



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4RG-8-00-L12-835-F-(L9)-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] 12-MAR-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2-72 LED 23.75" ARRAYS 4' RECESSED GRID LUMINAIRE
 [MORE] WHITE ALUM BODY w/WHITE REFL & FLAT FROST LENS
 [LUMCAT] MX4RG-8-00-L12-835-x-(L9)

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7409
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	127
Total Luminaire Watts	58.3
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	10696	10468	10037
55	9906	9312	9156
65	8355	8058	7803
75	6232	6163	6232
85	2879	2879	2879

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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	3031.60	3031.60	3031.60	3031.60	3031.60
5	3048.56	3014.64	2993.44	2989.20	2989.20
10	2993.44	2959.52	2934.08	2929.84	2925.60
15	2908.64	2866.24	2836.56	2832.32	2819.60
20	2760.24	2730.56	2722.08	2705.12	2683.92
25	2599.12	2573.68	2556.72	2531.28	2518.56
30	2421.04	2391.36	2361.68	2344.72	2327.76
35	2230.24	2213.28	2162.40	2170.88	2124.24
40	2018.24	2005.52	1988.56	1937.68	1912.24
45	1789.28	1772.32	1751.12	1700.24	1679.04
50	1556.08	1547.60	1505.20	1479.76	1462.80
55	1344.08	1314.40	1263.52	1263.52	1242.32
60	1060.00	1068.48	1030.32	1017.60	992.16
65	835.28	826.80	805.60	788.64	780.16
70	619.04	602.08	580.88	572.40	568.16
75	381.60	373.12	377.36	368.88	381.60
80	195.04	186.56	195.04	212.00	195.04
85	59.36	59.36	59.36	72.08	59.36
90	4.24	0.00	0.00	0.00	0.00

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Zone	Lumens	%Lamp	%Fixt
0-20	1087.81	N.A.	14.70
0-30	2264.1	N.A.	30.60
0-40	3627.24	N.A.	49.00
0-60	6115.2	N.A.	82.50
0-80	7321.01	N.A.	98.80
0-90	7408.84	N.A.	100.00
10-90	7123.85	N.A.	96.20
20-40	2539.43	N.A.	34.30
20-50	3883.75	N.A.	52.40
40-70	3289.03	N.A.	44.40
60-80	1205.8	N.A.	16.30
70-80	404.74	N.A.	5.50
80-90	87.84	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	7408.84	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	285.00
10-20	802.82
20-30	1176.29
30-40	1363.13
40-50	1344.33
50-60	1143.64
60-70	801.07
70-80	404.74
80-90	87.84
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

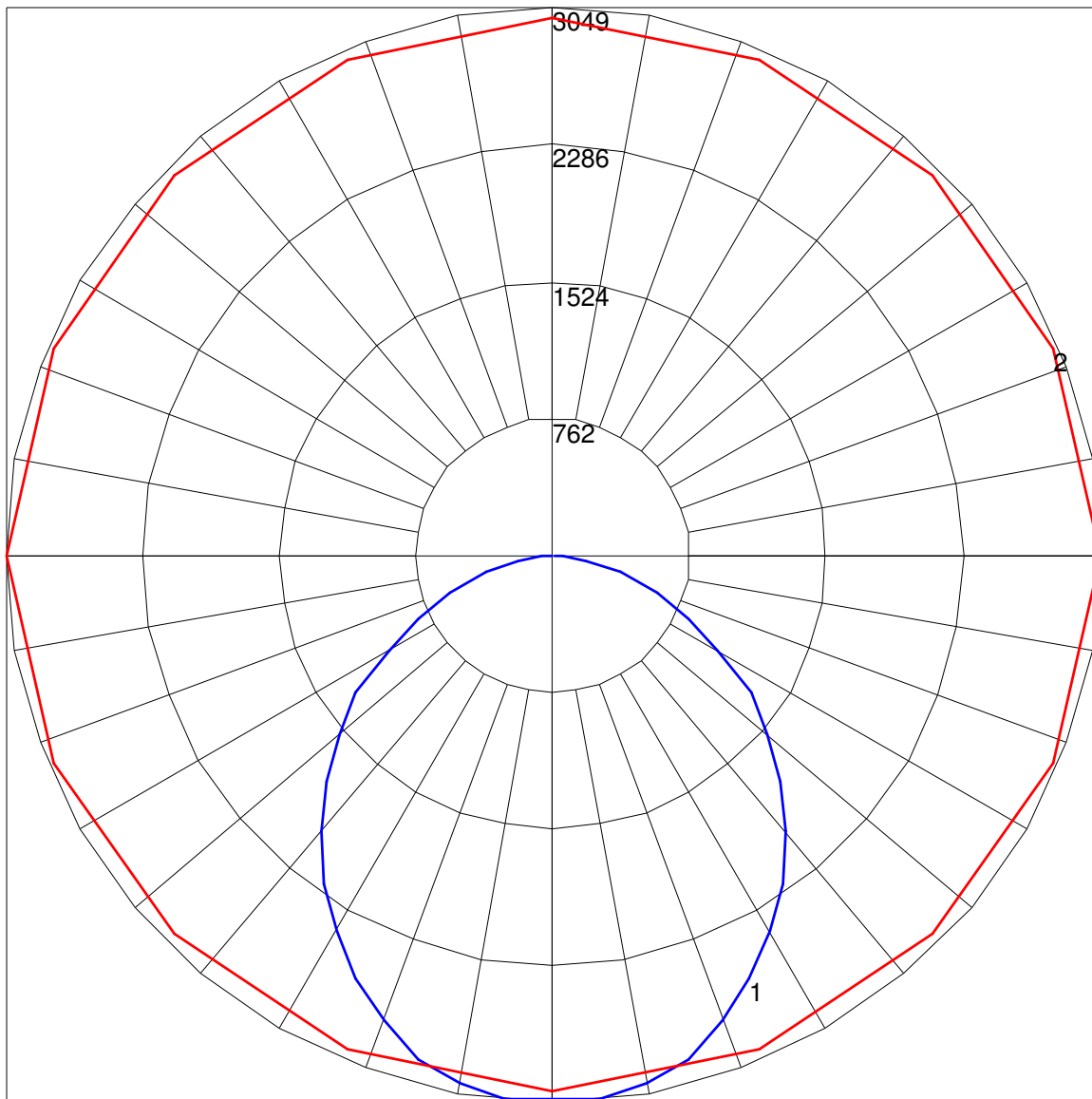
X=2H	Y=2H	20.0	21.6	20.3	21.9	22.2	19.6	21.2	20.0	21.5	21.8
	3H	21.5	22.9	21.9	23.3	23.6	21.1	22.6	21.5	22.9	23.3
	4H	22.0	23.3	22.4	23.7	24.1	21.7	23.0	22.1	23.3	23.7
	6H	22.3	23.5	22.7	23.9	24.3	22.0	23.2	22.4	23.6	24.0
	8H	22.3	23.5	22.8	23.9	24.3	22.1	23.2	22.5	23.6	24.0
	12H	22.4	23.5	22.8	23.9	24.3	22.1	23.2	22.5	23.6	24.0

UGR Viewed Endwise

4H	2H	20.5	21.8	20.9	22.2	22.5	20.2	21.5	20.6	21.9	22.3
	3H	22.2	23.3	22.6	23.7	24.1	21.9	23.0	22.3	23.4	23.8
	4H	22.8	23.8	23.3	24.2	24.7	22.5	23.5	23.0	24.0	24.4
	6H	23.2	24.1	23.7	24.5	25.0	23.0	23.8	23.4	24.3	24.7
	8H	23.3	24.1	23.7	24.5	25.0	23.1	23.9	23.6	24.3	24.8
	12H	23.3	24.1	23.8	24.5	25.0	23.1	23.9	23.6	24.4	24.8
8H	4H	23.0	23.8	23.5	24.3	24.7	22.8	23.6	23.2	24.0	24.5
	6H	23.5	24.1	24.0	24.6	25.1	23.3	24.0	23.8	24.5	24.9
	8H	23.6	24.2	24.1	24.7	25.2	23.5	24.1	24.0	24.6	25.1
	12H	23.7	24.2	24.2	24.7	25.3	23.6	24.1	24.1	24.6	25.2
12H	4H	23.0	23.8	23.5	24.2	24.7	22.8	23.5	23.3	24.0	24.5
	6H	23.5	24.1	24.0	24.6	25.1	23.3	23.9	23.8	24.4	24.9
	8H	23.6	24.2	24.2	24.7	25.2	23.5	24.1	24.0	24.6	25.1

Maximum UGR = 25.3

POLAR GRAPH



Maximum Candela = 3048.56 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.)