



IES INDOOR REPORT
PHOTOMETRIC FILENAME : MX4D-6-00-L12-835-F-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] 30-JUN-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-L12-835-F-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	7298
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	127
Total Luminaire Watts	57.5
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	13971	13548	13336
55	12831	12309	11961
65	10921	10744	10389
75	8290	8675	8193
85	4007	5152	4866

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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	2970.060	2970.060	2970.060	2970.060	2970.060
5	2983.339	2952.355	2939.076	2930.223	2930.223
10	2930.223	2899.239	2885.960	2877.107	2868.255
15	2828.418	2806.286	2784.155	2775.302	2762.023
20	2708.907	2677.923	2660.218	2633.660	2624.807
25	2553.986	2518.576	2500.870	2469.886	2465.460
30	2399.065	2359.228	2323.818	2314.965	2292.833
35	2182.175	2155.617	2124.633	2093.649	2093.649
40	1978.565	1952.007	1912.170	1903.317	1872.333
45	1752.822	1726.264	1699.707	1673.149	1673.149
50	1540.359	1504.949	1482.817	1465.112	1442.980
55	1305.764	1274.780	1252.648	1230.517	1217.238
60	1062.317	1044.611	1031.332	1013.627	1000.348
65	818.869	814.443	805.590	783.458	779.032
70	606.406	601.979	588.700	579.848	570.995
75	380.663	393.942	398.369	385.090	376.237
80	194.758	203.611	203.611	208.037	212.463
85	61.968	66.395	79.674	70.821	75.247
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1065.56	N.A.	14.60
0-30	2218.66	N.A.	30.40
0-40	3551.92	N.A.	48.70
0-60	5991.94	N.A.	82.10
0-80	7203.77	N.A.	98.70
0-90	7298.34	N.A.	100.00
10-90	7018.89	N.A.	96.20
20-40	2486.35	N.A.	34.10
20-50	3802.2	N.A.	52.10
40-70	3237.17	N.A.	44.40
60-80	1211.83	N.A.	16.60
70-80	414.69	N.A.	5.70
80-90	94.56	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	7298.34	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	279.44
10-20	786.12
20-30	1153.1
30-40	1333.26
40-50	1315.85
50-60	1124.18
60-70	797.14
70-80	414.69
80-90	94.56
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	179	179	179	179	175	175	175	175	167	167	167	160	160	160	153	153	153	150
1	164	158	151	146	160	154	149	144	148	143	139	142	138	135	137	134	131	128
2	150	138	128	120	146	135	126	119	130	123	116	125	119	113	121	116	111	108
3	137	122	110	101	134	120	109	100	115	106	98	111	103	96	107	101	95	92
4	126	109	96	86	123	107	95	85	103	93	84	99	90	83	96	88	82	79
5	116	97	84	75	113	96	83	74	93	82	73	90	80	73	87	79	72	69
6	107	88	75	65	105	87	74	65	84	73	65	81	72	64	79	70	63	60
7	100	80	67	58	97	79	67	58	76	65	57	74	64	57	72	63	57	54
8	93	73	61	52	91	72	60	52	70	59	52	68	58	51	67	58	51	48
9	87	67	55	47	85	66	55	47	65	54	47	63	53	46	62	53	46	43
10	82	62	51	43	80	61	50	43	60	50	42	59	49	42	57	48	42	40

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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	22.8
	3H	22.4	23.8	22.8	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	24.5	23.6	24.8	25.2	23.0	24.2	23.4	24.6	25.0
	8H	23.3	24.5	23.7	24.9	25.3	23.1	24.3	23.5	24.7	25.1
	12H	23.3	24.4	23.7	24.8	25.3	23.1	24.3	23.6	24.7	25.1

UGR Viewed Endwise

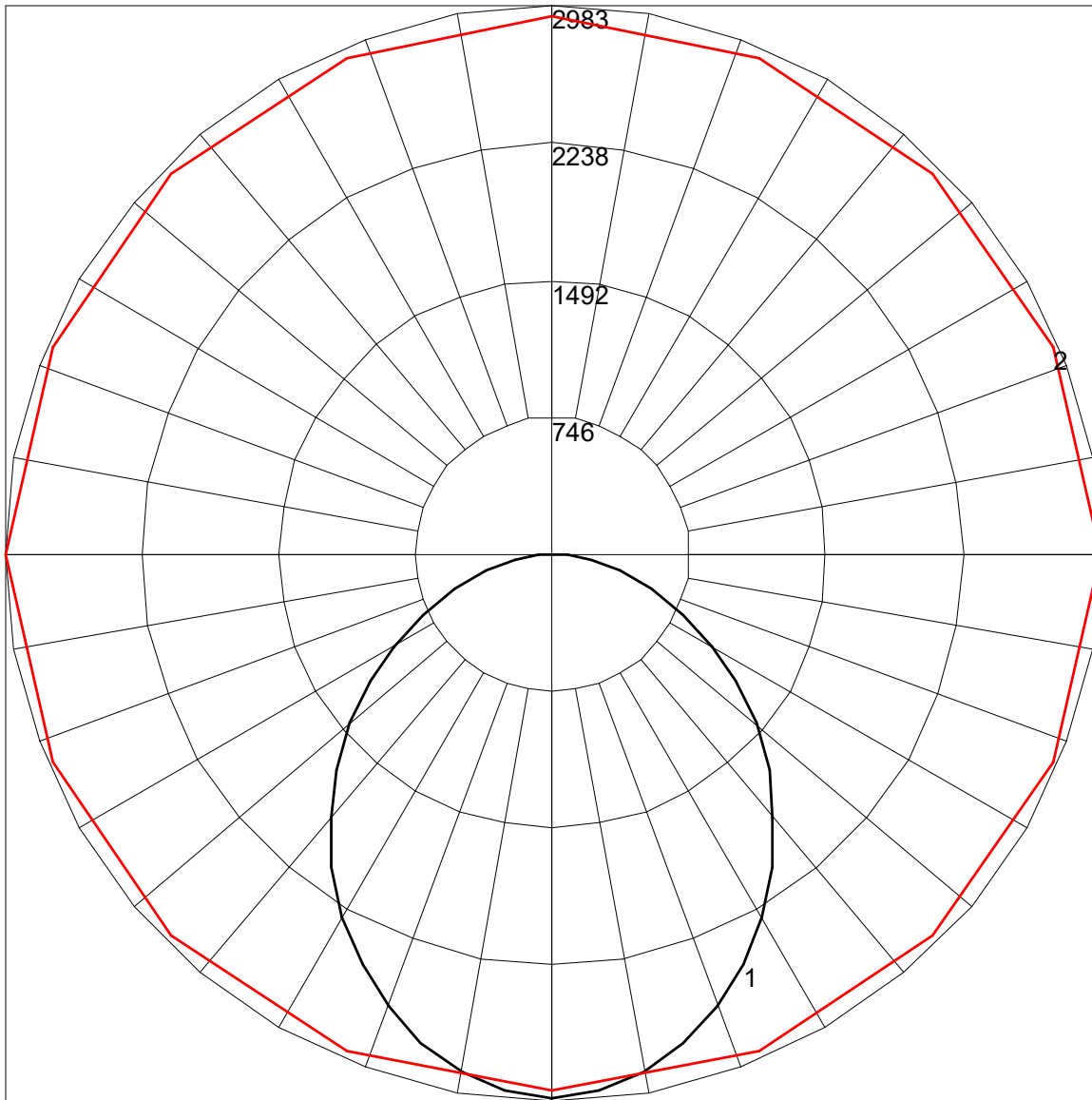
4H	2H	21.3	22.7	21.7	23.0	23.4	21.1	22.5	21.5	22.8	23.2
	3H	23.1	24.3	23.5	24.7	25.1	22.9	24.0	23.3	24.4	24.8
	4H	23.8	24.8	24.2	25.2	25.6	23.5	24.6	24.0	25.0	25.4
	6H	24.2	25.1	24.6	25.5	26.0	24.0	24.9	24.5	25.3	25.8
	8H	24.3	25.1	24.7	25.5	26.0	24.1	25.0	24.6	25.4	25.9
	12H	24.3	25.1	24.8	25.5	26.0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

8H	4H	24.0	24.8	24.5	25.3	25.7	23.8	24.6	24.3	25.1	25.5
	6H	24.5	25.2	25.0	25.7	26.1	24.4	25.0	24.8	25.5	26.0
	8H	24.6	25.3	25.1	25.8	26.3	24.5	25.1	25.0	25.7	26.1
	12H	24.7	25.3	25.3	25.8	26.3	24.7	25.2	25.2	25.7	26.3

12H	4H	24.0	24.8	24.5	25.2	25.7	23.8	24.6	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	25.3	25.2	25.7	26.3	24.6	25.1	25.1	25.6	26.2

Maximum UGR = 26.3

POLAR GRAPH



Maximum Candela = 2983.339 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.)