



IES INDOOR REPORT

PHOTOMETRIC FILENAME : WMA-4-L40-835-AF-CT-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TESTLAB] Photopia 2014.0.0 see: www.ltiopics.com/ies
 [ISSUE DATE] 11/13/2019
 [TEST DATE]
 [TEST] WMA CLOSED TOP
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] WMA-4-L40-835-AF-CT-DIM-UNV
 [LUMINAIRE] 4' WALL MOUNT LUMINAIRE WITH CLOSED TOP
 [LAMP]
 [LAMPCAT]

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4118
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	137
Total Luminaire Watts	30
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.62
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.54 ft
Luminous Width (90-270)	4.09 ft
Luminous Height	0.48 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4982	4871	5178
55	4567	4301	4721
65	3893	3671	3892
75	3264	2949	2602
85	2409	2004	926

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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	1400.767	1400.767	1400.767	1400.767	1400.767	1400.767	1400.767	1400.767	1400.767
5	1507.200	1427.404	1409.739	1399.701	1389.447	1305.907	1287.760	1311.427	1345.171
10	1509.726	1516.579	1473.533	1435.564	1382.011	1305.399	1252.811	1219.676	1205.616
15	1573.101	1539.116	1490.056	1390.970	1333.978	1247.189	1152.316	1120.680	1124.004
20	1551.642	1561.654	1475.234	1358.762	1234.105	1172.925	1073.941	1015.604	972.317
25	1540.589	1551.007	1458.888	1336.833	1186.948	1083.675	969.614	918.790	881.277
30	1546.083	1522.416	1419.269	1283.788	1126.428	979.157	863.422	809.729	769.476
35	1527.911	1484.180	1358.927	1211.301	1034.551	889.830	764.235	687.243	657.573
40	1467.302	1419.701	1296.821	1124.055	946.556	772.788	664.184	574.007	542.142
45	1373.039	1341.224	1217.532	1046.035	847.902	670.555	545.632	465.861	433.640
50	1301.580	1251.516	1135.311	937.457	751.062	563.601	431.622	345.798	323.019
55	1225.501	1163.306	1026.416	849.272	655.301	464.668	312.283	238.628	218.578
60	1102.913	1047.634	912.229	724.171	529.667	342.333	213.844	149.149	127.106
65	984.589	922.609	807.788	612.636	426.635	244.009	123.667	71.662	61.586
70	835.148	816.024	691.722	507.193	303.450	146.141	59.289	32.271	25.330
75	750.237	692.598	574.629	388.919	200.633	66.827	21.929	22.741	27.322
80	624.464	567.929	447.587	277.981	105.558	21.079	22.804	39.086	43.261
85	481.343	449.300	327.904	168.184	39.111	12.652	38.566	63.896	74.644
90	363.501	326.166	212.842	79.771	7.386	31.650	83.413	120.748	128.654
95	258.349	217.664	114.098	26.079	0.431	22.551	55.228	80.330	85.406
100	150.964	117.791	49.200	4.353	0.558	6.041	39.733	75.913	87.893
105	72.982	51.827	12.627	0.025	0.241	4.315	10.622	31.992	45.609
110	23.236	14.365	1.700	0.000	0.063	3.376	6.371	10.203	12.754
115	4.404	1.485	0.000	0.000	0.165	2.931	5.850	7.678	9.124
120	0.000	0.000	0.000	0.000	0.076	1.396	4.810	6.713	7.563
125	0.000	0.000	0.000	0.000	0.089	0.952	3.503	5.825	7.665
130	0.000	0.000	0.000	0.000	0.114	0.647	3.020	5.025	6.129
135	0.000	0.000	0.000	0.000	0.076	0.520	2.132	4.607	5.393
140	0.000	0.000	0.000	0.000	0.076	0.457	1.079	2.728	4.175
145	0.000	0.000	0.000	0.000	0.152	0.482	0.799	2.259	2.069
150	0.000	0.000	0.000	0.000	0.127	0.330	0.558	0.952	0.635
155	0.000	0.000	0.000	0.000	0.076	0.165	0.558	0.901	0.495
160	0.000	0.000	0.000	0.000	0.051	0.178	0.330	0.355	0.990
165	0.000	0.000	0.000	0.000	0.063	0.381	0.533	0.457	0.355
170	0.000	0.000	0.000	0.000	0.013	0.178	0.254	0.508	0.673
175	0.000	0.000	0.000	0.000	0.000	0.038	0.343	0.305	0.051
180	0.089	0.089	0.089	0.089	0.089	0.089	0.089	0.089	0.089

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	505.00	N.A.	12.30
0-30	1064.15	N.A.	25.80
0-40	1730.16	N.A.	42.00
0-60	3013.62	N.A.	73.20
0-80	3791.61	N.A.	92.10
0-90	3985.15	N.A.	96.80
10-90	3854.1	N.A.	93.60
20-40	1225.16	N.A.	29.80
20-50	1903.74	N.A.	46.20
40-70	1747.29	N.A.	42.40
60-80	777.99	N.A.	18.90
70-80	314.15	N.A.	7.60
80-90	193.54	N.A.	4.70
90-110	125.77	N.A.	3.10
90-120	129.53	N.A.	3.10
90-130	131.14	N.A.	3.20
90-150	132.43	N.A.	3.20
90-180	132.61	N.A.	3.20
110-180	6.84	N.A.	0.20
0-180	4117.76	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	131.05
10-20	373.95
20-30	559.15
30-40	666.01
40-50	678.58
50-60	604.87
60-70	463.83
70-80	314.15
80-90	193.54
90-100	98.89
100-110	26.88
110-120	3.76
120-130	1.60
130-140	0.93
140-150	0.36
150-160	0.11
160-170	0.05
170-180	0.01

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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	146	146	146	146	142	142	142	142	135	135	135	128	128	128	122	122	122	119
1	131	125	119	114	128	122	116	112	116	111	107	110	107	103	105	102	100	97
2	119	109	100	92	116	106	98	91	101	94	88	96	90	85	92	87	83	80
3	109	95	85	76	105	93	83	75	89	80	74	85	78	72	81	75	70	67
4	99	84	73	65	96	82	72	64	79	70	63	75	68	61	72	66	60	57
5	91	75	64	56	89	74	63	55	71	61	54	68	60	53	65	58	52	50
6	84	68	57	49	82	66	56	48	64	54	47	61	53	47	59	52	46	43
7	78	62	51	43	76	60	50	43	58	49	42	56	48	41	54	47	41	38
8	73	56	46	38	71	55	45	38	53	44	38	51	43	37	50	42	37	34
9	68	52	41	34	66	51	41	34	49	40	34	47	39	33	46	38	33	31
10	64	48	38	31	62	47	37	31	45	37	31	44	36	30	43	35	30	28

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UGR TABLE - CORRECTED

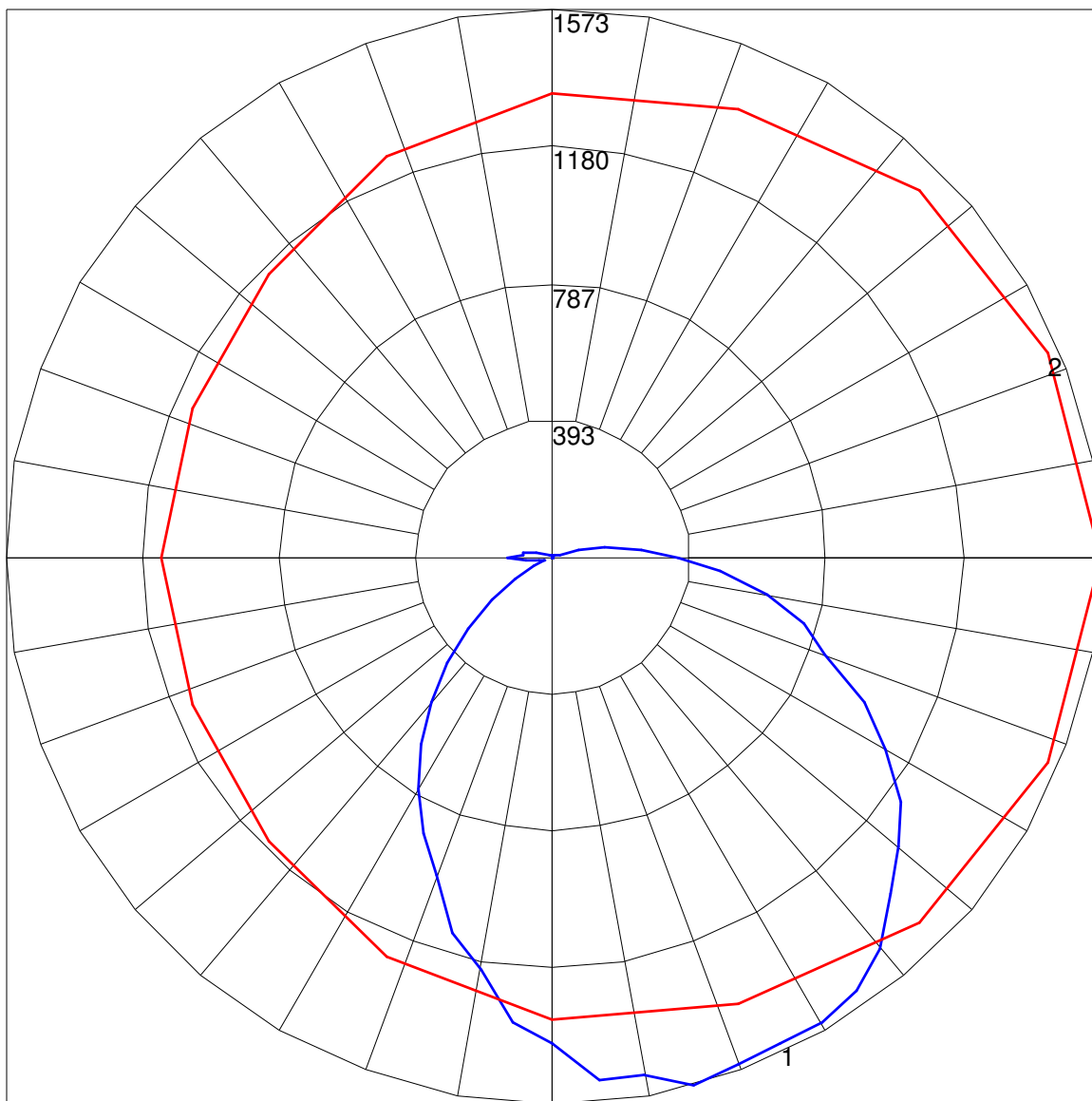
Reflectances

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	18.0	19.6	18.5	20.0	20.4	13.9	15.5	14.3	15.9	16.2
	3H	20.0	21.5	20.5	21.9	22.3	15.1	16.6	15.5	17.0	17.4
	4H	20.9	22.3	21.4	22.7	23.1	15.5	16.8	15.9	17.2	17.7
	6H	21.7	23.0	22.2	23.4	23.9	15.6	16.9	16.1	17.3	17.8
	8H	22.0	23.3	22.5	23.7	24.2	15.7	16.9	16.1	17.3	17.8
	12H	22.3	23.5	22.8	23.9	24.4	15.7	16.8	16.1	17.3	17.8
4H	2H	18.6	20.0	19.0	20.4	20.8	14.9	16.2	15.3	16.6	17.1
	3H	20.8	22.0	21.3	22.4	22.9	16.3	17.5	16.8	18.0	18.4
	4H	21.9	22.9	22.3	23.4	23.9	16.8	17.9	17.3	18.4	18.9
	6H	22.8	23.8	23.3	24.3	24.8	17.1	18.0	17.6	18.5	19.1
	8H	23.2	24.1	23.7	24.6	25.1	17.1	18.0	17.7	18.5	19.1
	12H	23.6	24.4	24.1	24.9	25.5	17.2	18.0	17.7	18.5	19.0
8H	4H	22.2	23.0	22.7	23.5	24.1	17.6	18.4	18.1	18.9	19.5
	6H	23.3	24.0	23.8	24.6	25.1	18.0	18.8	18.5	19.3	19.8
	8H	23.8	24.5	24.3	25.0	25.6	18.1	18.8	18.7	19.4	19.9
	12H	24.3	24.9	24.9	25.5	26.1	18.2	18.8	18.7	19.3	20.0
12H	4H	22.2	23.0	22.7	23.5	24.0	17.7	18.5	18.3	19.1	19.6
	6H	23.3	24.0	23.9	24.5	25.1	18.3	19.0	18.8	19.5	20.1
	8H	23.9	24.5	24.5	25.1	25.7	18.5	19.1	19.0	19.6	20.3

Maximum UGR = 26.1

POLAR GRAPH



Maximum Candela = 1573.101 Located At Horizontal Angle = 0, Vertical Angle = 15
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (15) (Through Max. Cd.)