



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4RG-4-00-L8-840-F-(L7.5)-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
 [ISSUE DATE] 01-18-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 4' RECESSED GRID LED LUMINAIRE
 [MORE] WHITE ALUM BODY w/WHITE REFL & FLAT FROST LENS
 [LUMCAT] MX4RG-4-00-L8-840-F-(L7.5)-DIM-UNV
 [LAMPCAT] MX2472_2835 REV A 10560314

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3140
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	25.4
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)	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	9066	8872	8507
55	8395	7892	7760
65	7081	6829	6614
75	5282	5224	5282
85	2440	2440	2440

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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	1284.708	1284.708	1284.708	1284.708	1284.708
5	1291.896	1277.521	1268.537	1266.740	1266.740
10	1268.537	1254.163	1243.382	1241.585	1239.789
15	1232.601	1214.633	1202.056	1200.259	1194.869
20	1169.714	1157.136	1153.542	1146.355	1137.371
25	1101.435	1090.655	1083.467	1072.687	1067.296
30	1025.970	1013.392	1000.815	993.628	986.440
35	945.114	937.927	916.365	919.959	900.194
40	855.274	849.884	842.697	821.135	810.355
45	758.247	751.060	742.076	720.515	711.531
50	659.424	655.830	637.862	627.081	619.894
55	569.584	557.006	535.445	535.445	526.461
60	449.199	452.792	436.621	431.231	420.450
65	353.969	350.375	341.391	334.204	330.610
70	262.332	255.145	246.161	242.567	240.771
75	161.712	158.118	159.915	156.321	161.712
80	82.653	79.059	82.653	89.840	82.653
85	25.155	25.155	25.155	30.546	25.155
90	1.797	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	460.98	N.A.	14.70
0-30	959.46	N.A.	30.60
0-40	1537.12	N.A.	49.00
0-60	2591.45	N.A.	82.50
0-80	3102.44	N.A.	98.80
0-90	3139.66	N.A.	100.00
10-90	3018.89	N.A.	96.20
20-40	1076.14	N.A.	34.30
20-50	1645.83	N.A.	52.40
40-70	1393.8	N.A.	44.40
60-80	510.99	N.A.	16.30
70-80	171.52	N.A.	5.50
80-90	37.22	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	3139.66	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	120.77
10-20	340.21
20-30	498.48
30-40	577.66
40-50	569.69
50-60	484.64
60-70	339.47
70-80	171.52
80-90	37.22
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	98	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

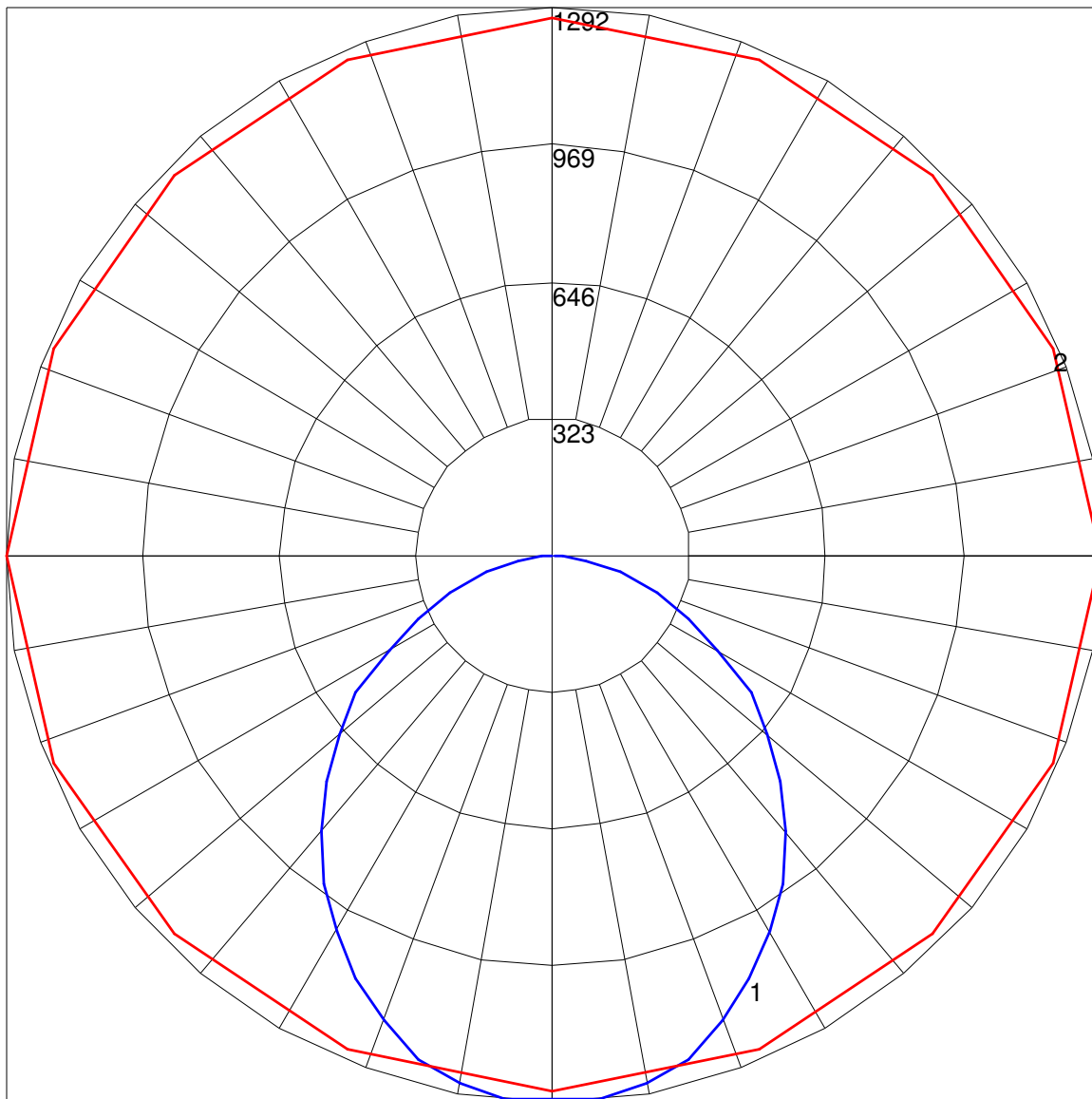
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UGR TABLE - CORRECTED

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	19.4	21.0	19.7	21.3	21.6	19.0	20.6	19.4	20.9	21.2
	3H	20.9	22.4	21.3	22.7	23.0	20.6	22.0	20.9	22.3	22.7
	4H	21.4	22.8	21.8	23.1	23.5	21.1	22.4	21.5	22.8	23.1
	6H	21.7	22.9	22.1	23.3	23.7	21.4	22.6	21.8	23.0	23.4
	8H	21.7	22.9	22.2	23.3	23.7	21.5	22.7	21.9	23.0	23.4
	12H	21.8	22.9	22.2	23.3	23.7	21.5	22.6	21.9	23.0	23.4
4H	2H	19.9	21.2	20.3	21.6	22.0	19.6	20.9	20.0	21.3	21.7
	3H	21.6	22.8	22.1	23.2	23.6	21.3	22.4	21.7	22.8	23.2
	4H	22.2	23.2	22.7	23.6	24.1	22.0	22.9	22.4	23.4	23.8
	6H	22.6	23.5	23.1	23.9	24.4	22.4	23.3	22.8	23.7	24.2
	8H	22.7	23.5	23.2	23.9	24.4	22.5	23.3	23.0	23.8	24.2
	12H	22.7	23.5	23.2	23.9	24.4	22.6	23.3	23.0	23.8	24.2
8H	4H	22.4	23.2	22.9	23.7	24.2	22.2	23.0	22.6	23.4	23.9
	6H	22.9	23.5	23.4	24.0	24.5	22.7	23.4	23.2	23.9	24.3
	8H	23.0	23.6	23.5	24.1	24.6	22.9	23.5	23.4	24.0	24.5
	12H	23.1	23.6	23.6	24.1	24.7	23.0	23.5	23.5	24.0	24.6
12H	4H	22.4	23.2	22.9	23.6	24.1	22.2	22.9	22.7	23.4	23.9
	6H	22.9	23.5	23.4	24.0	24.5	22.7	23.3	23.3	23.8	24.3
	8H	23.1	23.6	23.6	24.1	24.6	22.9	23.5	23.4	24.0	24.5

Maximum UGR = 24.7

POLAR GRAPH



Maximum Candela = 1291.896 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.)