



IES INDOOR REPORT
PHOTOMETRIC FILENAME : MX4RG-7-00-L8-830-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] 27-JULY-2020
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 7' RECESSED GRID LED LUMINAIRE
[MORE] WHITE ALUM BODY w/WHITE REFL & FLAT FROST LENS
[LUMCAT] MX4RG-7-00-L8-830-F-DIM-UNV
[LAMPCAT] HLMX 80 CRI 3000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6057
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
Total Luminaire Watts	51.1
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)	7.00 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	9994	9781	9379
55	9255	8701	8555
65	7806	7529	7291
75	5823	5759	5823
85	2690	2690	2690

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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	2478.558	2478.558	2478.558	2478.558	2478.558
5	2492.424	2464.692	2447.359	2443.892	2443.892
10	2447.359	2419.627	2398.828	2395.361	2391.895
15	2378.029	2343.364	2319.098	2315.631	2305.232
20	2256.701	2232.435	2225.502	2211.636	2194.303
25	2124.973	2104.174	2090.308	2069.509	2059.109
30	1979.380	1955.114	1930.848	1916.982	1903.116
35	1823.386	1809.520	1767.922	1774.855	1736.724
40	1650.061	1639.661	1625.795	1584.197	1563.398
45	1462.869	1449.003	1431.670	1390.072	1372.740
50	1272.211	1265.278	1230.613	1209.813	1195.947
55	1098.885	1074.619	1033.021	1033.021	1015.689
60	866.629	873.562	842.363	831.963	811.164
65	682.903	675.970	658.638	644.772	637.839
70	506.111	492.245	474.912	467.979	464.513
75	311.986	305.053	308.520	301.587	311.986
80	159.460	152.527	159.460	173.326	159.460
85	48.531	48.531	48.531	58.931	48.531
90	3.467	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	889.37	N.A.	14.70
0-30	1851.07	N.A.	30.60
0-40	2965.54	N.A.	49.00
0-60	4999.63	N.A.	82.50
0-80	5985.46	N.A.	98.80
0-90	6057.28	N.A.	100.00
10-90	5824.27	N.A.	96.20
20-40	2076.17	N.A.	34.30
20-50	3175.25	N.A.	52.40
40-70	2689.03	N.A.	44.40
60-80	985.83	N.A.	16.30
70-80	330.90	N.A.	5.50
80-90	71.81	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	6057.28	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	233.01
10-20	656.36
20-30	961.70
30-40	1114.46
40-50	1099.09
50-60	935.01
60-70	654.93
70-80	330.90
80-90	71.81
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

X=2H	Y=2H	19.7	21.3	20.1	21.6	21.9	19.4	21.0	19.8	21.3	21.6
	3H	21.3	22.7	21.7	23.0	23.4	20.9	22.3	21.3	22.7	23.0
	4H	21.8	23.1	22.2	23.5	23.8	21.4	22.8	21.8	23.1	23.5
	6H	22.1	23.3	22.5	23.7	24.0	21.8	23.0	22.2	23.4	23.7
	8H	22.1	23.3	22.5	23.7	24.1	21.8	23.0	22.2	23.4	23.8
	12H	22.1	23.3	22.6	23.6	24.1	21.9	23.0	22.3	23.4	23.8

UGR Viewed Endwise

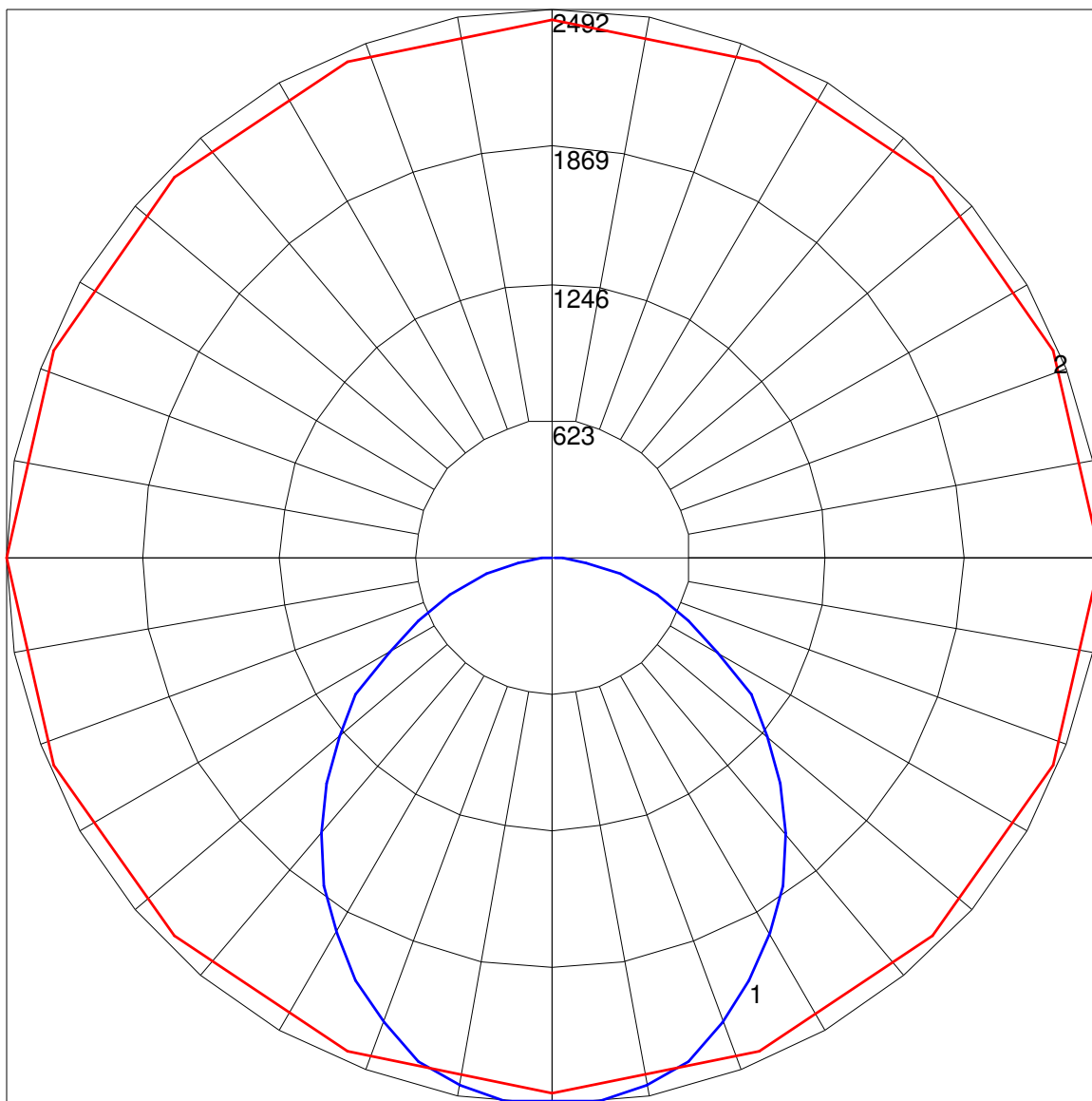
4H	2H	20.2	21.6	20.6	21.9	22.3	20.0	21.3	20.4	21.7	22.0
	3H	22.0	23.1	22.4	23.5	23.9	21.7	22.8	22.1	23.2	23.6
	4H	22.6	23.6	23.0	24.0	24.4	22.3	23.3	22.7	23.7	24.2
	6H	23.0	23.8	23.4	24.3	24.7	22.7	23.6	23.2	24.1	24.5
	8H	23.0	23.9	23.5	24.3	24.8	22.9	23.7	23.3	24.1	24.6
	12H	23.1	23.8	23.6	24.3	24.8	22.9	23.6	23.4	24.1	24.6

8H	4H	22.8	23.6	23.2	24.0	24.5	22.5	23.3	23.0	23.8	24.3
	6H	23.2	23.9	23.7	24.4	24.9	23.1	23.7	23.5	24.2	24.7
	8H	23.4	24.0	23.9	24.5	25.0	23.2	23.8	23.8	24.3	24.8
	12H	23.4	24.0	23.9	24.5	25.0	23.3	23.9	23.8	24.4	24.9

12H	4H	22.8	23.5	23.3	24.0	24.5	22.5	23.3	23.0	23.7	24.2
	6H	23.2	23.9	23.8	24.3	24.9	23.1	23.7	23.6	24.2	24.7
	8H	23.4	23.9	23.9	24.4	25.0	23.3	23.8	23.8	24.3	24.9

Maximum UGR = 25.0

POLAR GRAPH



Maximum Candela = 2492.424 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.)