



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4UD-4-L8-8TWU-L8-8TWD-AF.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN from BALLABS TEST NO. 20663.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 09-NOV-2018
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2-72 LED(UP) 2-72 LED(DOWN) 23.75"ARRAYS 4' LUMINAIRE
 [MORE] WHITE ALUM BODY w/WHITE REFL & FLAT FROST LENSES(UP/DOWN)
 [LUMCAT] MX4UD-4-L8-8TWU-L8-8TWD-AF

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6668
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	53.7
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.32 ft
Luminous Width (90-270)	4.00 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	8387	8363	8077
55	7784	7608	7255
65	6698	6538	6299
75	5208	4947	4687
85	2706	2320	1740

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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>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0	1143.923	1143.923	1143.923	1143.923	1143.923	1143.923	1143.923	1143.923	1143.923
5	1163.852	1155.881	1151.895	1143.923	1123.994	1122.002	1122.002	1129.973	1133.959
10	1147.909	1141.931	1135.952	1123.994	1100.080	1098.087	1098.087	1108.051	1112.037
15	1112.037	1110.044	1102.073	1092.108	1080.151	1070.186	1064.208	1068.193	1070.186
20	1074.172	1068.193	1062.215	1048.264	1028.335	1020.364	1016.378	1018.371	1022.357
25	1016.378	1010.399	1008.406	992.463	974.527	968.548	964.563	958.584	964.563
30	952.605	944.634	934.669	930.683	914.740	902.783	896.804	890.825	892.818
35	870.896	866.911	864.918	850.967	839.010	821.074	821.074	815.095	813.102
40	789.188	789.188	787.195	771.252	757.301	749.330	743.351	731.394	733.386
45	701.500	693.528	699.507	687.550	675.592	667.621	659.649	649.685	627.763
50	599.862	605.841	597.869	589.898	587.905	583.919	575.948	563.990	552.033
55	528.118	512.175	516.161	506.196	492.246	496.232	484.274	476.303	478.296
60	424.487	426.480	422.494	416.516	404.558	404.558	390.608	384.629	390.608
65	334.807	330.821	326.835	326.835	314.878	316.871	308.899	300.928	308.899
70	245.126	239.148	241.141	227.190	227.190	221.212	223.205	221.212	219.219
75	159.432	155.446	151.460	145.482	143.489	145.482	147.474	145.482	139.503
80	85.695	85.695	79.716	73.737	71.744	73.737	75.730	79.716	79.716
85	27.901	23.915	23.915	21.922	17.936	17.936	21.922	23.915	23.915
90	5.979	5.979	5.979	7.972	11.957	7.972	5.979	3.986	5.979
95	57.794	61.780	67.759	69.751	69.751	69.751	61.780	57.794	55.801
100	117.581	121.567	135.517	135.517	131.531	129.538	121.567	105.624	105.624
105	199.290	207.261	215.233	223.205	217.226	203.276	195.304	189.325	171.389
110	288.970	294.949	308.899	328.828	326.835	312.885	284.984	267.048	259.077
115	396.587	402.565	422.494	438.438	442.423	420.501	390.608	364.700	356.729
120	530.111	530.111	544.061	565.983	563.990	548.047	510.182	482.281	474.310
125	647.692	659.649	669.614	693.528	689.543	675.592	631.749	607.834	589.898
130	787.195	793.173	807.124	823.067	825.060	807.124	775.237	721.429	723.422
135	928.690	928.690	938.655	942.641	940.648	934.669	896.804	864.918	852.960
140	1042.286	1046.271	1050.257	1050.257	1050.257	1028.335	1006.413	984.492	978.513
145	1137.945	1151.895	1141.931	1151.895	1149.902	1129.973	1098.087	1086.129	1074.172
150	1227.625	1227.625	1227.625	1237.590	1237.590	1213.675	1195.739	1181.789	1167.838
155	1289.405	1287.412	1293.391	1297.377	1299.369	1279.441	1257.519	1243.568	1233.604
160	1335.242	1335.242	1339.227	1347.199	1355.171	1331.256	1309.334	1301.362	1293.391
165	1367.128	1367.128	1371.114	1377.093	1385.064	1367.128	1347.199	1339.227	1331.256
170	1379.085	1383.071	1387.057	1391.043	1403.000	1383.071	1369.121	1361.149	1359.156
175	1383.071	1379.085	1389.050	1401.007	1414.958	1397.021	1377.093	1369.121	1357.164
180	1385.064	1385.064	1385.064	1385.064	1385.064	1385.064	1385.064	1385.064	1385.064

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	413.54	N.A.	6.20
0-30	866.18	N.A.	13.00
0-40	1392.14	N.A.	20.90
0-60	2357.51	N.A.	35.40
0-80	2831.54	N.A.	42.50
0-90	2866.7	N.A.	43.00
10-90	2758.78	N.A.	41.40
20-40	978.61	N.A.	14.70
20-50	1499.07	N.A.	22.50
40-70	1280.42	N.A.	19.20
60-80	474.03	N.A.	7.10
70-80	158.97	N.A.	2.40
80-90	35.16	N.A.	0.50
90-110	290.49	N.A.	4.40
90-120	697.60	N.A.	10.50
90-130	1285.92	N.A.	19.30
90-150	2695.27	N.A.	40.40
90-180	3800.84	N.A.	57.00
110-180	3510.35	N.A.	52.60
0-180	6667.54	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	107.92
10-20	305.62
20-30	452.64
30-40	525.97
40-50	520.47
50-60	444.90
60-70	315.05
70-80	158.97
80-90	35.16
90-100	70.75
100-110	219.74
110-120	407.11
120-130	588.31
130-140	704.89
140-150	704.46
150-160	588.79
160-170	384.62
170-180	132.16

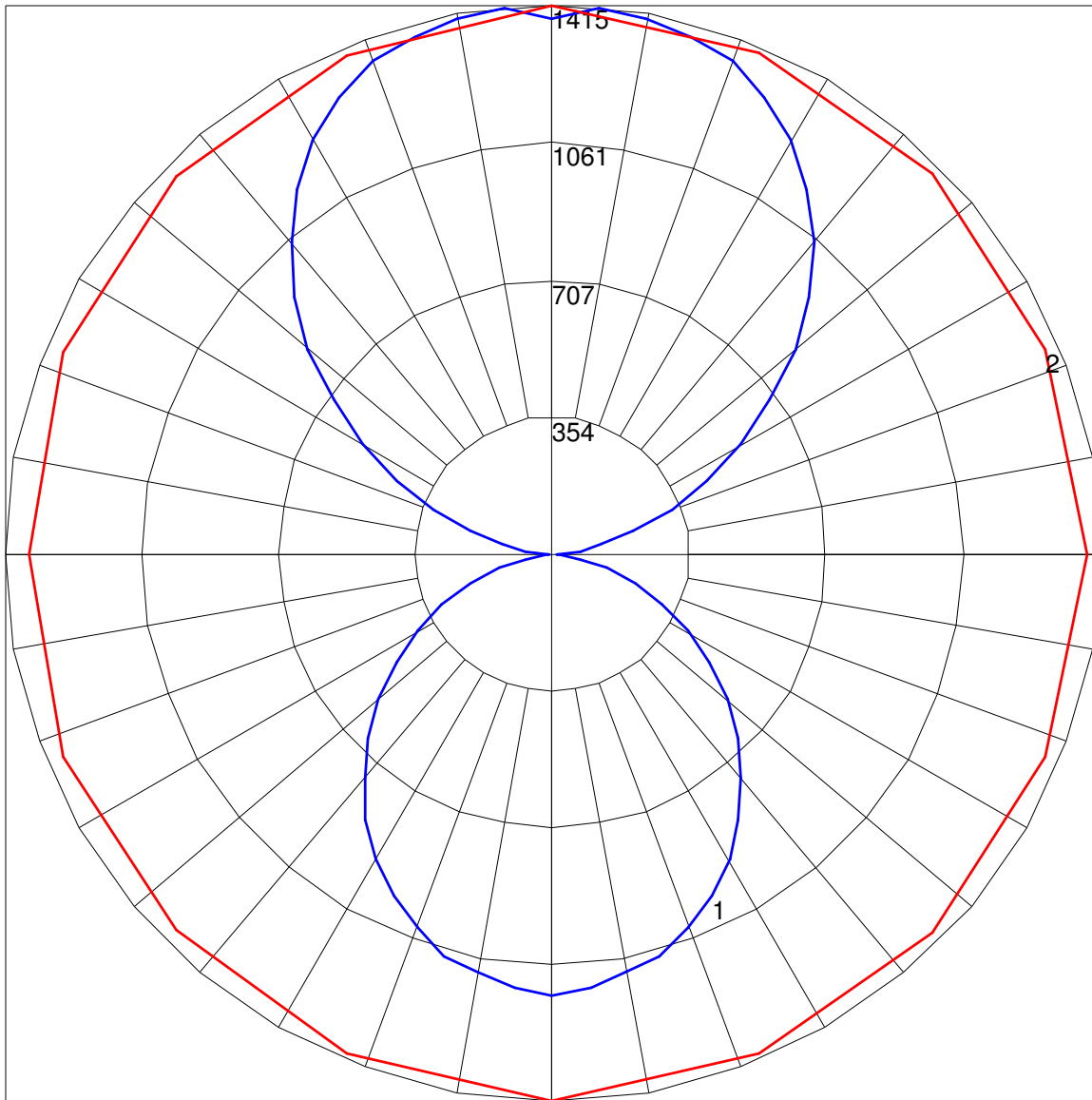
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	104	104	104	104	95	95	95	95	79	79	79	63	63	63	49	49	49	43
1	95	91	88	84	87	84	80	78	69	67	65	56	54	53	44	43	42	36
2	87	80	74	69	79	73	68	64	61	57	54	49	47	44	39	37	35	31
3	79	70	63	57	72	64	58	53	54	49	45	44	40	38	34	32	30	26
4	73	62	55	49	66	57	50	45	48	43	39	39	35	32	31	28	26	22
5	67	55	48	42	61	51	44	39	43	37	33	35	31	28	28	25	23	19
6	61	50	42	36	56	46	39	34	38	33	29	32	28	25	25	22	20	17
7	57	45	37	32	52	41	34	30	35	29	26	29	25	22	23	20	18	15
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16	14
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	17	14	12
10	46	34	27	22	42	31	25	21	27	22	18	22	18	16	18	15	13	11

POLAR GRAPH



Maximum Candela = 1414.958 Located At Horizontal Angle = 90, Vertical Angle = 175
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (175) (Through Max. Cd.)