



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4WUD-2-00-L8-835U-L8-835D-A-F-EM10WRM-DIM-UNV_(EMER MODE).IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM BALLABS TEST NO. 29653.0
 [TESTLABV] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 06-12-2023
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 2' DIRECT-INDIRECT SUSPENDED LUMINAIRE
 [MORE] WITH FROSTED ACRYLIC LENS
 [LUMCAT] MX4UD-2-00-L8-835U-L8-835D-AF-EM10WRM-DIM-UNV
 [LAMPCAT] HLM 80 CRI, 3500K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Direct
 [_SEARCH_MOUNTING] Suspended

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1160
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	116
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.99 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	6695	6492	6390
55	6148	5898	5731
65	5233	5148	4978
75	3972	4157	3926
85	1920	2469	2332

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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	472.019	472.019	472.019	472.019	472.019
5	474.130	469.206	467.095	465.688	465.688
10	465.688	460.764	458.654	457.247	455.840
15	449.509	445.991	442.474	441.067	438.957
20	430.515	425.591	422.777	418.557	417.150
25	405.894	400.267	397.453	392.529	391.825
30	381.273	374.942	369.315	367.908	364.391
35	346.804	342.583	337.659	332.735	332.735
40	314.445	310.224	303.893	302.486	297.562
45	278.569	274.348	270.127	265.907	265.907
50	244.803	239.175	235.658	232.844	229.327
55	207.520	202.595	199.078	195.561	193.451
60	168.830	166.016	163.905	161.092	158.981
65	130.139	129.436	128.029	124.512	123.808
70	96.374	95.670	93.560	92.153	90.746
75	60.497	62.608	63.311	61.201	59.794
80	30.952	32.359	32.359	33.062	33.766
85	9.848	10.552	12.662	11.255	11.959
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	169.35	N.A.	14.60
0-30	352.60	N.A.	30.40
0-40	564.49	N.A.	48.70
0-60	952.27	N.A.	82.10
0-80	1144.87	N.A.	98.70
0-90	1159.89	N.A.	100.00
10-90	1115.48	N.A.	96.20
20-40	395.15	N.A.	34.10
20-50	604.27	N.A.	52.10
40-70	514.47	N.A.	44.40
60-80	192.59	N.A.	16.60
70-80	65.90	N.A.	5.70
80-90	15.03	N.A.	1.30
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	1159.89	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	44.41
10-20	124.93
20-30	183.26
30-40	211.89
40-50	209.12
50-60	178.66
60-70	126.69
70-80	65.90
80-90	15.03
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	98	95	93	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	87	82	77	83	79	75	80	77	74	72
3	91	81	73	67	89	80	72	67	77	70	65	74	69	64	71	67	63	61
4	84	72	64	57	82	71	63	57	68	62	56	66	60	55	64	59	55	52
5	77	65	56	50	75	64	56	49	62	54	49	60	53	48	58	52	48	46
6	72	59	50	44	70	58	49	43	56	48	43	54	48	43	53	47	42	40
7	66	53	45	39	65	52	44	39	51	44	38	49	43	38	48	42	38	36
8	62	49	40	35	60	48	40	35	47	39	34	45	39	34	44	38	34	32
9	58	45	37	31	57	44	36	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	28	53	41	33	28	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	18.2	19.8	18.6	20.1	20.4	18.0	19.5	18.3	19.9	20.2
	3H	19.8	21.2	20.2	21.6	21.9	19.5	20.9	19.9	21.3	21.6
	4H	20.3	21.7	20.7	22.0	22.4	20.0	21.4	20.4	21.7	22.1
	6H	20.6	21.9	21.1	22.2	22.6	20.4	21.7	20.8	22.0	22.4
	8H	20.7	21.9	21.1	22.3	22.7	20.5	21.7	20.9	22.1	22.5
	12H	20.7	21.9	21.2	22.2	22.7	20.6	21.7	21.0	22.1	22.5

UGR Viewed Endwise

4H	2H	18.8	20.1	19.2	20.5	20.8	18.5	19.9	18.9	20.2	20.6
	3H	20.6	21.7	21.0	22.1	22.5	20.3	21.4	20.7	21.8	22.2
	4H	21.2	22.2	21.6	22.6	23.1	21.0	22.0	21.4	22.4	22.8
	6H	21.6	22.5	22.1	22.9	23.4	21.4	22.3	21.9	22.8	23.2
	8H	21.7	22.5	22.2	23.0	23.4	21.6	22.4	22.0	22.8	23.3
	12H	21.7	22.5	22.2	23.0	23.4	21.6	22.4	22.1	22.9	23.3

8H	4H	21.4	22.3	21.9	22.7	23.2	21.2	22.1	21.7	22.5	23.0
	6H	21.9	22.6	22.4	23.1	23.6	21.8	22.5	22.3	23.0	23.4
	8H	22.1	22.7	22.6	23.2	23.7	22.0	22.6	22.5	23.1	23.6
	12H	22.2	22.7	22.7	23.2	23.8	22.1	22.6	22.6	23.1	23.7

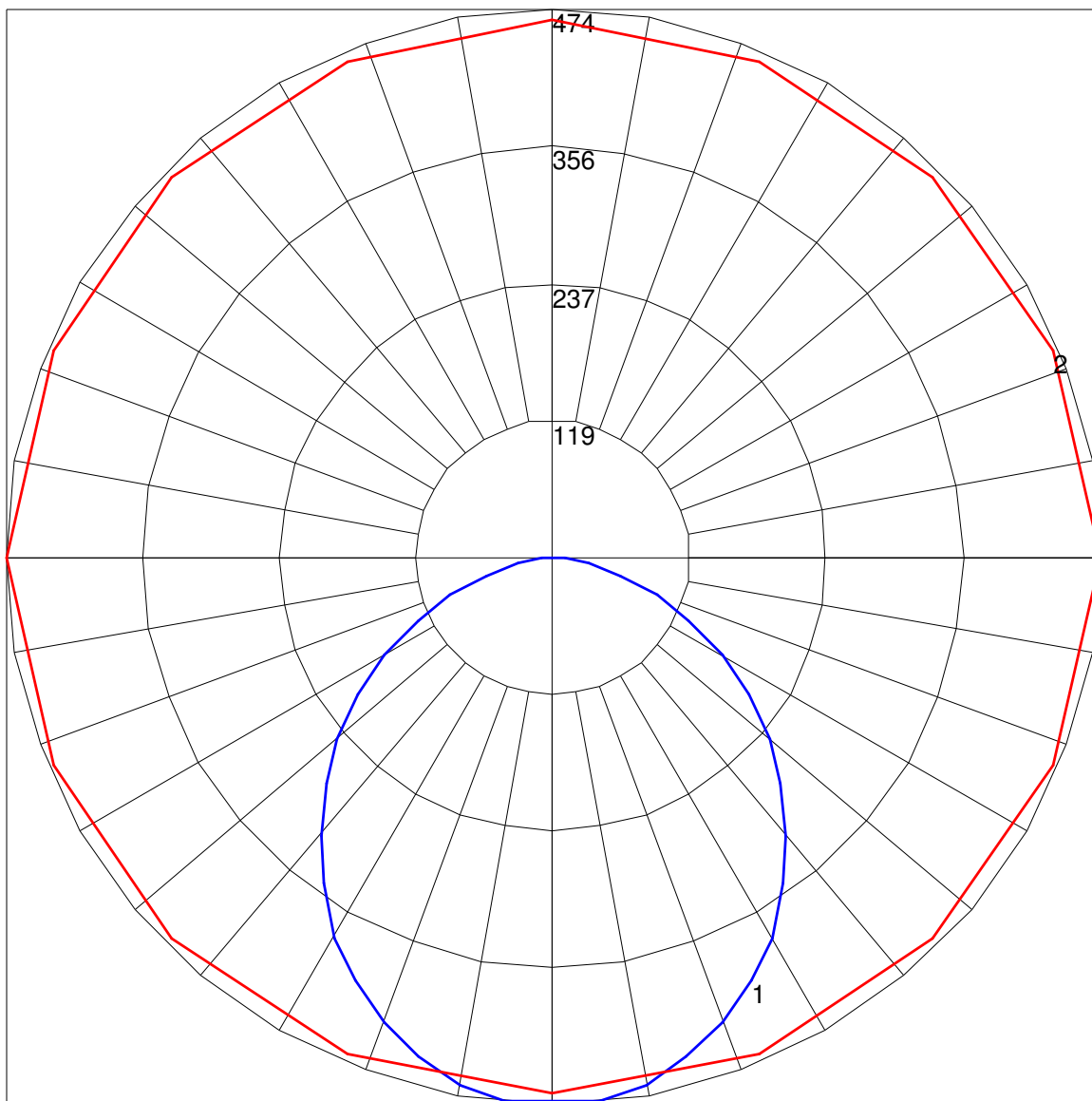
12H	4H	21.4	22.2	21.9	22.7	23.1	21.2	22.0	21.7	22.5	22.9
	6H	22.0	22.6	22.5	23.0	23.6	21.8	22.4	22.3	22.9	23.4
	8H	22.1	22.7	22.7	23.2	23.7	22.0	22.6	22.5	23.1	23.6

Maximum UGR = 23.8

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POLAR GRAPH



Maximum Candela = 474.13 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.)