



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4WUD-2-00-L8-835U-L8-835D-AF-DIM-UNV_.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] 06-12-2023
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 1-72 LED(UP) 2-72 LED(DOWN) 23.75"ARRAYS 2' LUMINAIRE
 [MORE] WHITE ALUM BODY w/WHITE REFL & FLAT FROST LENSES(UP/DOWN)
 [MORE] 2 ADVANCE #XI036C100V054DSM5 @ 375mA(DOWN) & 350mA(UP)
 [LUMCAT] MX4WUD-2-00-L8-835U-L8-835D-AF-DIM-UNV
 [LAMPCAT] MX2472_2835 REV A 10560314

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3366
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
Total Luminaire Watts	28.4
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)	2.00 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	8467	8443	8155
55	7859	7681	7325
65	6762	6601	6359
75	5258	4995	4732
85	2732	2342	1757

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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	577.431	577.431	577.431	577.431	577.431	577.431	577.431	577.431	577.431
5	587.491	583.467	581.455	577.431	567.371	566.365	566.365	570.389	572.401
10	579.443	576.425	573.407	567.371	555.299	554.293	554.293	559.323	561.335
15	561.335	560.329	556.305	551.275	545.240	540.210	537.192	539.204	540.210
20	542.222	539.204	536.186	529.144	519.084	515.060	513.048	514.054	516.066
25	513.048	510.030	509.024	500.977	491.923	488.905	486.893	483.875	486.893
30	480.857	476.833	471.803	469.791	461.743	455.708	452.690	449.672	450.678
35	439.612	437.600	436.594	429.552	423.516	414.463	414.463	411.445	410.439
40	398.367	398.367	397.361	389.313	382.271	378.247	375.229	369.194	370.200
45	354.104	350.080	353.098	347.062	341.026	337.002	332.978	327.949	316.883
50	302.799	305.817	301.793	297.769	296.763	294.751	290.727	284.692	278.656
55	266.584	258.536	260.548	255.518	248.476	250.488	244.452	240.429	241.434
60	214.273	215.279	213.267	210.249	204.213	204.213	197.171	194.154	197.171
65	169.004	166.992	164.980	164.980	158.944	159.950	155.926	151.903	155.926
70	123.735	120.717	121.723	114.681	114.681	111.663	112.669	111.663	110.657
75	80.478	78.466	76.454	73.436	72.430	73.436	74.442	73.436	70.418
80	43.257	43.257	40.239	37.221	36.215	37.221	38.227	40.239	40.239
85	14.084	12.072	12.072	11.066	9.054	9.054	11.066	12.072	12.072
90	3.018	3.018	3.018	4.024	6.036	4.024	3.018	2.012	3.018
95	29.173	31.185	34.203	35.209	35.209	35.209	31.185	29.173	28.167
100	59.353	61.365	68.406	68.406	66.394	65.389	61.365	53.317	53.317
105	100.598	104.622	108.646	112.669	109.651	102.610	98.586	95.568	86.514
110	145.867	148.885	155.926	165.986	164.980	157.938	143.855	134.801	130.777
115	200.189	203.207	213.267	221.315	223.327	212.261	197.171	184.094	180.070
120	267.590	267.590	274.632	285.697	284.692	276.644	257.530	243.446	239.423
125	326.943	332.978	338.008	350.080	348.068	341.026	318.895	306.823	297.769
130	397.361	400.379	407.421	415.469	416.474	407.421	391.325	364.164	365.170
135	468.785	468.785	473.815	475.827	474.821	471.803	452.690	436.594	430.558
140	526.126	528.138	530.150	530.150	530.150	519.084	508.018	496.953	493.935
145	574.413	581.455	576.425	581.455	580.449	570.389	554.293	548.257	542.222
150	619.682	619.682	619.682	624.712	624.712	612.640	603.586	596.544	589.503
155	650.867	649.861	652.879	654.891	655.897	645.837	634.772	627.730	622.700
160	674.005	674.005	676.017	680.040	684.064	671.993	660.927	656.903	652.879
165	690.100	690.100	692.112	695.130	699.154	690.100	680.040	676.017	671.993
170	696.136	698.148	700.160	702.172	708.208	698.148	691.106	687.082	686.076
175	698.148	696.136	701.166	707.202	714.244	705.190	695.130	691.106	685.070
180	699.154	699.154	699.154	699.154	699.154	699.154	699.154	699.154	699.154

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	208.74	N.A.	6.20
0-30	437.23	N.A.	13.00
0-40	702.73	N.A.	20.90
0-60	1190.03	N.A.	35.40
0-80	1429.31	N.A.	42.50
0-90	1447.05	N.A.	43.00
10-90	1392.58	N.A.	41.40
20-40	493.98	N.A.	14.70
20-50	756.70	N.A.	22.50
40-70	646.33	N.A.	19.20
60-80	239.28	N.A.	7.10
70-80	80.25	N.A.	2.40
80-90	17.75	N.A.	0.50
90-110	146.63	N.A.	4.40
90-120	352.14	N.A.	10.50
90-130	649.11	N.A.	19.30
90-150	1360.52	N.A.	40.40
90-180	1918.59	N.A.	57.00
110-180	1771.96	N.A.	52.60
0-180	3365.65	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	54.47
10-20	154.27
20-30	228.48
30-40	265.50
40-50	262.72
50-60	224.58
60-70	159.03
70-80	80.25
80-90	17.75
90-100	35.71
100-110	110.92
110-120	205.50
120-130	296.97
130-140	355.82
140-150	355.60
150-160	297.21
160-170	194.15
170-180	66.71

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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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	50	50	50	43
1	96	92	88	85	88	84	81	78	70	68	66	57	55	54	44	43	42	37
2	88	81	75	70	80	74	69	64	61	58	54	50	47	45	39	37	36	31
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	35	32	31	26
4	73	63	55	49	67	58	51	46	48	43	39	39	36	33	31	28	26	23
5	67	56	48	42	61	51	44	39	43	38	34	35	31	28	28	25	23	20
6	62	50	42	36	56	46	39	34	39	33	29	32	28	25	25	23	20	17
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	33	28	49	38	31	26	32	27	23	26	22	20	21	18	16	14
9	49	37	30	25	45	35	28	24	29	24	21	24	20	18	20	17	15	12
10	46	34	27	22	42	32	25	21	27	22	18	22	19	16	18	15	13	11

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UGR TABLE - CORRECTED

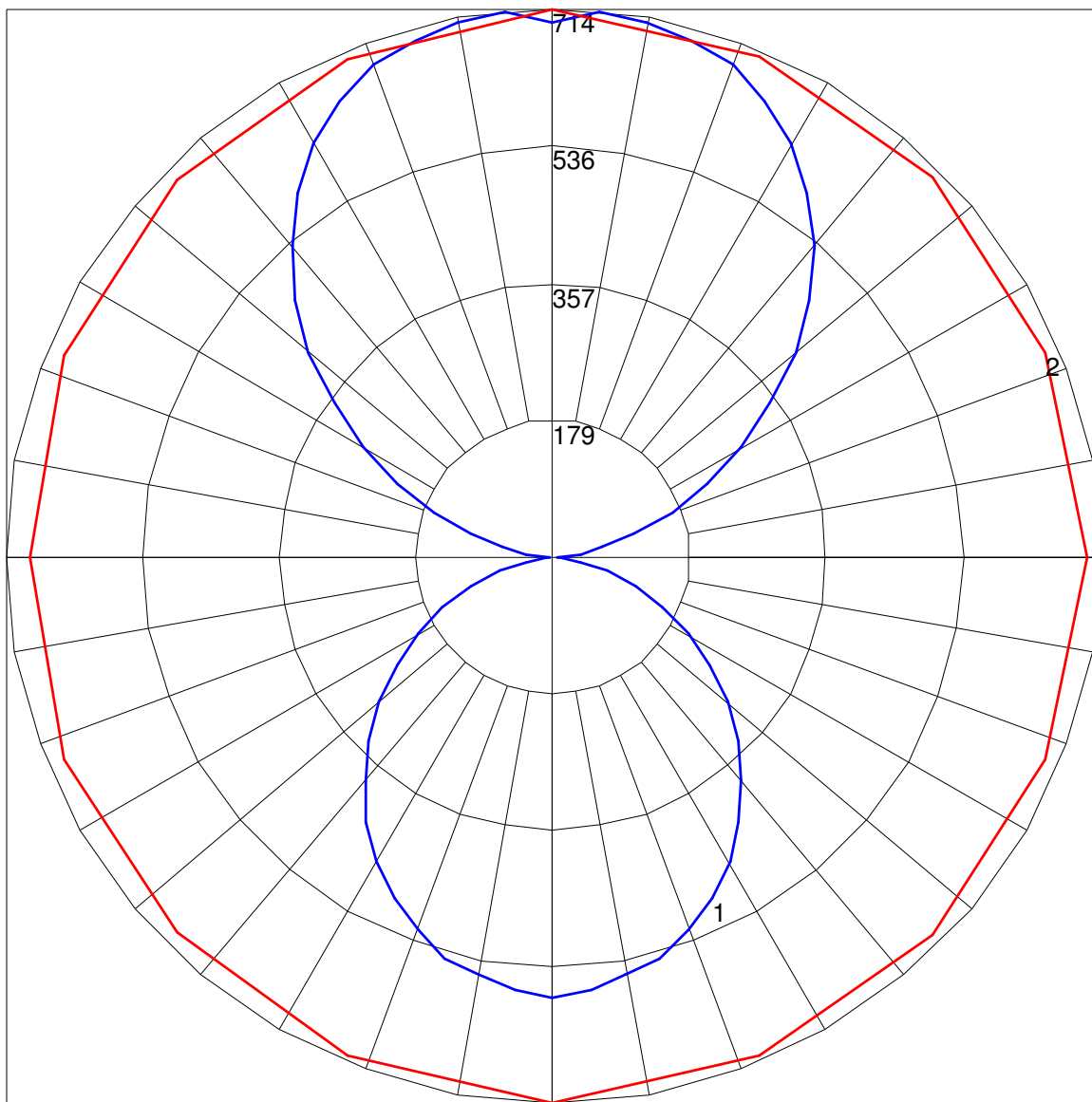
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	14.7	15.4	15.7	16.5	17.8	14.4	15.2	15.4	16.2	17.6
	3H	16.2	16.9	17.2	17.9	19.3	15.9	16.6	16.9	17.6	19.0
	4H	16.7	17.3	17.7	18.4	19.8	16.3	17.0	17.4	18.0	19.4
	6H	17.0	17.6	18.0	18.6	20.0	16.6	17.2	17.6	18.2	19.6
	8H	17.0	17.6	18.1	18.7	20.1	16.6	17.2	17.6	18.2	19.6
	12H	17.0	17.6	18.1	18.7	20.1	16.6	17.1	17.6	18.2	19.6
4H	2H	15.1	15.8	16.2	16.8	18.2	14.9	15.5	15.9	16.6	18.0
	3H	16.8	17.4	17.9	18.4	19.9	16.5	17.1	17.6	18.1	19.5
	4H	17.4	17.9	18.5	19.0	20.4	17.1	17.6	18.1	18.6	20.1
	6H	17.8	18.3	18.9	19.3	20.8	17.4	17.8	18.5	18.9	20.3
	8H	17.9	18.3	19.0	19.4	20.8	17.5	17.9	18.5	18.9	20.4
	12H	17.9	18.3	19.0	19.4	20.8	17.5	17.8	18.5	18.9	20.4
8H	4H	17.6	18.0	18.6	19.0	20.5	17.2	17.6	18.3	18.7	20.2
	6H	18.1	18.4	19.2	19.5	21.0	17.7	18.0	18.8	19.1	20.5
	8H	18.2	18.5	19.3	19.6	21.1	17.8	18.1	18.9	19.2	20.6
	12H	18.3	18.5	19.4	19.6	21.1	17.8	18.1	18.9	19.1	20.6
12H	4H	17.5	17.9	18.6	19.0	20.4	17.2	17.6	18.3	18.7	20.1
	6H	18.1	18.4	19.2	19.5	20.9	17.7	18.0	18.8	19.1	20.5
	8H	18.2	18.5	19.3	19.6	21.1	17.8	18.1	18.9	19.2	20.6

Maximum UGR = 21.1

POLAR GRAPH



Maximum Candela = 714.244 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.)