



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-8-00-L12-835-F-(L10)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 29653.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 23-JUL-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 8' DIRECT SUSPENDED LUMINAIRE
 [MORE] WITH FROSTED ACRYLIC LENS
 [LUMCAT] MX4D-8-00-L12-835-F-(L10)-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	8055
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	63
Total Luminaire Watts	128.8
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)	8.00 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	11565	11215	11040
55	10621	10189	9901
65	9040	8893	8600
75	6862	7181	6782
85	3317	4265	4028

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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	3278.093	3278.093	3278.093	3278.093	3278.093
5	3292.750	3258.552	3243.896	3234.125	3234.125
10	3234.125	3199.927	3185.271	3175.500	3165.730
15	3121.761	3097.334	3072.907	3063.136	3048.480
20	2989.856	2955.658	2936.116	2906.804	2897.033
25	2818.867	2779.784	2760.243	2726.045	2721.159
30	2647.879	2603.910	2564.827	2555.056	2530.629
35	2408.495	2379.183	2344.985	2310.787	2310.787
40	2183.767	2154.455	2110.486	2100.716	2066.518
45	1934.612	1905.300	1875.988	1846.676	1846.676
50	1700.114	1661.031	1636.604	1617.062	1592.636
55	1441.189	1406.991	1382.564	1358.137	1343.481
60	1172.492	1152.951	1138.295	1118.753	1104.097
65	903.796	898.911	889.140	864.713	859.828
70	669.298	664.412	649.756	639.985	630.215
75	420.143	434.799	439.685	425.028	415.258
80	214.957	224.728	224.728	229.613	234.498
85	68.395	73.281	87.937	78.166	83.052
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	1176.08	N.A.	14.60
0-30	2448.77	N.A.	30.40
0-40	3920.3	N.A.	48.70
0-60	6613.38	N.A.	82.10
0-80	7950.9	N.A.	98.70
0-90	8055.27	N.A.	100.00
10-90	7746.84	N.A.	96.20
20-40	2744.22	N.A.	34.10
20-50	4196.54	N.A.	52.10
40-70	3572.9	N.A.	44.40
60-80	1337.51	N.A.	16.60
70-80	457.70	N.A.	5.70
80-90	104.37	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	8055.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	308.43
10-20	867.65
20-30	1272.69
30-40	1471.53
40-50	1452.32
50-60	1240.77
60-70	879.82
70-80	457.70
80-90	104.37
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	99	99	99	99	97	97	97	97	93	93	93	89	89	89	85	85	85	83
1	91	87	84	81	89	86	83	80	82	80	77	79	77	75	76	74	73	71
2	83	77	71	67	81	75	70	66	72	68	64	70	66	63	67	64	62	60
3	76	68	61	56	74	66	60	55	64	59	55	62	57	54	60	56	53	51
4	70	60	53	48	68	59	53	47	57	51	47	55	50	46	53	49	46	44
5	65	54	47	41	63	53	46	41	51	45	41	50	44	40	48	44	40	38
6	60	49	42	36	58	48	41	36	47	40	36	45	40	36	44	39	35	34
7	55	44	37	32	54	44	37	32	42	36	32	41	36	32	40	35	31	30
8	52	41	34	29	50	40	33	29	39	33	29	38	32	28	37	32	28	27
9	48	37	31	26	47	37	30	26	36	30	26	35	30	26	34	29	26	24
10	45	35	28	24	44	34	28	24	33	28	24	33	27	23	32	27	23	22

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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

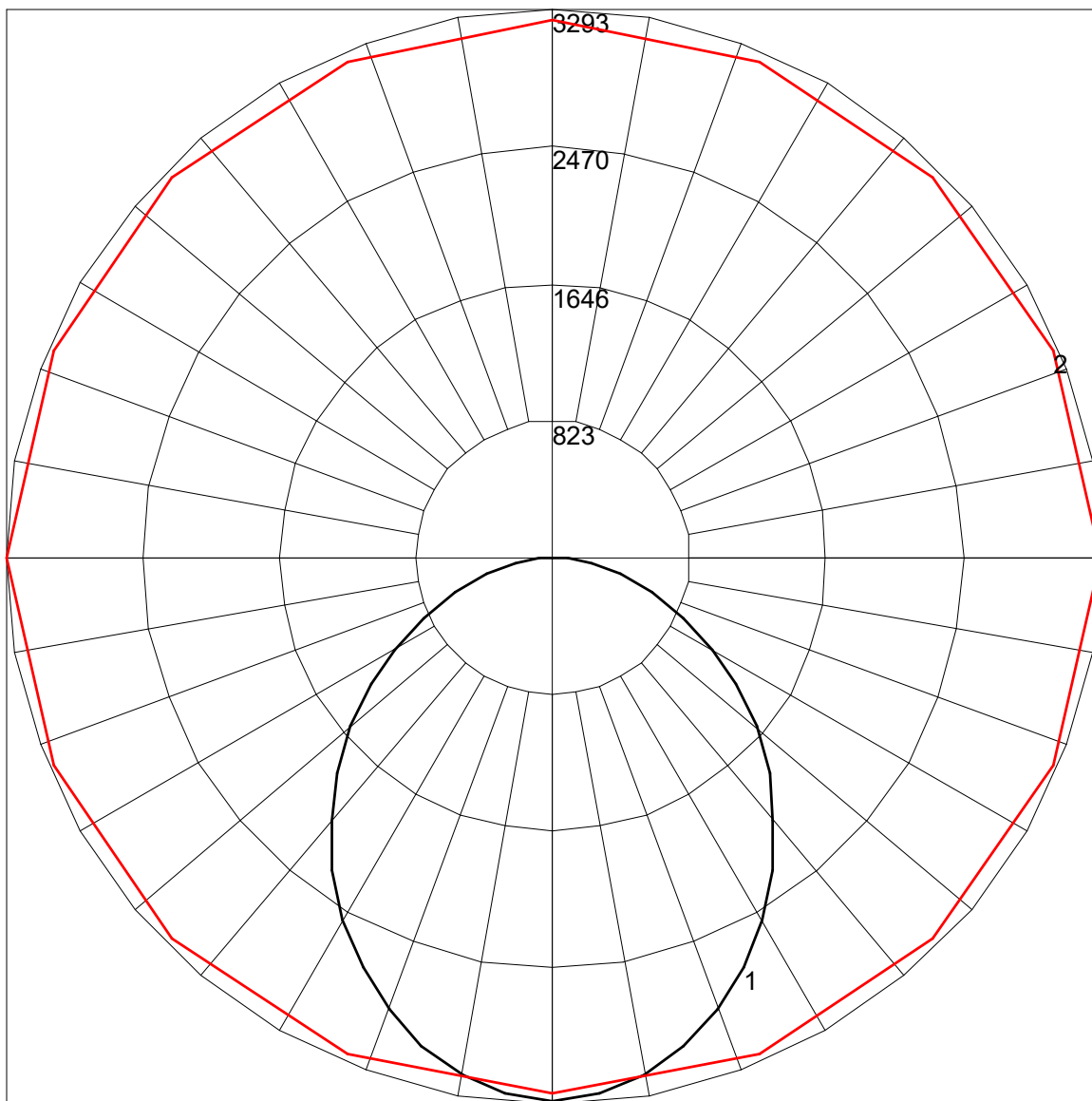
X=2H	Y=2H	20.8	22.4	21.2	22.7	23.0	20.5	22.1	20.9	22.4	22.7
	3H	22.4	23.8	22.7	24.1	24.5	22.1	23.5	22.5	23.8	24.2
	4H	22.9	24.2	23.3	24.6	25.0	22.6	24.0	23.0	24.3	24.7
	6H	23.2	24.4	23.6	24.8	25.2	23.0	24.2	23.4	24.6	25.0
	8H	23.3	24.5	23.7	24.8	25.2	23.1	24.3	23.5	24.7	25.1
	12H	23.3	24.4	23.7	24.8	25.2	23.1	24.3	23.6	24.6	25.1

UGR Viewed Endwise

4H	2H	21.3	22.7	21.7	23.0	23.4	21.1	22.5	21.5	22.8	23.2
	3H	23.1	24.2	23.5	24.6	25.0	22.9	24.0	23.3	24.4	24.8
	4H	23.8	24.8	24.2	25.2	25.6	23.5	24.5	24.0	25.0	25.4
	6H	24.2	25.1	24.6	25.5	25.9	24.0	24.9	24.4	25.3	25.8
	8H	24.3	25.1	24.7	25.5	26.0	24.1	25.0	24.6	25.4	25.9
	12H	24.3	25.1	24.8	25.5	26.0	24.2	24.9	24.7	25.4	25.9
8H	4H	24.0	24.8	24.4	25.3	25.7	23.8	24.6	24.2	25.1	25.5
	6H	24.5	25.2	25.0	25.7	26.1	24.3	25.0	24.8	25.5	26.0
	8H	24.6	25.2	25.1	25.8	26.2	24.5	25.1	25.0	25.6	26.1
	12H	24.7	25.3	25.2	25.8	26.3	24.7	25.2	25.2	25.7	26.2
12H	4H	24.0	24.7	24.5	25.2	25.7	23.8	24.5	24.3	25.0	25.5
	6H	24.5	25.1	25.0	25.6	26.1	24.4	25.0	24.9	25.5	26.0
	8H	24.7	25.2	25.2	25.7	26.3	24.6	25.1	25.1	25.6	26.2

Maximum UGR = 26.3

POLAR GRAPH



Maximum Candela = 3292.75 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.)