



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4RG-4-00-L12-B35T-F-(L10)-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] 28-APR-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4' RECESSED GRID LUMINAIRE

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

[LUMCAT] MX4RG-4-00-L12-B35T-F-(L10)-DIM-UNV

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4296
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
Total Luminaire Watts	37.7
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	12404	12140	11640
55	11487	10799	10618
65	9689	9344	9049
75	7228	7147	7228
85	3339	3339	3339

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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>
<b>0</b>	1757.827	1757.827	1757.827	1757.827	1757.827
<b>5</b>	1767.661	1747.993	1735.701	1733.242	1733.242
<b>10</b>	1735.701	1716.033	1701.282	1698.823	1696.365
<b>15</b>	1686.531	1661.946	1644.736	1642.278	1634.902
<b>20</b>	1600.483	1583.274	1578.357	1568.523	1556.230
<b>25</b>	1507.060	1492.309	1482.475	1467.724	1460.349
<b>30</b>	1403.803	1386.594	1369.384	1359.550	1349.716
<b>35</b>	1293.171	1283.337	1253.835	1258.752	1231.708
<b>40</b>	1170.246	1162.870	1153.036	1123.534	1108.783
<b>45</b>	1037.487	1027.653	1015.360	985.858	973.566
<b>50</b>	902.269	897.352	872.767	858.016	848.182
<b>55</b>	779.344	762.135	732.633	732.633	720.340
<b>60</b>	614.625	619.542	597.415	590.040	575.289
<b>65</b>	484.324	479.407	467.115	457.281	452.364
<b>70</b>	358.941	349.107	336.814	331.897	329.439
<b>75</b>	221.265	216.348	218.806	213.889	221.265
<b>80</b>	113.091	108.174	113.091	122.925	113.091
<b>85</b>	34.419	34.419	34.419	41.794	34.419
<b>90</b>	2.458	0.000	0.000	0.000	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : MX4RG-4-00-L12-B35T-F-(L10)-DIM-UNV\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	630.75	N.A.	14.70
0-30	1312.81	N.A.	30.60
0-40	2103.2	N.A.	49.00
0-60	3545.81	N.A.	82.50
0-80	4244.97	N.A.	98.80
0-90	4295.9	N.A.	100.00
10-90	4130.65	N.A.	96.20
20-40	1472.45	N.A.	34.30
20-50	2251.93	N.A.	52.40
40-70	1907.1	N.A.	44.40
60-80	699.17	N.A.	16.30
70-80	234.68	N.A.	5.50
80-90	50.93	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	4295.9	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	165.25
10-20	465.50
20-30	682.05
30-40	790.39
40-50	779.49
50-60	663.12
60-70	464.49
70-80	234.68
80-90	50.93
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	142	142	142	142	138	138	138	138	132	132	132	127	127	127	121	121	121	119
1	130	125	120	116	127	122	118	114	117	114	110	113	110	107	108	106	104	101
2	119	110	102	95	116	107	100	94	103	97	92	99	94	90	96	92	88	86
3	109	97	88	80	106	95	86	79	91	84	78	88	82	77	85	80	75	73
4	100	86	76	68	97	85	75	68	82	74	67	79	72	66	76	70	65	63
5	92	77	67	59	90	76	66	59	74	65	58	71	64	58	69	62	57	55
6	85	70	60	52	83	69	59	52	67	58	51	65	57	51	63	56	51	48
7	79	63	53	46	77	63	53	46	61	52	46	59	51	45	57	50	45	43
8	74	58	48	41	72	57	48	41	56	47	41	54	46	41	53	46	41	38
9	69	53	44	37	67	53	44	37	51	43	37	50	42	37	49	42	37	35
10	65	49	40	34	63	49	40	34	48	39	34	46	39	34	45	38	33	31

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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

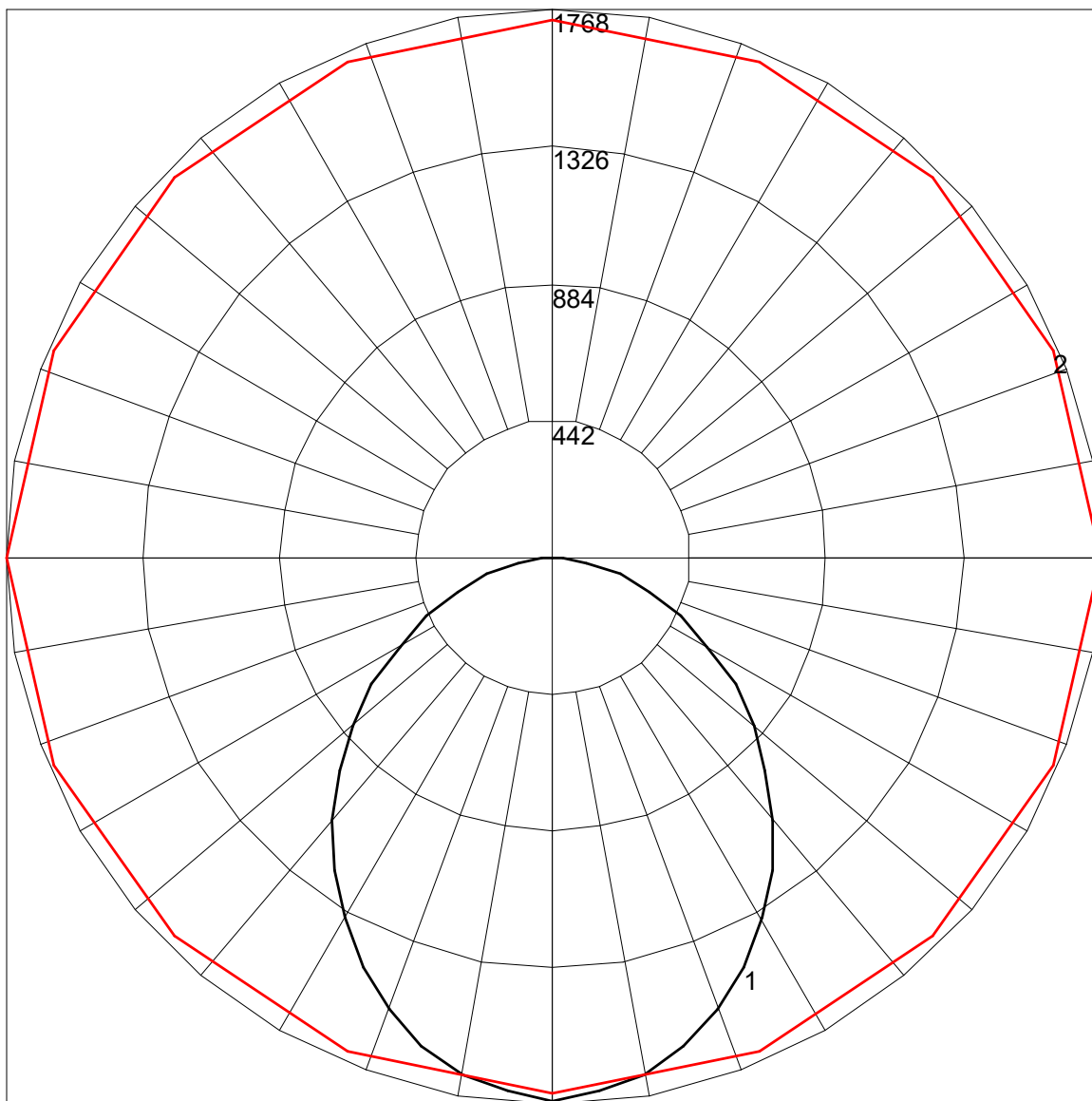
X=2H	Y=2H	19.9	21.5	20.2	21.8	22.1	19.5	21.1	19.9	21.4	21.7
	3H	21.4	22.9	21.8	23.2	23.5	21.1	22.5	21.4	22.8	23.2
	4H	21.9	23.3	22.3	23.6	24.0	21.6	22.9	22.0	23.3	23.6
	6H	22.2	23.4	22.6	23.8	24.2	21.9	23.1	22.3	23.5	23.9
	8H	22.2	23.4	22.7	23.8	24.2	22.0	23.2	22.4	23.5	23.9
	12H	22.3	23.4	22.7	23.8	24.2	22.0	23.1	22.4	23.5	23.9

### UGR Viewed Endwise

4H	2H	20.4	21.7	20.8	22.1	22.5	20.1	21.4	20.5	21.8	22.2
	3H	22.1	23.3	22.6	23.7	24.1	21.8	22.9	22.2	23.3	23.7
	4H	22.7	23.7	23.2	24.1	24.6	22.5	23.4	22.9	23.9	24.3
	6H	23.1	24.0	23.6	24.4	24.9	22.9	23.8	23.3	24.2	24.7
	8H	23.2	24.0	23.7	24.4	24.9	23.0	23.8	23.5	24.3	24.7
	12H	23.2	24.0	23.7	24.4	24.9	23.1	23.8	23.5	24.3	24.7
8H	4H	22.9	23.7	23.4	24.2	24.7	22.7	23.5	23.1	23.9	24.4
	6H	23.4	24.0	23.9	24.5	25.0	23.2	23.9	23.7	24.4	24.8
	8H	23.5	24.1	24.0	24.6	25.1	23.4	24.0	23.9	24.5	25.0
	12H	23.6	24.1	24.1	24.6	25.2	23.5	24.0	24.0	24.5	25.1
12H	4H	22.9	23.7	23.4	24.1	24.6	22.7	23.4	23.2	23.9	24.4
	6H	23.4	24.0	23.9	24.5	25.0	23.2	23.8	23.8	24.3	24.8
	8H	23.6	24.1	24.1	24.6	25.1	23.4	24.0	23.9	24.5	25.0

Maximum UGR = 25.2

POLAR GRAPH



Maximum Candela = 1767.661 Located At Horizontal Angle = 0, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)