



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4RG-8-00-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] 8' RECESSED GRID LED LUMINAIRE
 [MORE] WHITE ALUM BODY w/WHITE REFL & FLAT FROST LENS
 [LUMCAT] MX4RG-8-00-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	6924
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
Total Luminaire Watts	58.4
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)	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	9996	9783	9380
55	9257	8702	8556
65	7807	7530	7292
75	5824	5759	5824
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	2833.021	2833.021	2833.021	2833.021	2833.021
5	2848.870	2817.172	2797.360	2793.398	2793.398
10	2797.360	2765.662	2741.889	2737.926	2733.964
15	2718.115	2678.492	2650.757	2646.794	2634.908
20	2579.436	2551.700	2543.775	2527.926	2508.115
25	2428.870	2405.096	2389.247	2365.473	2353.587
30	2262.454	2234.719	2206.983	2191.134	2175.285
35	2084.152	2068.303	2020.756	2028.681	1985.096
40	1886.039	1874.152	1858.303	1810.756	1786.982
45	1672.077	1656.228	1636.416	1588.869	1569.058
50	1454.152	1446.227	1406.605	1382.831	1366.982
55	1256.039	1228.303	1180.756	1180.756	1160.944
60	990.567	998.491	962.831	950.944	927.170
65	780.567	772.642	752.831	736.982	729.057
70	578.491	562.642	542.831	534.906	530.944
75	356.604	348.679	352.642	344.717	356.604
80	182.264	174.340	182.264	198.113	182.264
85	55.472	55.472	55.472	67.359	55.472
90	3.962	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1016.56	N.A.	14.70
0-30	2115.8	N.A.	30.60
0-40	3389.64	N.A.	49.00
0-60	5714.64	N.A.	82.50
0-80	6841.46	N.A.	98.80
0-90	6923.54	N.A.	100.00
10-90	6657.21	N.A.	96.20
20-40	2373.09	N.A.	34.30
20-50	3629.35	N.A.	52.40
40-70	3073.59	N.A.	44.40
60-80	1126.82	N.A.	16.30
70-80	378.22	N.A.	5.50
80-90	82.08	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	6923.54	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	266.33
10-20	750.23
20-30	1099.24
30-40	1273.84
40-50	1256.27
50-60	1068.73
60-70	748.60
70-80	378.22
80-90	82.08
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	20.0	21.6	21.9	19.3	20.9	19.7	21.2	21.5
	3H	21.2	22.6	21.6	23.0	23.3	20.8	22.3	21.2	22.6	23.0
	4H	21.7	23.0	22.1	23.4	23.8	21.4	22.7	21.8	23.0	23.4
	6H	22.0	23.2	22.4	23.6	24.0	21.7	22.9	22.1	23.3	23.7
	8H	22.0	23.2	22.5	23.6	24.0	21.8	22.9	22.2	23.3	23.7
	12H	22.1	23.2	22.5	23.6	24.0	21.8	22.9	22.2	23.3	23.7

UGR Viewed Endwise

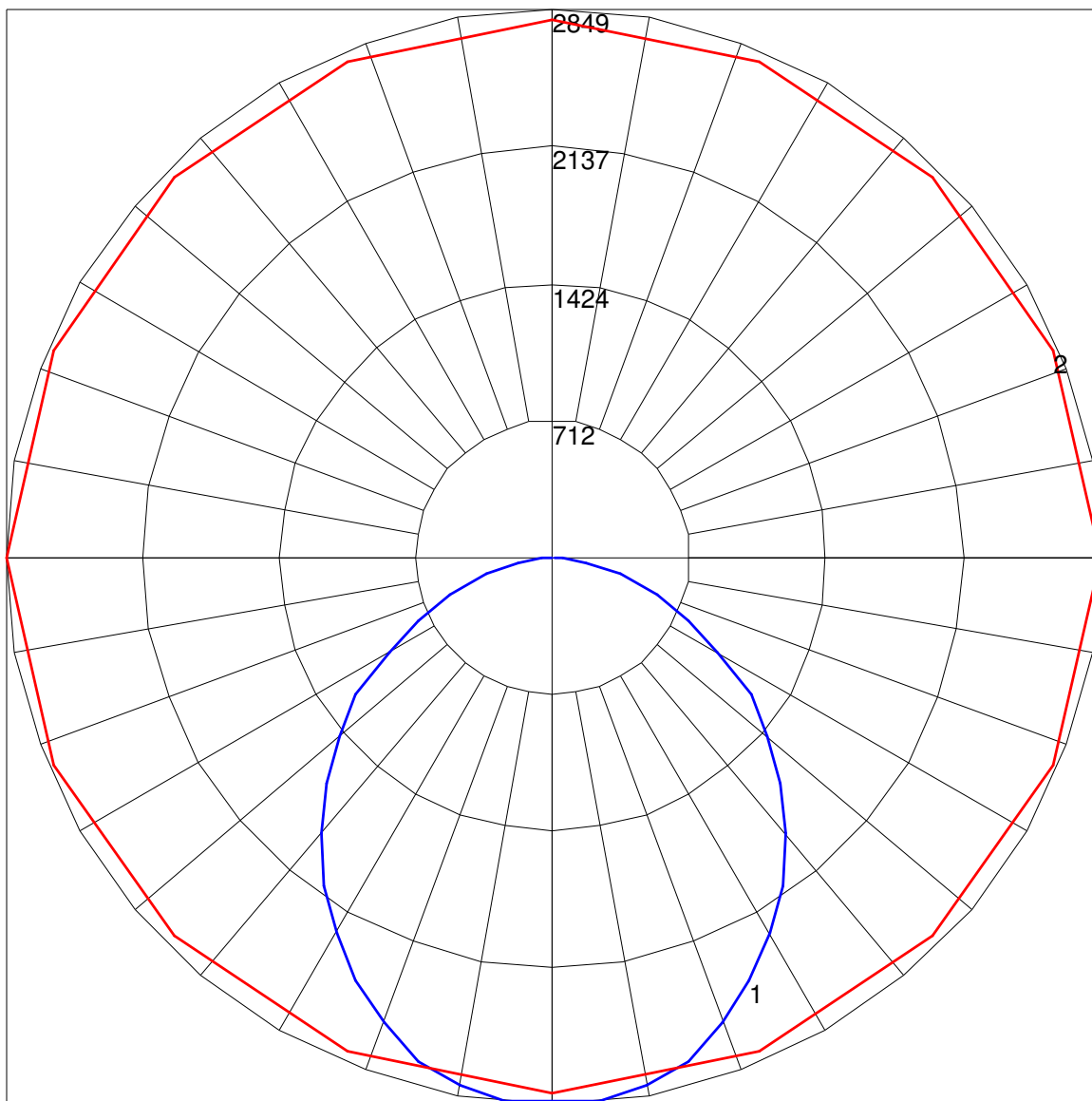
4H	2H	20.2	21.5	20.6	21.9	22.2	19.9	21.2	20.3	21.6	22.0
	3H	21.9	23.0	22.3	23.4	23.8	21.6	22.7	22.0	23.1	23.5
	4H	22.5	23.5	23.0	23.9	24.4	22.2	23.2	22.7	23.7	24.1
	6H	22.9	23.8	23.4	24.2	24.7	22.7	23.5	23.1	24.0	24.4
	8H	23.0	23.8	23.4	24.2	24.7	22.8	23.6	23.3	24.0	24.5
	12H	23.0	23.8	23.5	24.2	24.7	22.8	23.6	23.3	24.1	24.5

8H	4H	22.7	23.5	23.2	24.0	24.4	22.5	23.3	22.9	23.7	24.2
	6H	23.2	23.8	23.7	24.3	24.8	23.0	23.7	23.5	24.2	24.6
	8H	23.3	23.9	23.8	24.4	24.9	23.2	23.8	23.7	24.3	24.8
	12H	23.4	23.9	23.9	24.4	25.0	23.3	23.8	23.8	24.3	24.9

12H	4H	22.7	23.5	23.2	23.9	24.4	22.5	23.2	23.0	23.7	24.2
	6H	23.2	23.8	23.7	24.3	24.8	23.0	23.6	23.5	24.1	24.6
	8H	23.3	23.9	23.9	24.4	24.9	23.2	23.8	23.7	24.3	24.8

Maximum UGR = 25.0

POLAR GRAPH



Maximum Candela = 2848.87 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.)