



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4S-2-00-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] 2' SURFACE MOUNT LINEAR LED LUMINAIRE

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

[LUMCAT] MX4S-2-00-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	816
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
Total Luminaire Watts	7.6
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)	2.00 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	5476	4745	4305
55	4534	3790	3447
65	3417	2873	2601
75	2346	2060	1839
85	1130	941	753

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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	387.858	387.858	387.858	387.858	387.858
5	389.263	385.047	383.173	380.831	380.363
10	381.768	375.679	371.463	367.247	365.373
15	370.057	364.436	352.726	347.104	344.294
20	355.536	344.294	331.646	322.746	318.999
25	335.862	322.746	306.351	298.388	296.046
30	312.909	296.983	280.588	272.625	268.877
35	285.272	268.409	252.014	244.051	239.366
40	254.356	239.835	220.161	212.666	207.513
45	221.098	207.513	191.587	178.939	173.786
50	184.560	171.444	155.518	145.681	144.276
55	148.491	138.186	124.133	118.980	112.891
60	117.575	104.928	96.028	89.938	87.127
65	82.443	75.417	69.327	65.111	62.769
70	59.022	51.527	48.716	44.969	44.032
75	34.664	32.790	30.448	28.574	27.169
80	19.206	18.269	17.332	15.927	14.990
85	5.621	5.621	4.684	4.684	3.747
90	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : MX4S-2-00-L8-830-F-(L4)-DIM-UNV_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	136.20	N.A.	16.70
0-30	279.28	N.A.	34.20
0-40	439.60	N.A.	53.90
0-60	703.46	N.A.	86.20
0-80	808.53	N.A.	99.10
0-90	815.88	N.A.	100.00
10-90	779.63	N.A.	95.60
20-40	303.40	N.A.	37.20
20-50	452.48	N.A.	55.50
40-70	335.25	N.A.	41.10
60-80	105.08	N.A.	12.90
70-80	33.68	N.A.	4.10
80-90	7.34	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	815.88	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	36.25
10-20	99.96
20-30	143.07
30-40	160.33
40-50	149.08
50-60	114.77
60-70	71.40
70-80	33.68
80-90	7.34
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

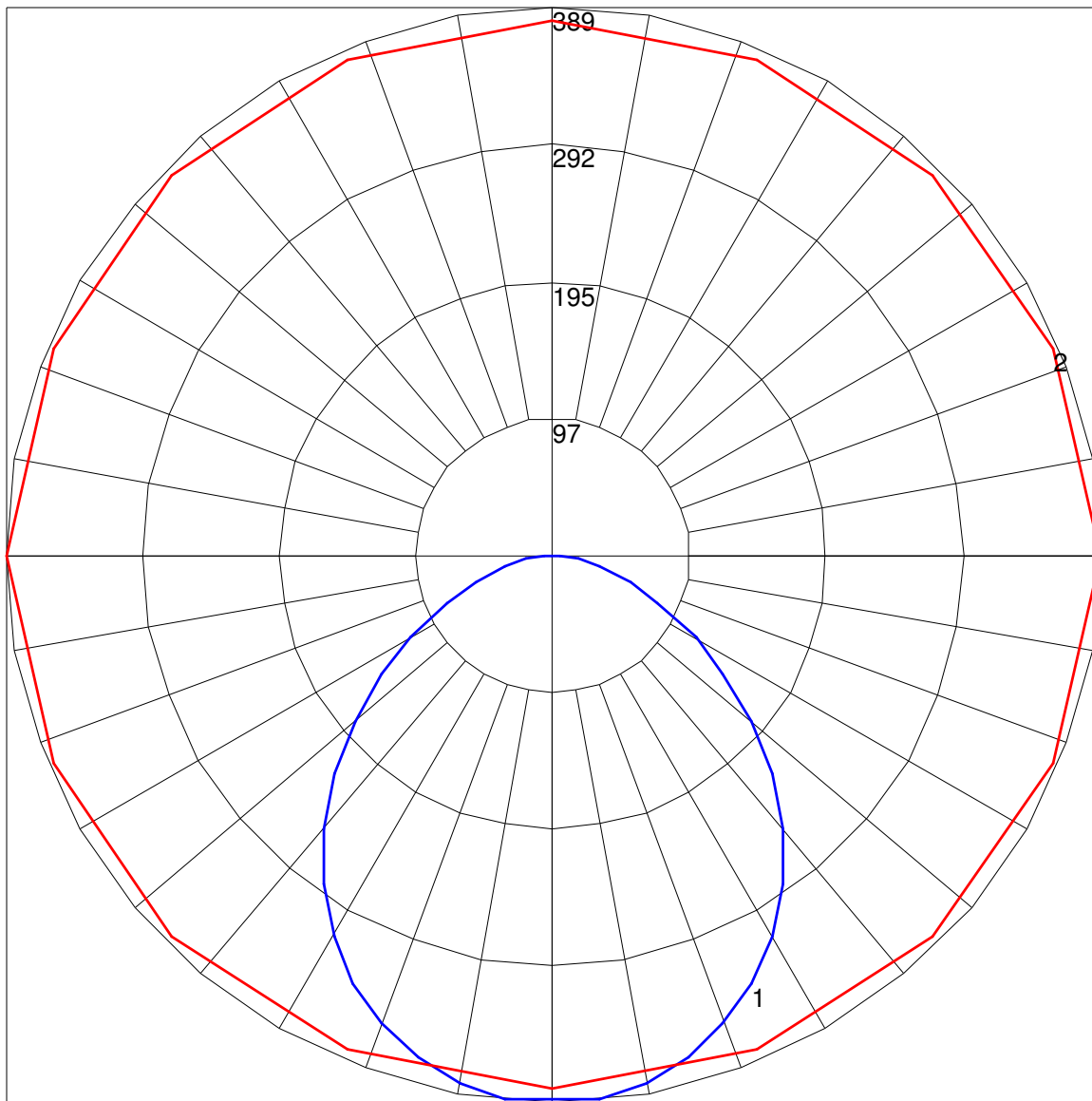
X=2H	Y=2H	16.9	18.4	17.2	18.7	19.0	15.6	17.1	16.0	17.5	17.8
	3H	18.1	19.5	18.5	19.8	20.2	16.8	18.2	17.2	18.5	18.8
	4H	18.5	19.8	18.9	20.1	20.5	17.2	18.4	17.6	18.8	19.2
	6H	18.8	19.9	19.2	20.3	20.7	17.4	18.6	17.8	19.0	19.3
	8H	18.8	19.9	19.3	20.3	20.7	17.5	18.6	17.9	19.0	19.4
	12H	18.8	19.9	19.3	20.3	20.7	17.5	18.5	17.9	18.9	19.4

UGR Viewed Endwise

4H	2H	17.2	18.4	17.6	18.8	19.2	16.1	17.4	16.5	17.7	18.1
	3H	18.6	19.7	19.0	20.1	20.5	17.5	18.6	17.9	19.0	19.4
	4H	19.1	20.0	19.5	20.5	20.9	18.0	18.9	18.4	19.3	19.8
	6H	19.5	20.3	19.9	20.7	21.2	18.3	19.1	18.8	19.6	20.0
	8H	19.6	20.3	20.0	20.8	21.2	18.4	19.2	18.9	19.6	20.1
	12H	19.6	20.3	20.1	20.8	21.2	18.4	19.1	18.9	19.6	20.1
8H	4H	19.2	20.0	19.7	20.4	20.9	18.2	19.0	18.6	19.4	19.9
	6H	19.7	20.3	20.2	20.8	21.3	18.6	19.2	19.1	19.7	20.2
	8H	19.8	20.4	20.3	20.9	21.4	18.7	19.3	19.2	19.8	20.3
	12H	19.9	20.4	20.4	20.9	21.4	18.8	19.3	19.3	19.8	20.3
12H	4H	19.2	19.9	19.7	20.4	20.9	18.2	18.9	18.7	19.4	19.8
	6H	19.7	20.2	20.2	20.7	21.2	18.6	19.2	19.2	19.7	20.2
	8H	19.8	20.3	20.4	20.8	21.4	18.8	19.3	19.3	19.8	20.4

Maximum UGR = 21.4

POLAR GRAPH



Maximum Candela = 389.263 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.)