



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4RG-4-00-L8-B35T-F-(L5)-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] 3-MAY-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-L8-B35T-F-(L5)-DIM-UNV

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2148
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
Total Luminaire Watts	18.9
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	6202	6070	5820
55	5744	5399	5309
65	4844	4672	4525
75	3614	3574	3614
85	1669	1669	1669

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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>	878.914	878.914	878.914	878.914	878.914
<b>5</b>	883.831	873.997	867.850	866.621	866.621
<b>10</b>	867.850	858.016	850.641	849.412	848.182
<b>15</b>	843.265	830.973	822.368	821.139	817.451
<b>20</b>	800.242	791.637	789.178	784.261	778.115
<b>25</b>	753.530	746.155	741.238	733.862	730.174
<b>30</b>	701.902	693.297	684.692	679.775	674.858
<b>35</b>	646.585	641.668	626.917	629.376	615.854
<b>40</b>	585.123	581.435	576.518	561.767	554.392
<b>45</b>	518.743	513.826	507.680	492.929	486.783
<b>50</b>	451.135	448.676	436.384	429.008	424.091
<b>55</b>	389.672	381.067	366.316	366.316	360.170
<b>60</b>	307.312	309.771	298.708	295.020	287.644
<b>65</b>	242.162	239.704	233.557	228.640	226.182
<b>70</b>	179.470	174.553	168.407	165.949	164.719
<b>75</b>	110.632	108.174	109.403	106.945	110.632
<b>80</b>	56.545	54.087	56.545	61.462	56.545
<b>85</b>	17.209	17.209	17.209	20.897	17.209
<b>90</b>	1.229	0.000	0.000	0.000	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : MX4RG-4-00-L8-B35T-F-(L5)-DIM-UNV\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	315.38	N.A.	14.70
0-30	656.40	N.A.	30.60
0-40	1051.6	N.A.	49.00
0-60	1772.9	N.A.	82.50
0-80	2122.49	N.A.	98.80
0-90	2147.95	N.A.	100.00
10-90	2065.33	N.A.	96.20
20-40	736.22	N.A.	34.30
20-50	1125.97	N.A.	52.40
40-70	953.55	N.A.	44.40
60-80	349.58	N.A.	16.30
70-80	117.34	N.A.	5.50
80-90	25.46	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	2147.95	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	82.63
10-20	232.75
20-30	341.03
30-40	395.20
40-50	389.74
50-60	331.56
60-70	232.24
70-80	117.34
80-90	25.46
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 RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	60	60	60	60	58	58	58	58	56	56	56	53	53	53	51	51	51	50
1	55	52	50	49	53	51	50	48	49	48	46	47	46	45	46	45	44	43
2	50	46	43	40	49	45	42	40	43	41	39	42	40	38	40	39	37	36
3	46	41	37	34	45	40	36	33	38	35	33	37	34	32	36	34	32	31
4	42	36	32	29	41	36	32	29	34	31	28	33	30	28	32	30	27	26
5	39	33	28	25	38	32	28	25	31	27	25	30	27	24	29	26	24	23
6	36	29	25	22	35	29	25	22	28	24	22	27	24	21	26	23	21	20
7	33	27	22	19	32	26	22	19	26	22	19	25	22	19	24	21	19	18
8	31	24	20	17	30	24	20	17	23	20	17	23	20	17	22	19	17	16
9	29	22	18	16	28	22	18	16	22	18	16	21	18	16	21	18	15	15
10	27	21	17	14	27	21	17	14	20	17	14	20	16	14	19	16	14	13

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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

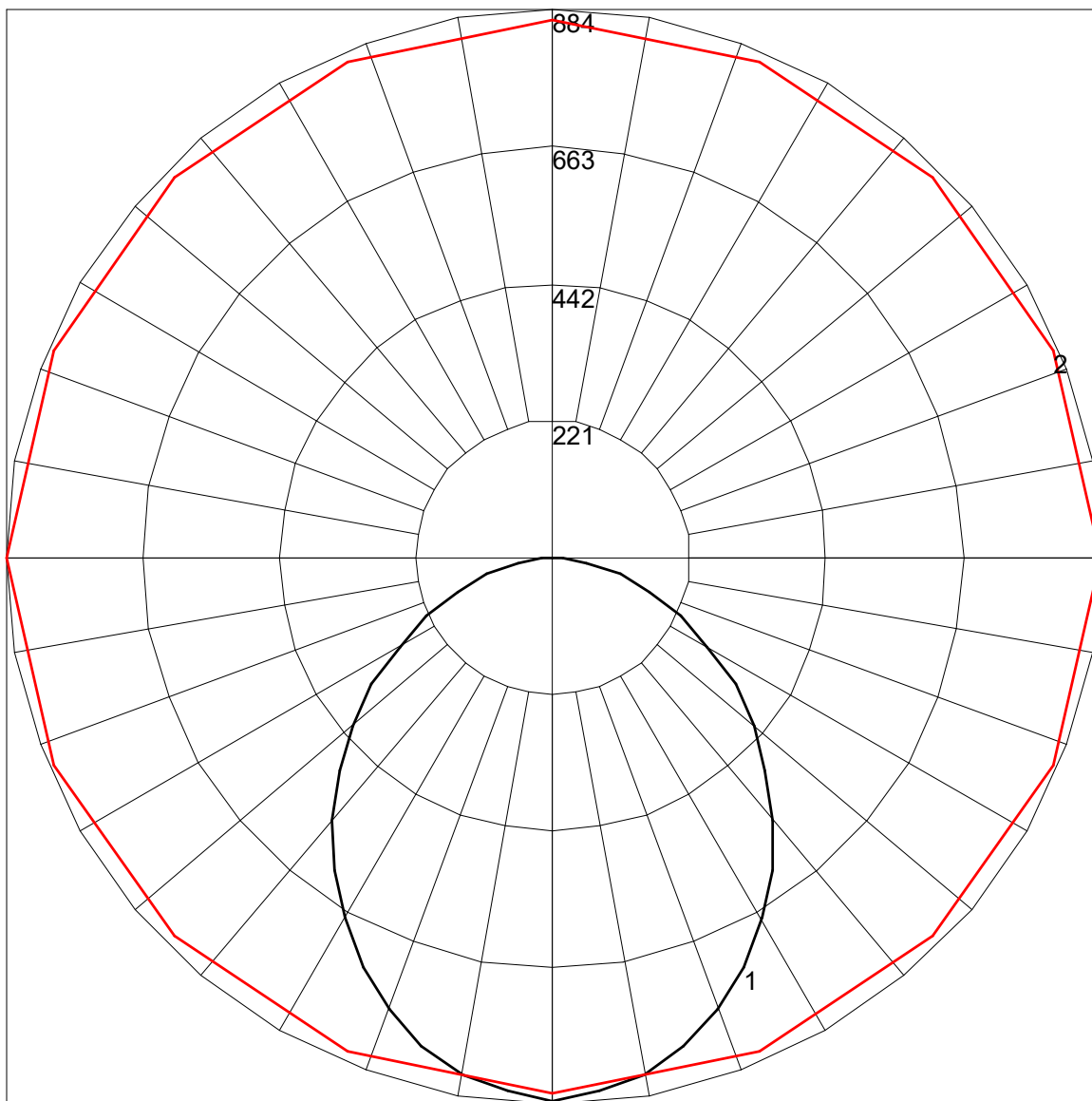
X=2H	Y=2H	20.5	22.1	20.8	22.4	22.7	20.1	21.7	20.5	22.0	22.3
	3H	22.0	23.5	22.4	23.8	24.1	21.7	23.1	22.0	23.4	23.8
	4H	22.5	23.9	22.9	24.2	24.6	22.2	23.5	22.6	23.9	24.2
	6H	22.8	24.0	23.2	24.4	24.8	22.5	23.7	22.9	24.1	24.5
	8H	22.8	24.0	23.3	24.4	24.8	22.6	23.8	23.0	24.1	24.5
	12H	22.9	24.0	23.3	24.4	24.8	22.6	23.7	23.0	24.1	24.5

### UGR Viewed Endwise

4H	2H	21.0	22.3	21.4	22.7	23.1	20.7	22.0	21.1	22.4	22.8
	3H	22.7	23.9	23.2	24.3	24.7	22.4	23.5	22.8	23.9	24.3
	4H	23.3	24.3	23.8	24.7	25.2	23.1	24.0	23.5	24.5	24.9
	6H	23.7	24.6	24.2	25.0	25.5	23.5	24.4	23.9	24.8	25.3
	8H	23.8	24.6	24.3	25.0	25.5	23.6	24.4	24.1	24.9	25.3
	12H	23.8	24.6	24.3	25.0	25.5	23.7	24.4	24.1	24.9	25.3
8H	4H	23.5	24.3	24.0	24.8	25.3	23.3	24.1	23.7	24.5	25.0
	6H	24.0	24.6	24.5	25.1	25.6	23.8	24.5	24.3	25.0	25.4
	8H	24.1	24.7	24.6	25.2	25.7	24.0	24.6	24.5	25.1	25.6
	12H	24.2	24.7	24.7	25.2	25.8	24.1	24.6	24.6	25.1	25.7
12H	4H	23.5	24.3	24.0	24.7	25.2	23.3	24.0	23.8	24.5	25.0
	6H	24.0	24.6	24.5	25.1	25.6	23.8	24.4	24.4	24.9	25.4
	8H	24.2	24.7	24.7	25.2	25.7	24.0	24.6	24.5	25.1	25.6

Maximum UGR = 25.8

POLAR GRAPH



Maximum Candela = 883.831 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.)