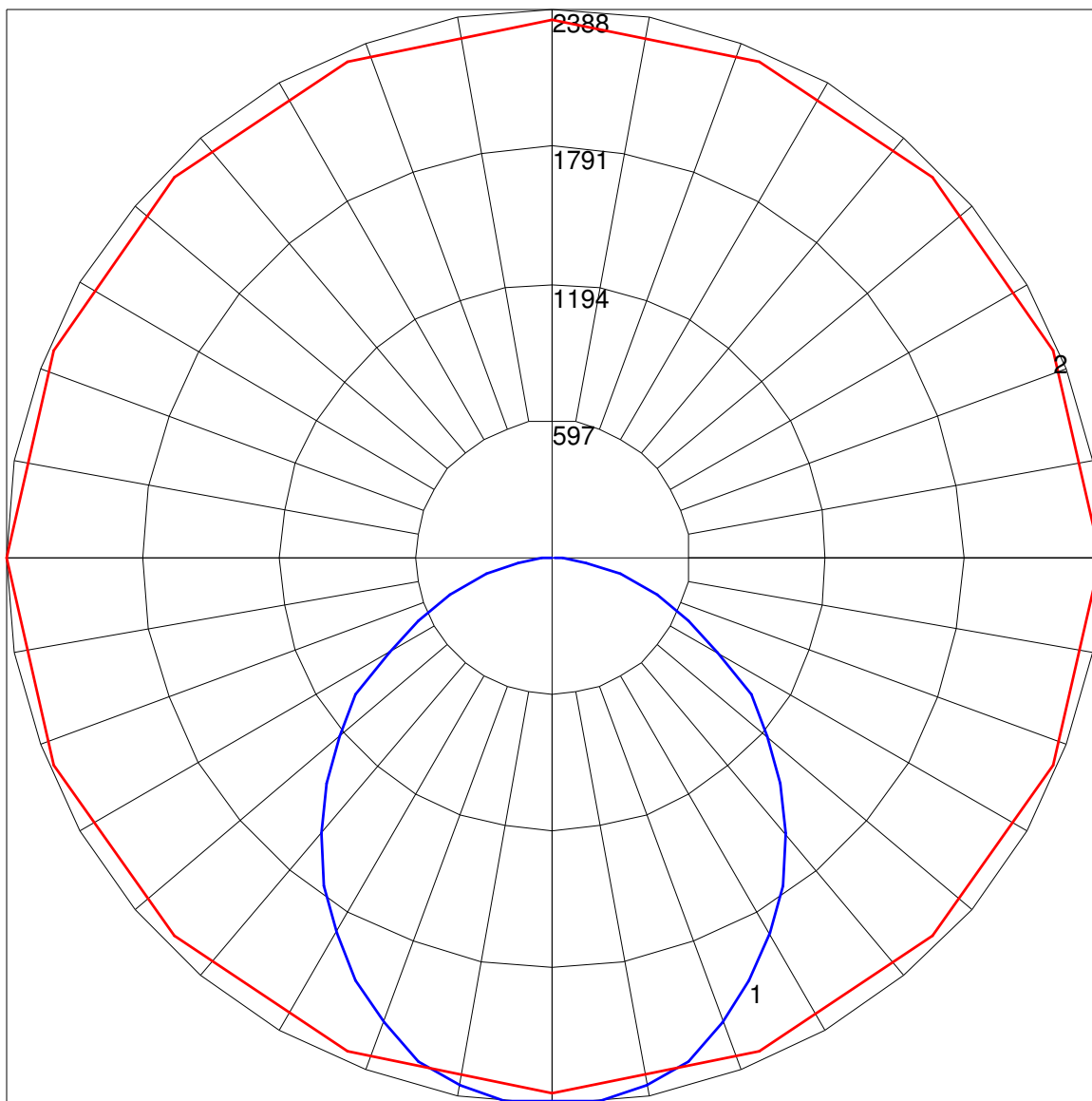
Reflectances

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	19.1	20.7	19.4	21.0	21.3	18.7	20.3	19.1	20.6	20.9
	3H	20.6	22.0	21.0	22.4	22.7	20.2	21.7	20.6	22.0	22.4
	4H	21.1	22.4	21.5	22.8	23.2	20.8	22.1	21.2	22.4	22.8
	6H	21.4	22.6	21.8	23.0	23.4	21.1	22.3	21.5	22.7	23.1
	8H	21.4	22.6	21.9	23.0	23.4	21.2	22.3	21.6	22.7	23.1
	12H	21.5	22.6	21.9	23.0	23.4	21.2	22.3	21.6	22.7	23.1
4H	2H	19.6	20.9	20.0	21.3	21.6	19.3	20.6	19.7	21.0	21.4
	3H	21.3	22.4	21.7	22.8	23.2	21.0	22.1	21.4	22.5	22.9
	4H	21.9	22.9	22.4	23.3	23.8	21.6	22.6	22.1	23.1	23.5
	6H	22.3	23.2	22.8	23.6	24.1	22.1	22.9	22.5	23.4	23.8
	8H	22.4	23.2	22.8	23.6	24.1	22.2	23.0	22.7	23.4	23.9
	12H	22.4	23.2	22.9	23.6	24.1	22.2	23.0	22.7	23.5	23.9
8H	4H	22.1	22.9	22.6	23.4	23.8	21.9	22.7	22.3	23.1	23.6
	6H	22.6	23.2	23.1	23.7	24.2	22.4	23.1	22.9	23.6	24.0
	8H	22.7	23.3	23.2	23.8	24.3	22.6	23.2	23.1	23.7	24.2
	12H	22.8	23.3	23.3	23.8	24.4	22.7	23.2	23.2	23.7	24.3
12H	4H	22.1	22.9	22.6	23.3	23.8	21.9	22.6	22.4	23.1	23.6
	6H	22.6	23.2	23.1	23.7	24.2	22.4	23.0	22.9	23.5	24.0
	8H	22.7	23.3	23.3	23.8	24.3	22.6	23.2	23.1	23.7	24.2

Maximum UGR = 24.4

POLAR GRAPH



Maximum Candela = 2388.295 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.)