



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4S-5-00-L8-830-F-(L4)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20649.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 10/28/2022

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 5' LINEAR SURFACE LED LUMINAIRE

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

[LUMCAT] MX4S-5-00-L8-830-F-(L4)-DIM-UNV

[LAMPCAT] HLMX 80 CRI 3000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1894
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	121
Total Luminaire Watts	15.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.06
Spacing Criterion (Diagonal)	1.20
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	5.00 ft
Luminous Width (90-270)	0.31 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5084	4406	3996
55	4210	3519	3200
65	3172	2667	2415
75	2178	1913	1707
85	1049	874	699

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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	900.248	900.248	900.248	900.248	900.248
5	903.510	893.724	889.375	883.939	882.852
10	886.114	871.979	862.194	852.409	848.060
15	858.932	845.885	818.704	805.657	799.133
20	825.227	799.133	769.777	749.119	740.421
25	779.563	749.119	711.065	692.582	687.146
30	726.287	689.320	651.266	632.783	624.085
35	662.139	622.998	584.944	566.460	555.588
40	590.380	556.675	511.010	493.614	481.654
45	513.185	481.654	444.688	415.332	403.372
50	428.379	397.936	360.969	338.137	334.875
55	344.660	320.741	288.123	276.163	262.029
60	272.901	243.545	222.887	208.753	202.230
65	191.357	175.048	160.914	151.129	145.692
70	136.994	119.598	113.075	104.377	102.202
75	80.457	76.108	70.672	66.323	63.061
80	44.577	42.403	40.228	36.967	34.792
85	13.047	13.047	10.873	10.873	8.698
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	316.14	N.A.	16.70
0-30	648.23	N.A.	34.20
0-40	1020.36	N.A.	53.90
0-60	1632.77	N.A.	86.20
0-80	1876.67	N.A.	99.10
0-90	1893.71	N.A.	100.00
10-90	1809.58	N.A.	95.60
20-40	704.22	N.A.	37.20
20-50	1050.24	N.A.	55.50
40-70	778.15	N.A.	41.10
60-80	243.89	N.A.	12.90
70-80	78.16	N.A.	4.10
80-90	17.05	N.A.	0.90
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	1893.71	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	84.13
10-20	232.01
20-30	332.09
30-40	372.13
40-50	346.03
50-60	266.39
60-70	165.73
70-80	78.16
80-90	17.05
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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	89	87
2	101	94	88	83	99	92	86	82	89	84	80	85	81	78	82	79	76	74
3	93	84	76	70	91	82	75	70	79	73	68	76	71	67	74	70	66	64
4	86	75	67	61	84	74	66	60	71	65	59	69	63	59	67	62	58	56
5	79	67	59	53	77	66	59	53	64	57	52	62	56	52	61	55	51	49
6	74	61	53	47	72	60	52	47	58	51	46	57	51	46	55	50	45	44
7	69	56	48	42	67	55	47	42	54	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	43	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	40	35	31	29

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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	16.6	18.1	16.9	18.4	18.7	15.3	16.9	15.7	17.2	17.5
	3H	17.8	19.2	18.2	19.5	19.9	16.5	17.9	16.9	18.2	18.6
	4H	18.2	19.5	18.6	19.8	20.2	16.9	18.2	17.3	18.5	18.9
	6H	18.5	19.7	18.9	20.0	20.4	17.1	18.3	17.5	18.7	19.1
	8H	18.5	19.7	19.0	20.0	20.5	17.2	18.3	17.6	18.7	19.1
	12H	18.6	19.6	19.0	20.0	20.4	17.2	18.3	17.6	18.6	19.1

UGR Viewed Endwise

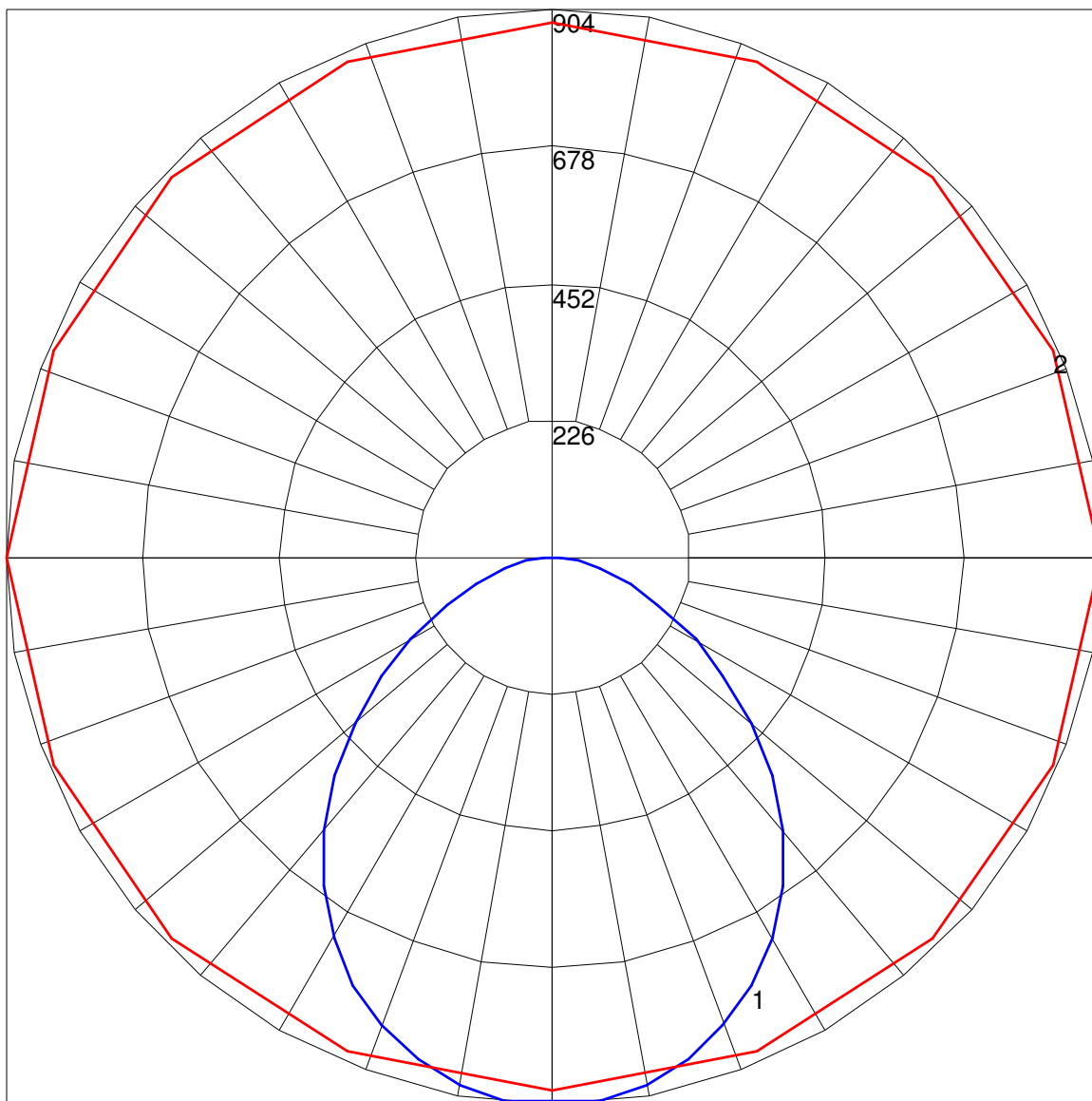
4H	2H	16.9	18.1	17.3	18.5	18.9	15.8	17.1	16.2	17.5	17.8
	3H	18.3	19.4	18.7	19.8	20.2	17.2	18.3	17.6	18.7	19.1
	4H	18.8	19.8	19.2	20.2	20.6	17.7	18.6	18.1	19.0	19.5
	6H	19.2	20.0	19.6	20.4	20.9	18.0	18.8	18.5	19.3	19.8
	8H	19.3	20.0	19.7	20.5	21.0	18.1	18.9	18.6	19.3	19.8
	12H	19.3	20.0	19.8	20.5	21.0	18.1	18.8	18.6	19.3	19.8

8H	4H	18.9	19.7	19.4	20.2	20.6	17.9	18.7	18.4	19.1	19.6
	6H	19.4	20.0	19.9	20.5	21.0	18.3	19.0	18.8	19.4	19.9
	8H	19.5	20.1	20.0	20.6	21.1	18.4	19.0	19.0	19.5	20.0
	12H	19.6	20.1	20.1	20.6	21.2	18.5	19.0	19.0	19.5	20.1

12H	4H	18.9	19.6	19.4	20.1	20.6	17.9	18.6	18.4	19.1	19.5
	6H	19.4	20.0	19.9	20.4	21.0	18.4	18.9	18.9	19.4	19.9
	8H	19.6	20.1	20.1	20.6	21.1	18.5	19.0	19.0	19.5	20.1

Maximum UGR = 21.2

POLAR GRAPH



Maximum Candela = 903.51 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.)