



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-6-00-L8-835-F-(L7.5)-DIM-UNV_.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] 23-JUL-2020
 [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-L8-835-F-(L7.5)-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	4538
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	127
Total Luminaire Watts	35.6
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)	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	8686	8423	8292
55	7977	7653	7437
65	6790	6680	6459
75	5154	5394	5094
85	2492	3203	3025

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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	1846.573	1846.573	1846.573	1846.573	1846.573
5	1854.828	1835.565	1827.309	1821.805	1821.805
10	1821.805	1802.541	1794.285	1788.781	1783.277
15	1758.509	1744.750	1730.990	1725.486	1717.230
20	1684.206	1664.942	1653.935	1637.423	1631.919
25	1587.887	1565.872	1554.864	1535.600	1532.848
30	1491.568	1466.801	1444.785	1439.281	1425.521
35	1356.722	1340.210	1320.946	1301.682	1301.682
40	1230.131	1213.619	1188.851	1183.348	1164.084
45	1089.781	1073.269	1056.757	1040.245	1040.245
50	957.686	935.670	921.910	910.902	897.143
55	811.831	792.568	778.808	765.048	756.792
60	660.473	649.465	641.209	630.201	621.945
65	509.115	506.363	500.859	487.099	484.347
70	377.020	374.268	366.012	360.508	355.004
75	236.670	244.925	247.677	239.421	233.918
80	121.087	126.591	126.591	129.343	132.095
85	38.528	41.280	49.535	44.032	46.784
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	662.49	N.A.	14.60
0-30	1379.41	N.A.	30.40
0-40	2208.33	N.A.	48.70
0-60	3725.37	N.A.	82.10
0-80	4478.79	N.A.	98.70
0-90	4537.59	N.A.	100.00
10-90	4363.85	N.A.	96.20
20-40	1545.84	N.A.	34.10
20-50	2363.94	N.A.	52.10
40-70	2012.64	N.A.	44.40
60-80	753.43	N.A.	16.60
70-80	257.82	N.A.	5.70
80-90	58.79	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	4537.59	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	173.74
10-20	488.75
20-30	716.91
30-40	828.92
40-50	818.10
50-60	698.93
60-70	495.61
70-80	257.82
80-90	58.79
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	94	94	94	94	92	92	92	92	88	88	88	84	84	84	81	81	81	79
1	87	83	80	77	85	81	78	76	78	76	73	75	73	71	72	71	69	67
2	79	73	68	63	77	72	67	63	69	65	61	66	63	60	64	61	59	57
3	73	64	58	53	71	63	57	53	61	56	52	59	54	51	57	53	50	48
4	67	57	51	45	65	56	50	45	54	49	45	53	48	44	51	47	43	42
5	61	51	45	39	60	51	44	39	49	43	39	47	42	38	46	41	38	36
6	57	46	40	35	55	46	39	34	44	38	34	43	38	34	42	37	34	32
7	53	42	35	31	51	42	35	31	40	35	30	39	34	30	38	33	30	28
8	49	39	32	27	48	38	32	27	37	31	27	36	31	27	35	30	27	25
9	46	36	29	25	45	35	29	25	34	29	25	33	28	24	33	28	24	23
10	43	33	27	23	42	32	27	23	32	26	22	31	26	22	30	26	22	21

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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

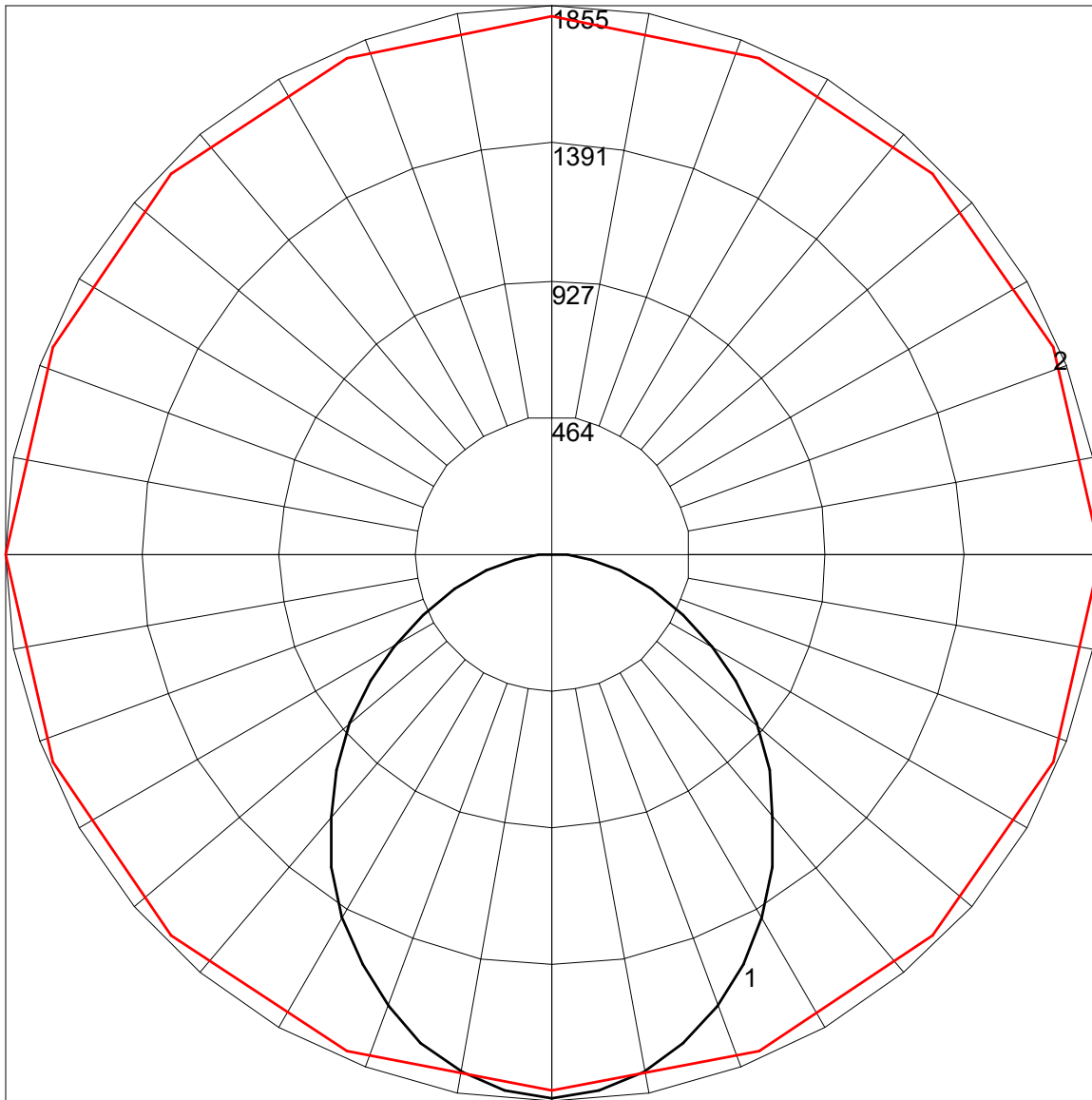
X=2H	Y=2H	20.0	21.6	20.4	21.9	22.2	19.7	21.3	20.1	21.6	21.9
	3H	21.6	23.0	21.9	23.3	23.7	21.3	22.7	21.7	23.0	23.4
	4H	22.1	23.4	22.5	23.8	24.2	21.8	23.2	22.2	23.5	23.9
	6H	22.4	23.6	22.8	24.0	24.4	22.2	23.4	22.6	23.8	24.2
	8H	22.5	23.7	22.9	24.0	24.4	22.3	23.5	22.7	23.9	24.3
	12H	22.5	23.6	22.9	24.0	24.4	22.3	23.5	22.8	23.8	24.3

UGR Viewed Endwise

4H	2H	20.5	21.9	20.9	22.2	22.6	20.3	21.7	20.7	22.0	22.4
	3H	22.3	23.4	22.7	23.8	24.2	22.1	23.2	22.5	23.6	24.0
	4H	23.0	24.0	23.4	24.4	24.8	22.7	23.7	23.2	24.2	24.6
	6H	23.4	24.3	23.8	24.7	25.1	23.2	24.1	23.6	24.5	25.0
	8H	23.5	24.3	23.9	24.7	25.2	23.3	24.2	23.8	24.6	25.1
	12H	23.5	24.3	24.0	24.7	25.2	23.4	24.1	23.9	24.6	25.1
8H	4H	23.2	24.0	23.6	24.5	24.9	23.0	23.8	23.4	24.3	24.7
	6H	23.7	24.4	24.2	24.9	25.3	23.5	24.2	24.0	24.7	25.2
	8H	23.8	24.4	24.3	25.0	25.4	23.7	24.3	24.2	24.8	25.3
	12H	23.9	24.5	24.4	25.0	25.5	23.9	24.4	24.4	24.9	25.4
12H	4H	23.2	23.9	23.7	24.4	24.9	23.0	23.7	23.5	24.2	24.7
	6H	23.7	24.3	24.2	24.8	25.3	23.6	24.2	24.1	24.7	25.2
	8H	23.9	24.4	24.4	24.9	25.5	23.8	24.3	24.3	24.8	25.4

Maximum UGR = 25.5

POLAR GRAPH



Maximum Candela = 1854.828 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)