



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-6-00-L8-935-F-(L6)-DIM-UNV_.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] 24 JUNE, 2024
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 6' DIRECT SUSPENDED LUMINAIRE
 [MORE] WITH FROSTED ACRYLIC LENS
 [LUMCAT] MX4D-6-00-L8-935-F-(L6)-DIM-UNV
 [LAMPCAT] HLM 90 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	3150
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
Total Luminaire Watts	29.52
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)	6.00 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	6058	5785	5568
55	5582	5321	4991
65	4938	4645	4447
75	3800	3645	3617
85	1755	2173	2006

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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	1244.534	1244.534	1244.534	1244.534	1244.534
5	1270.134	1242.565	1234.688	1228.124	1221.560
10	1253.068	1223.530	1214.340	1204.494	1197.274
15	1227.468	1194.648	1177.582	1161.828	1157.233
20	1173.643	1140.823	1131.634	1104.721	1100.126
25	1098.157	1072.558	1063.368	1043.020	1038.425
30	1022.671	999.697	987.882	973.441	966.221
35	951.780	924.868	905.832	897.299	889.422
40	873.012	852.007	824.438	811.310	800.808
45	771.926	757.486	737.137	724.666	709.568
50	678.718	654.431	650.492	627.518	615.047
55	576.976	562.535	550.063	530.371	515.930
60	483.110	462.106	454.885	437.162	424.691
65	376.117	364.958	353.800	342.641	338.702
70	276.344	266.498	259.278	248.776	253.370
75	177.228	177.884	170.008	170.008	168.695
80	87.301	92.552	89.927	95.178	88.614
85	27.569	32.820	34.133	40.040	31.507
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	450.15	N.A.	14.30
0-30	939.39	N.A.	29.80
0-40	1510.19	N.A.	47.90
0-60	2571.15	N.A.	81.60
0-80	3106.61	N.A.	98.60
0-90	3150.07	N.A.	100.00
10-90	3032.58	N.A.	96.30
20-40	1060.04	N.A.	33.70
20-50	1630.78	N.A.	51.80
40-70	1412.69	N.A.	44.80
60-80	535.46	N.A.	17.00
70-80	183.74	N.A.	5.80
80-90	43.46	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	3150.07	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	117.49
10-20	332.66
20-30	489.24
30-40	570.80
40-50	570.74
50-60	490.22
60-70	351.72
70-80	183.74
80-90	43.46
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 RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	88	88	88	88	86	86	86	86	82	82	82	79	79	79	75	75	75	74
1	81	77	74	72	79	76	73	71	73	70	68	70	68	66	67	66	64	63
2	74	68	63	59	72	66	62	58	64	60	57	61	58	56	59	57	54	53
3	67	60	54	49	66	59	53	49	57	52	48	54	51	47	53	49	46	45
4	62	53	47	42	60	52	46	42	50	45	41	49	44	41	47	43	40	39
5	57	48	41	36	55	47	41	36	45	40	36	44	39	35	42	38	35	33
6	53	43	37	32	51	42	36	32	41	36	31	40	35	31	39	34	31	29
7	49	39	33	28	48	39	32	28	37	32	28	36	31	28	35	31	28	26
8	46	36	30	25	44	35	29	25	34	29	25	33	28	25	32	28	25	23
9	43	33	27	23	42	32	27	23	32	26	23	31	26	23	30	26	22	21
10	40	30	25	21	39	30	24	21	29	24	21	29	24	21	28	24	20	19

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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	18.0	19.6	18.4	19.9	20.2	17.5	19.1	17.9	19.4	19.8
	3H	19.6	21.1	20.0	21.4	21.8	19.1	20.6	19.5	20.9	21.3
	4H	20.2	21.5	20.6	21.9	22.3	19.7	21.1	20.1	21.4	21.8
	6H	20.5	21.8	20.9	22.1	22.5	20.1	21.3	20.5	21.7	22.1
	8H	20.6	21.8	21.0	22.2	22.6	20.2	21.4	20.6	21.7	22.1
	12H	20.6	21.7	21.0	22.1	22.6	20.2	21.3	20.6	21.7	22.2

UGR Viewed Endwise

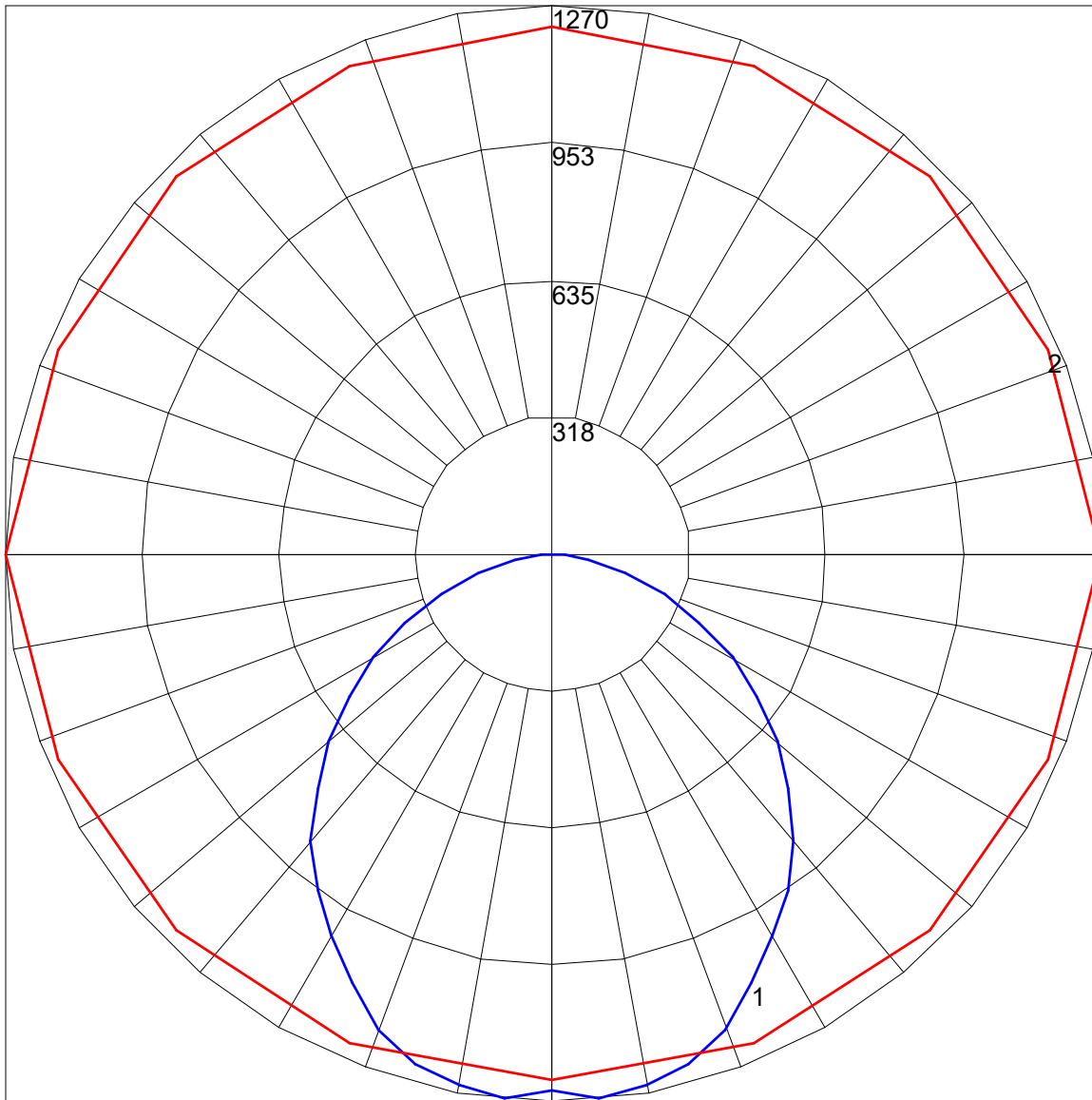
4H	2H	18.5	19.9	18.9	20.2	20.6	18.2	19.5	18.6	19.9	20.2
	3H	20.4	21.5	20.8	21.9	22.3	19.9	21.1	20.4	21.5	21.9
	4H	21.0	22.1	21.5	22.5	22.9	20.6	21.6	21.1	22.1	22.5
	6H	21.5	22.4	21.9	22.8	23.2	21.1	22.0	21.6	22.4	22.9
	8H	21.6	22.4	22.0	22.8	23.3	21.2	22.1	21.7	22.5	23.0
	12H	21.6	22.4	22.1	22.8	23.3	21.3	22.1	21.8	22.5	23.0

8H	4H	21.3	22.1	21.7	22.5	23.0	20.9	21.7	21.4	22.2	22.6
	6H	21.8	22.5	22.3	22.9	23.4	21.5	22.2	22.0	22.6	23.1
	8H	21.9	22.5	22.4	23.1	23.5	21.7	22.3	22.2	22.8	23.3
	12H	22.0	22.6	22.5	23.1	23.6	21.8	22.4	22.3	22.8	23.4

12H	4H	21.3	22.0	21.7	22.5	23.0	20.9	21.7	21.4	22.1	22.6
	6H	21.8	22.4	22.3	22.9	23.4	21.5	22.1	22.0	22.6	23.1
	8H	22.0	22.5	22.5	23.0	23.6	21.7	22.3	22.3	22.8	23.3

Maximum UGR = 23.6

POLAR GRAPH



Maximum Candela = 1270.134 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.)