



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4W-4-00-L12-835-F-(L9)-EM10WRM-DIM-UNV(EMERGENCY MODE).IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM BALLABS TEST NO. 20195.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 04-16-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 4' WALL MOUNTED LUMINAIRE
 [MORE] WITH FROSTED ACRYLIC LENS
 [LUMCAT] MX4WD-4-L12-835-F-(L9)-EM10WRM-DIM-UNV(EMER MODE)
 [LAMPCAT] HLM 80 CRI, 3500K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Direct-Indirect
 [_SEARCH_MOUNTING] WALL

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1234
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.18
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	3559	3399	3272
55	3280	3127	2933
65	2902	2730	2613
75	2233	2142	2125
85	1031	1277	1179

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	487.532	487.532	487.532	487.532	487.532
5	497.560	486.760	483.675	481.103	478.532
10	490.874	479.303	475.703	471.846	469.018
15	480.846	467.989	461.304	455.132	453.332
20	459.761	446.904	443.304	432.761	430.961
25	430.190	420.162	416.562	408.591	406.791
30	400.619	391.620	386.991	381.334	378.506
35	372.849	362.306	354.849	351.506	348.421
40	341.992	333.764	322.964	317.821	313.707
45	302.393	296.736	288.765	283.879	277.965
50	265.880	256.366	254.823	245.823	240.937
55	226.023	220.366	215.481	207.767	202.110
60	189.253	181.024	178.196	171.253	166.368
65	147.339	142.968	138.597	134.225	132.683
70	108.255	104.398	101.569	97.455	99.255
75	69.427	69.684	66.598	66.598	66.084
80	34.199	36.256	35.228	37.285	34.713
85	10.800	12.857	13.371	15.685	12.343
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	176.34	N.A.	14.30
0-30	367.99	N.A.	29.80
0-40	591.60	N.A.	47.90
0-60	1007.22	N.A.	81.60
0-80	1216.98	N.A.	98.60
0-90	1234.00	N.A.	100.00
10-90	1187.98	N.A.	96.30
20-40	415.26	N.A.	33.70
20-50	638.84	N.A.	51.80
40-70	553.40	N.A.	44.80
60-80	209.76	N.A.	17.00
70-80	71.98	N.A.	5.80
80-90	17.02	N.A.	1.40
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	1234.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	46.02
10-20	130.32
20-30	191.65
30-40	223.60
40-50	223.58
50-60	192.04
60-70	137.78
70-80	71.98
80-90	17.02
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	102	99	95	98	95	92	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73	71
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	61
4	84	72	63	57	81	71	63	56	68	61	56	66	60	55	64	58	54	52
5	77	64	56	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	43	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	51	43	38	49	42	38	48	42	37	35
8	62	48	40	34	60	48	40	34	46	39	34	45	39	34	44	38	33	32
9	58	44	36	31	56	44	36	31	43	36	31	42	35	30	41	35	30	29
10	54	41	33	28	53	41	33	28	40	33	28	39	32	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	16.1	17.7	16.5	18.0	18.3	15.6	17.2	16.0	17.6	17.9
	3H	17.8	19.2	18.1	19.5	19.9	17.2	18.7	17.6	19.0	19.4
	4H	18.3	19.6	18.7	20.0	20.4	17.8	19.2	18.2	19.5	19.9
	6H	18.6	19.9	19.0	20.2	20.6	18.2	19.4	18.6	19.8	20.2
	8H	18.7	19.9	19.1	20.3	20.7	18.3	19.5	18.7	19.8	20.2
	12H	18.7	19.9	19.1	20.2	20.7	18.3	19.5	18.7	19.8	20.3

UGR Viewed Endwise

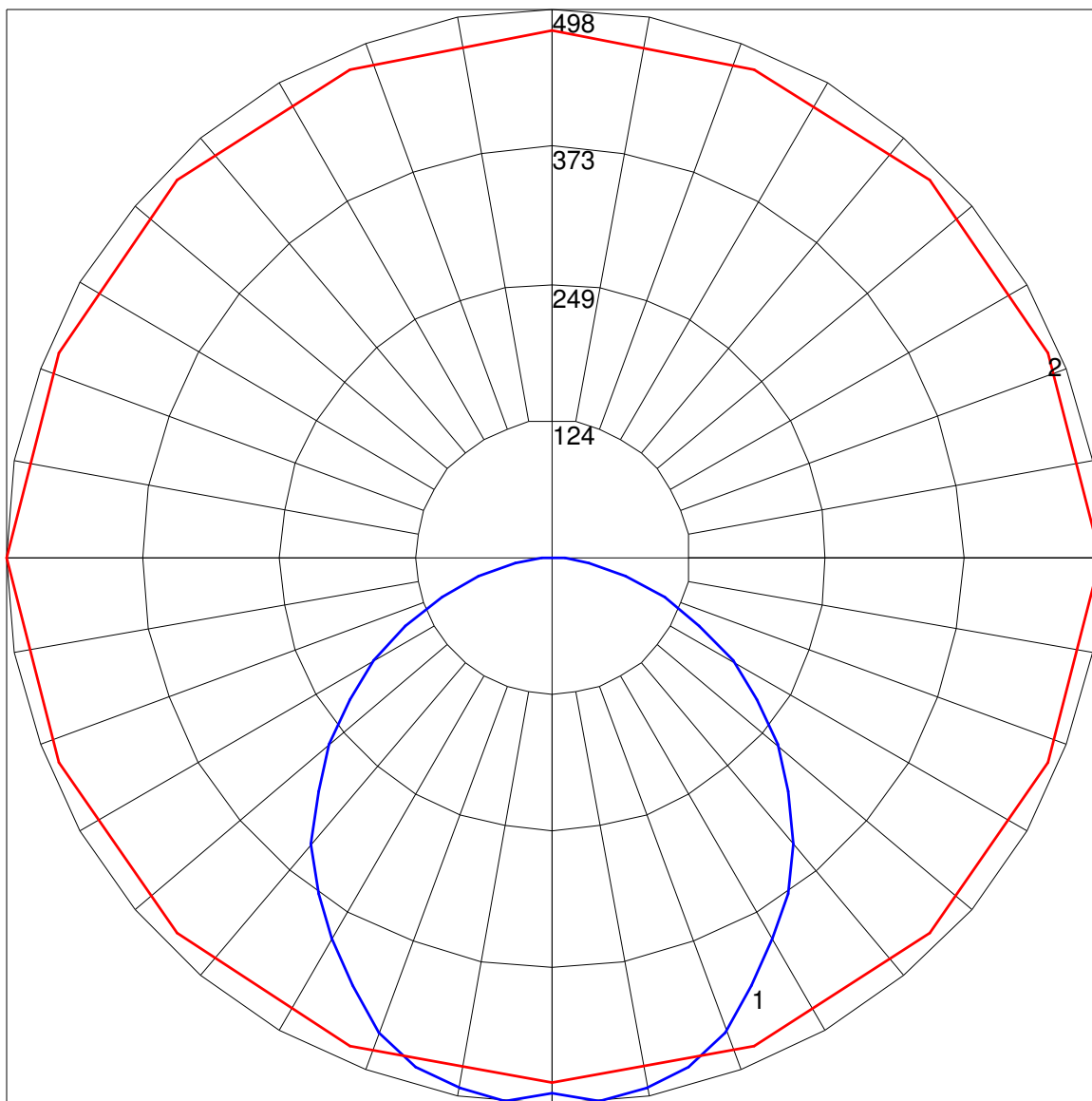
4H	2H	16.6	18.0	17.0	18.4	18.7	16.3	17.6	16.7	18.0	18.3
	3H	18.5	19.6	18.9	20.0	20.4	18.1	19.2	18.5	19.6	20.0
	4H	19.1	20.2	19.6	20.6	21.0	18.7	19.8	19.2	20.2	20.6
	6H	19.6	20.5	20.0	20.9	21.4	19.2	20.1	19.7	20.5	21.0
	8H	19.7	20.5	20.1	20.9	21.4	19.3	20.2	19.8	20.6	21.1
	12H	19.7	20.5	20.2	21.0	21.4	19.4	20.2	19.9	20.6	21.1
8H	4H	19.4	20.2	19.8	20.6	21.1	19.0	19.8	19.5	20.3	20.7
	6H	19.9	20.6	20.4	21.1	21.5	19.6	20.3	20.1	20.8	21.2
	8H	20.0	20.7	20.5	21.2	21.6	19.8	20.4	20.3	20.9	21.4
	12H	20.1	20.7	20.7	21.2	21.7	19.9	20.5	20.4	21.0	21.5
12H	4H	19.4	20.1	19.9	20.6	21.1	19.0	19.8	19.5	20.2	20.7
	6H	19.9	20.5	20.4	21.0	21.5	19.6	20.2	20.1	20.7	21.2
	8H	20.1	20.7	20.6	21.1	21.7	19.9	20.4	20.4	20.9	21.5

Maximum UGR = 21.7

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POLAR GRAPH



Maximum Candela = 497.56 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.)