



IES INDOOR REPORT

PHOTOMETRIC FILENAME : WMA-2-L20-835-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
 [MANUFACTURER] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] WMA-2-L20-835-AF-CT-DIM-UNV
 [LUMINAIRE] 2' WALL MOUNT LUMINAIRE WITH CLOSED TOP
 [LAMP]
 [LAMPCAT]

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2117
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
Total Luminaire Watts	15.9
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)	2.09 ft
Luminous Height	0.48 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5008	4679	4731
55	4591	4093	4175
65	3913	3456	3283
75	3281	2742	2027
85	2422	1831	602

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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	720.113	720.113	720.113	720.113	720.113	720.113	720.113	720.113	720.113
5	774.828	733.806	724.725	719.565	714.293	671.347	662.017	674.185	691.532
10	776.127	779.650	757.521	738.001	710.470	671.086	644.051	627.017	619.788
15	808.707	791.236	766.015	715.076	685.777	641.161	592.388	576.124	577.833
20	797.675	802.822	758.395	698.519	634.434	602.983	552.097	522.106	499.853
25	791.993	797.349	749.992	687.245	610.192	557.100	498.464	472.336	453.051
30	794.818	782.651	729.624	659.975	579.079	503.370	443.872	416.269	395.576
35	785.475	762.994	698.603	622.711	531.846	457.448	392.881	353.301	338.048
40	754.317	729.846	666.676	577.859	486.610	397.278	341.447	295.088	278.707
45	705.858	689.503	625.914	537.751	435.893	344.722	280.501	239.492	222.928
50	669.122	643.385	583.646	481.932	386.109	289.739	221.890	177.769	166.059
55	630.011	598.038	527.665	436.598	336.880	238.878	160.540	122.675	112.367
60	566.991	538.573	468.963	372.285	272.294	175.988	109.934	76.675	65.343
65	506.162	474.299	415.271	314.947	219.326	125.441	63.575	36.840	31.660
70	429.337	419.505	355.604	260.740	155.999	75.129	30.480	16.590	13.022
75	385.685	356.054	295.408	199.937	103.143	34.355	11.273	11.691	14.046
80	321.027	291.963	230.097	142.906	54.266	10.836	11.723	20.094	22.240
85	247.451	230.978	168.571	86.461	20.107	6.504	19.826	32.848	38.373
90	186.870	167.677	109.419	41.009	3.797	16.271	42.881	62.075	66.139
95	132.813	111.898	58.656	13.407	0.222	11.593	28.392	41.296	43.906
100	77.608	60.555	25.293	2.238	0.287	3.105	20.426	39.026	45.184
105	37.519	26.644	6.491	0.013	0.124	2.218	5.460	16.447	23.447
110	11.945	7.385	0.874	0.000	0.033	1.735	3.275	5.245	6.557
115	2.264	0.763	0.000	0.000	0.085	1.507	3.008	3.947	4.691
120	0.000	0.000	0.000	0.000	0.039	0.718	2.473	3.451	3.888
125	0.000	0.000	0.000	0.000	0.046	0.489	1.801	2.994	3.940
130	0.000	0.000	0.000	0.000	0.059	0.333	1.553	2.583	3.151
135	0.000	0.000	0.000	0.000	0.039	0.267	1.096	2.368	2.773
140	0.000	0.000	0.000	0.000	0.039	0.235	0.555	1.403	2.146
145	0.000	0.000	0.000	0.000	0.078	0.248	0.411	1.161	1.063
150	0.000	0.000	0.000	0.000	0.065	0.170	0.287	0.489	0.326
155	0.000	0.000	0.000	0.000	0.039	0.085	0.287	0.463	0.254
160	0.000	0.000	0.000	0.000	0.026	0.091	0.170	0.183	0.509
165	0.000	0.000	0.000	0.000	0.033	0.196	0.274	0.235	0.183
170	0.000	0.000	0.000	0.000	0.007	0.091	0.130	0.261	0.346
175	0.000	0.000	0.000	0.000	0.000	0.020	0.176	0.157	0.026
180	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	259.61	N.A.	12.30
0-30	547.07	N.A.	25.80
0-40	889.45	N.A.	42.00
0-60	1549.26	N.A.	73.20
0-80	1949.21	N.A.	92.10
0-90	2048.7	N.A.	96.80
10-90	1981.33	N.A.	93.60
20-40	629.84	N.A.	29.80
20-50	978.68	N.A.	46.20
40-70	898.25	N.A.	42.40
60-80	399.95	N.A.	18.90
70-80	161.50	N.A.	7.60
80-90	99.50	N.A.	4.70
90-110	64.66	N.A.	3.10
90-120	66.59	N.A.	3.10
90-130	67.42	N.A.	3.20
90-150	68.08	N.A.	3.20
90-180	68.17	N.A.	3.20
110-180	3.52	N.A.	0.20
0-180	2116.88	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	67.37
10-20	192.24
20-30	287.45
30-40	342.39
40-50	348.85
50-60	310.96
60-70	238.45
70-80	161.50
80-90	99.50
90-100	50.84
100-110	13.82
110-120	1.94
120-130	0.82
130-140	0.48
140-150	0.19
150-160	0.06
160-170	0.03
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	61	61	61	61	59	59	59	59	56	56	56	53	53	53	51	51	51	50
1	55	52	50	48	53	51	49	47	48	47	45	46	45	43	44	43	42	40
2	50	45	42	38	48	44	41	38	42	39	37	40	38	36	38	36	35	33
3	45	40	35	32	44	39	35	32	37	34	31	35	32	30	34	31	29	28
4	42	35	31	27	40	34	30	27	33	29	26	31	28	26	30	27	25	24
5	38	31	27	23	37	31	26	23	29	26	23	28	25	22	27	24	22	21
6	35	28	24	20	34	28	23	20	27	23	20	26	22	20	25	22	19	18
7	33	26	21	18	32	25	21	18	24	20	18	23	20	17	23	19	17	16
8	30	23	19	16	30	23	19	16	22	18	16	21	18	16	21	18	15	14
9	28	22	17	14	28	21	17	14	20	17	14	20	16	14	19	16	14	13
10	27	20	16	13	26	20	16	13	19	15	13	18	15	13	18	15	13	12

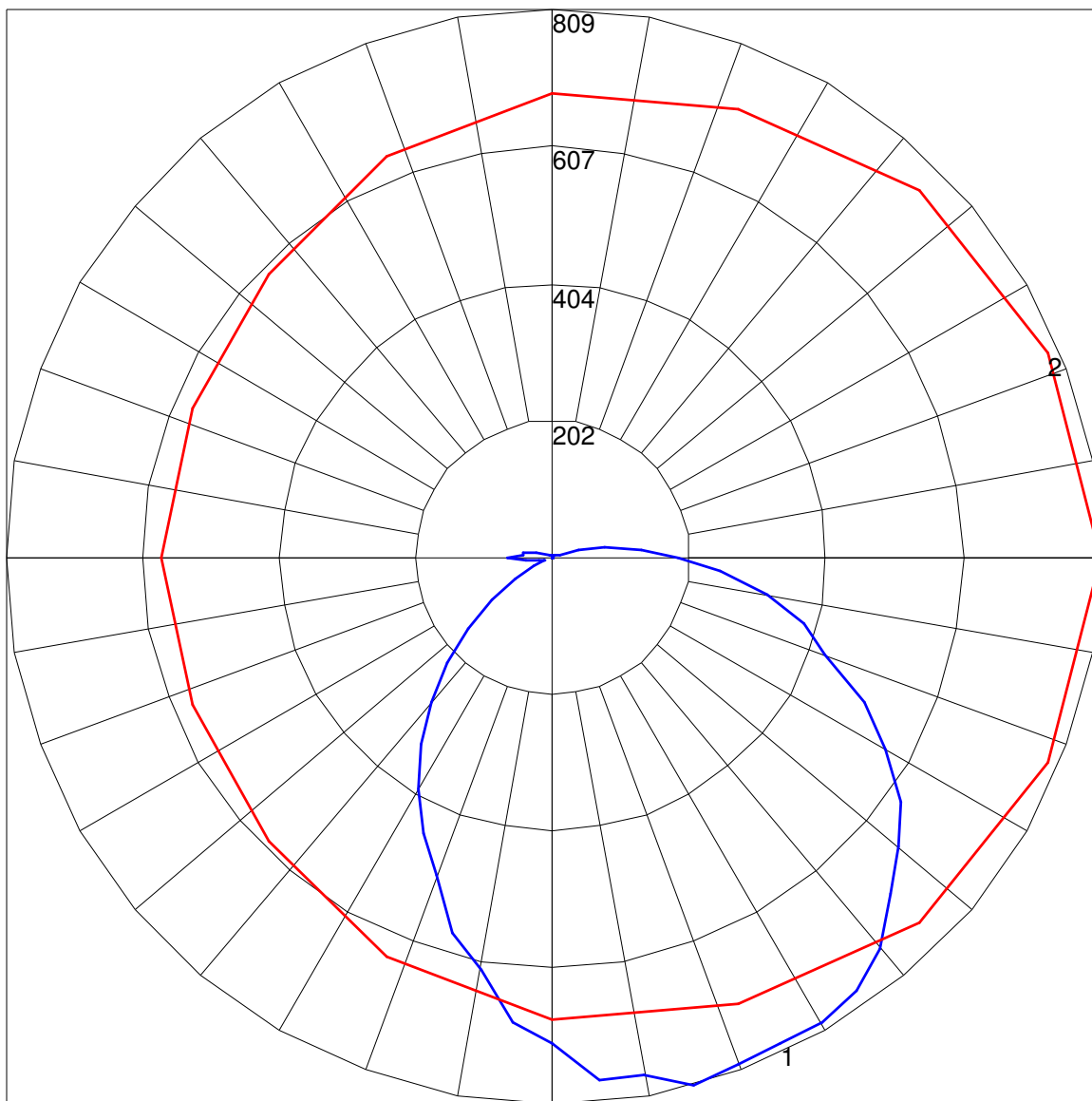
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UGR TABLE - CORRECTED

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	18.7	20.3	19.2	20.7	21.1	14.6	16.2	15.0	16.6	16.9
	3H	20.7	22.2	21.2	22.6	23.0	15.8	17.3	16.2	17.7	18.1
	4H	21.6	23.0	22.1	23.4	23.8	16.2	17.5	16.6	17.9	18.4
	6H	22.4	23.7	22.9	24.1	24.6	16.3	17.6	16.8	18.0	18.5
	8H	22.7	24.0	23.2	24.4	24.9	16.4	17.6	16.8	18.0	18.5
	12H	23.0	24.2	23.5	24.6	25.1	16.4	17.5	16.8	18.0	18.5
4H	2H	19.3	20.7	19.7	21.1	21.5	15.6	16.9	16.0	17.3	17.8
	3H	21.5	22.7	22.0	23.1	23.6	17.0	18.2	17.5	18.7	19.1
	4H	22.6	23.6	23.0	24.1	24.6	17.5	18.6	18.0	19.1	19.6
	6H	23.5	24.5	24.0	25.0	25.5	17.8	18.7	18.3	19.2	19.8
	8H	23.9	24.8	24.4	25.3	25.8	17.8	18.7	18.4	19.2	19.8
	12H	24.3	25.1	24.8	25.6	26.2	17.9	18.7	18.4	19.2	19.7
8H	4H	22.9	23.7	23.4	24.2	24.8	18.3	19.1	18.8	19.6	20.2
	6H	24.0	24.7	24.5	25.3	25.8	18.7	19.5	19.2	20.0	20.5
	8H	24.5	25.2	25.0	25.7	26.3	18.8	19.5	19.4	20.1	20.6
	12H	25.0	25.6	25.6	26.2	26.8	18.9	19.5	19.4	20.0	20.7
12H	4H	22.9	23.7	23.4	24.2	24.7	18.4	19.2	19.0	19.8	20.3
	6H	24.0	24.7	24.6	25.2	25.8	19.0	19.7	19.5	20.2	20.8
	8H	24.6	25.2	25.2	25.8	26.4	19.2	19.8	19.7	20.3	21.0

Maximum UGR = 26.8

POLAR GRAPH



Maximum Candela = 808.707 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.)