



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4RG-4-00-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] 4' RECESSED GRID LED LUMINAIRE
 [MORE] WHITE ALUM BODY w/WHITE REFL & FLAT FROST LENS
 [LUMCAT] MX4RG-4-00-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	3462
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
Total Luminaire Watts	29.2
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	9996	9782	9380
55	9257	8702	8556
65	7807	7530	7292
75	5824	5759	5824
85	2690	2690	2690

IES INDOOR REPORT
 PHOTOMETRIC FILENAME : MX4RG-4-00-L8-830-F-DIM-UNV_.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	1416.494	1416.494	1416.494	1416.494	1416.494
5	1424.418	1408.569	1398.664	1396.683	1396.683
10	1398.664	1382.815	1370.928	1368.947	1366.966
15	1359.041	1339.230	1325.363	1323.381	1317.438
20	1289.703	1275.835	1271.873	1263.948	1254.043
25	1214.420	1202.534	1194.609	1182.723	1176.779
30	1131.214	1117.346	1103.478	1095.554	1087.629
35	1042.064	1034.139	1010.366	1014.328	992.536
40	943.008	937.065	929.141	905.367	893.481
45	836.028	828.104	818.198	794.425	784.520
50	727.067	723.105	703.294	691.407	683.483
55	628.012	614.144	590.371	590.371	580.465
60	495.277	499.240	481.410	475.466	463.580
65	390.279	386.316	376.411	368.486	364.524
70	289.242	281.318	271.412	267.450	265.469
75	178.300	174.338	176.319	172.357	178.300
80	91.131	87.169	91.131	99.055	91.131
85	27.736	27.736	27.736	33.679	27.736
90	1.981	0.000	0.000	0.000	0.000

IES INDOOR REPORT
PHOTOMETRIC FILENAME : MX4RG-4-00-L8-830-F-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	508.27	N.A.	14.70
0-30	1057.89	N.A.	30.60
0-40	1694.8	N.A.	49.00
0-60	2857.28	N.A.	82.50
0-80	3420.69	N.A.	98.80
0-90	3461.73	N.A.	100.00
10-90	3328.57	N.A.	96.20
20-40	1186.53	N.A.	34.30
20-50	1814.65	N.A.	52.40
40-70	1536.78	N.A.	44.40
60-80	563.40	N.A.	16.30
70-80	189.11	N.A.	5.50
80-90	41.04	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	3461.73	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	133.16
10-20	375.11
20-30	549.61
30-40	636.91
40-50	628.13
50-60	534.36
60-70	374.29
70-80	189.11
80-90	41.04
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : MX4RG-4-00-L8-830-F-DIM-UNV_.IES

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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : MX4RG-4-00-L8-830-F-DIM-UNV_.IES

UGR TABLE - CORRECTED

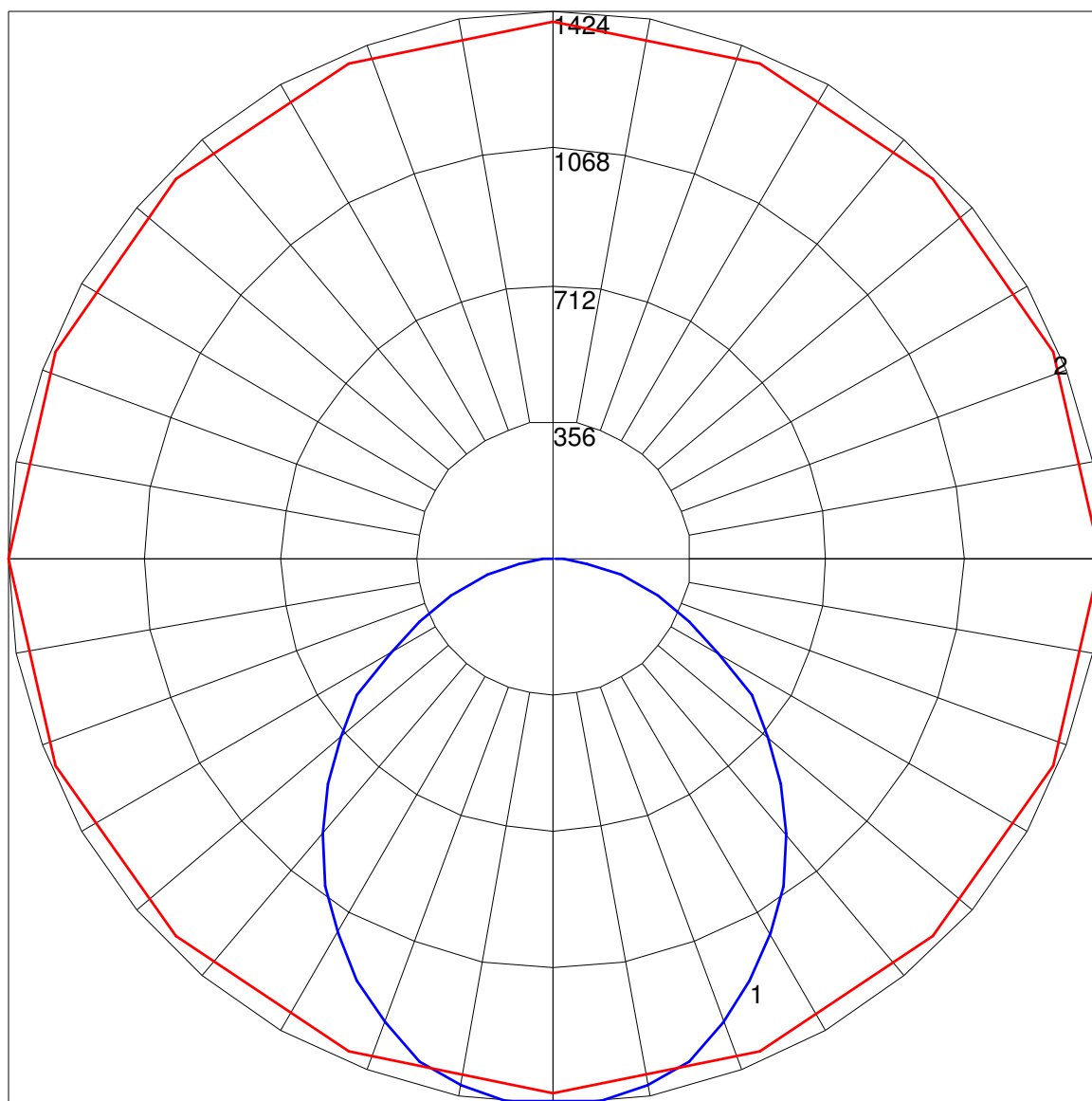
Reflectances

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					UGR Viewed Endwise				
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	22.7	21.6	23.0	23.3	20.9	22.3	21.2	22.6	23.0
	4H	21.7	23.1	22.1	23.4	23.8	21.4	22.7	21.8	23.1	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	23.0	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
4H	2H	20.2	21.5	20.6	21.9	22.3	19.9	21.2	20.3	21.6	22.0
	3H	21.9	23.1	22.4	23.5	23.9	21.6	22.7	22.0	23.1	23.5
	4H	22.5	23.5	23.0	23.9	24.4	22.3	23.2	22.7	23.7	24.1
	6H	22.9	23.8	23.4	24.2	24.7	22.7	23.6	23.1	24.0	24.5
	8H	23.0	23.8	23.5	24.2	24.7	22.8	23.6	23.3	24.1	24.5
	12H	23.0	23.8	23.5	24.2	24.7	22.9	23.6	23.3	24.1	24.5
8H	4H	22.7	23.5	23.2	24.0	24.5	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	23.6	24.1	24.6
	8H	23.4	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 = 1424.418 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.)