



IES INDOOR REPORT

PHOTOMETRIC FILENAME : WMA-4-L40-835-AF-(L32)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 17320.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 12-30-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 4' DIRECT/INDIRECT WALL MOUNT LUMINAIRE
 [MORE] WITH FROSTED ACRYLIC LENS ON TOP & BOTTOM
 [LUMCAT] WMA-4-L40-835-AF-(L32)-DIM-UNV
 [LAMPCAT] HLM 80 CRI, 3500K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Corridor, Healthcare, Direct-Indirect
 [_SEARCH_MOUNTING] Wall

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3350
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
Total Luminaire Watts	25.1
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 w/Sides
Luminous Length (0-180)	0.28 ft
Luminous Width (90-270)	3.98 ft
Luminous Height	0.46 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3519	3402	3958
55	2880	2734	3343
65	2328	2179	2773
75	1842	1549	1975
85	1898	1484	830

IES INDOOR REPORT
PHOTOMETRIC FILENAME : WMA-4-L40-835-AF-(L32)-DIM-UNV_.IES

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	600.046	600.046	600.046	600.046	600.046	600.046	600.046	600.046	600.046
5	654.973	647.719	634.246	615.592	596.419	585.538	568.438	556.002	550.302
10	691.245	678.809	653.418	617.146	576.729	547.711	515.066	493.821	486.048
15	711.972	698.500	663.264	612.483	557.038	512.475	469.466	441.485	431.121
20	753.944	730.627	680.364	608.337	529.056	463.766	408.322	371.531	359.613
25	734.254	711.972	654.973	575.692	489.675	418.685	358.577	322.305	307.796
30	733.217	705.754	639.946	546.674	446.149	364.277	297.432	259.606	245.615
35	725.445	696.945	622.328	521.284	414.540	329.559	262.196	221.261	208.306
40	693.318	662.746	582.429	475.166	362.722	275.151	208.306	169.961	157.007
45	675.700	640.982	553.929	435.785	318.678	229.033	164.780	129.026	117.108
50	620.255	586.574	499.002	386.558	273.596	187.579	126.953	93.271	83.944
55	568.438	534.756	447.185	336.814	227.997	146.125	90.681	61.145	51.817
60	505.220	473.612	394.331	290.178	187.579	111.926	63.217	36.272	28.500
65	458.067	425.940	347.177	245.097	149.234	79.799	34.718	13.991	9.327
70	395.886	366.868	292.769	200.015	111.408	49.227	11.918	2.591	2.591
75	350.286	315.050	232.660	150.789	74.617	23.318	2.591	4.664	4.664
80	341.477	304.169	211.934	111.408	44.045	2.591	4.664	4.664	6.218
85	337.332	298.469	202.606	87.572	17.100	2.591	8.809	15.027	17.100
90	307.796	273.596	185.507	79.281	0.000	8.809	16.063	21.763	23.836
95	335.259	299.505	204.161	87.572	18.136	3.109	12.436	18.136	20.209
100	339.405	304.169	212.970	111.926	45.599	2.591	4.664	6.736	8.291
105	348.213	315.050	235.770	151.825	75.654	19.691	2.591	4.664	4.664
110	395.367	368.940	296.396	200.534	111.408	44.563	9.327	2.591	4.145
115	454.957	427.494	349.250	247.688	149.753	76.172	33.163	11.400	8.291
120	501.075	472.575	395.367	291.732	188.616	110.371	60.626	34.718	27.463
125	563.774	533.202	450.294	339.405	232.142	146.125	92.235	61.145	51.817
130	611.964	583.465	499.002	388.113	277.224	187.579	126.953	93.271	83.944
135	666.891	637.873	553.929	437.340	321.268	229.033	164.780	127.989	117.108
140	687.618	661.191	583.983	477.239	367.904	276.705	209.861	171.516	159.080
145	719.227	693.318	622.328	522.320	421.794	331.114	263.751	223.333	209.861
150	725.445	703.163	639.946	548.229	451.848	366.350	300.541	261.678	247.688
155	728.554	709.381	653.937	576.729	495.893	418.685	360.132	322.823	309.350
160	745.135	727.517	678.291	608.337	535.275	465.321	408.840	375.159	362.204
165	709.900	698.500	663.782	614.037	565.329	512.993	470.503	443.039	433.194
170	685.545	676.736	651.864	617.146	585.538	547.711	516.102	495.893	488.121
175	653.937	649.273	635.282	619.219	606.265	588.128	571.547	559.111	553.929
180	601.601	601.601	601.601	601.601	601.601	601.601	601.601	601.601	601.601

IES INDOOR REPORT**PHOTOMETRIC FILENAME : WMA-4-L40-835-AF-(L32)-DIM-UNV_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	216.37	N.A.	6.50
0-30	449.93	N.A.	13.40
0-40	723.68	N.A.	21.60
0-60	1240.62	N.A.	37.00
0-80	1563.87	N.A.	46.70
0-90	1673.88	N.A.	50.00
10-90	1617.14	N.A.	48.30
20-40	507.31	N.A.	15.10
20-50	782.62	N.A.	23.40
40-70	706.32	N.A.	21.10
60-80	323.25	N.A.	9.60
70-80	133.87	N.A.	4.00
80-90	110.01	N.A.	3.30
90-110	245.02	N.A.	7.30
90-120	434.02	N.A.	13.00
90-130	675.85	N.A.	20.20
90-150	1225.55	N.A.	36.60
90-180	1676.31	N.A.	50.00
110-180	1431.28	N.A.	42.70
0-180	3350.18	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	56.74
10-20	159.63
20-30	233.57
30-40	273.74
40-50	275.31
50-60	241.63
60-70	189.38
70-80	133.87
80-90	110.01
90-100	110.96
100-110	134.06
110-120	189.00
120-130	241.83
130-140	275.28
140-150	274.41
150-160	233.86
160-170	159.95
170-180	56.94

IES INDOOR REPORT**PHOTOMETRIC FILENAME : WMA-4-L40-835-AF-(L32)-DIM-UNV_.IES****COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	47	45	40
2	88	80	73	68	81	74	68	63	62	58	54	52	49	46	42	40	38	33
3	80	70	62	56	73	65	58	53	55	50	46	46	42	39	37	34	32	28
4	73	62	54	48	67	57	50	45	49	43	39	41	36	33	33	30	27	24
5	67	55	47	41	62	51	44	38	44	38	33	36	32	29	30	26	24	21
6	62	50	41	35	57	46	39	33	39	33	29	33	28	25	27	24	21	18
7	57	45	37	31	53	42	34	29	36	30	26	30	25	22	25	21	19	16
8	53	41	33	27	49	38	31	26	32	27	23	27	23	20	23	19	17	14
9	49	37	29	24	45	35	28	23	30	24	20	25	21	18	21	18	15	13
10	46	34	27	22	43	32	25	21	27	22	18	23	19	16	19	16	14	12

IES INDOOR REPORT

PHOTOMETRIC FILENAME : WMA-4-L40-835-AF-(L32)-DIM-UNV_.IES

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	15.8	16.7	16.8	17.7	19.0	UGR Viewed Endwise	8.3	9.2	9.3	10.2	11.5
	3H	18.3	19.1	19.2	20.0	21.3		9.4	10.2	10.4	11.2	12.5
	4H	19.4	20.2	20.4	21.2	22.5		9.7	10.5	10.7	11.5	12.8
	6H	20.8	21.5	21.8	22.5	23.8		9.9	10.6	10.9	11.6	12.9
	8H	21.6	22.3	22.6	23.3	24.6		9.9	10.5	10.9	11.6	12.9
	12H	22.5	23.2	23.5	24.2	25.5		9.9	10.5	10.9	11.5	12.8

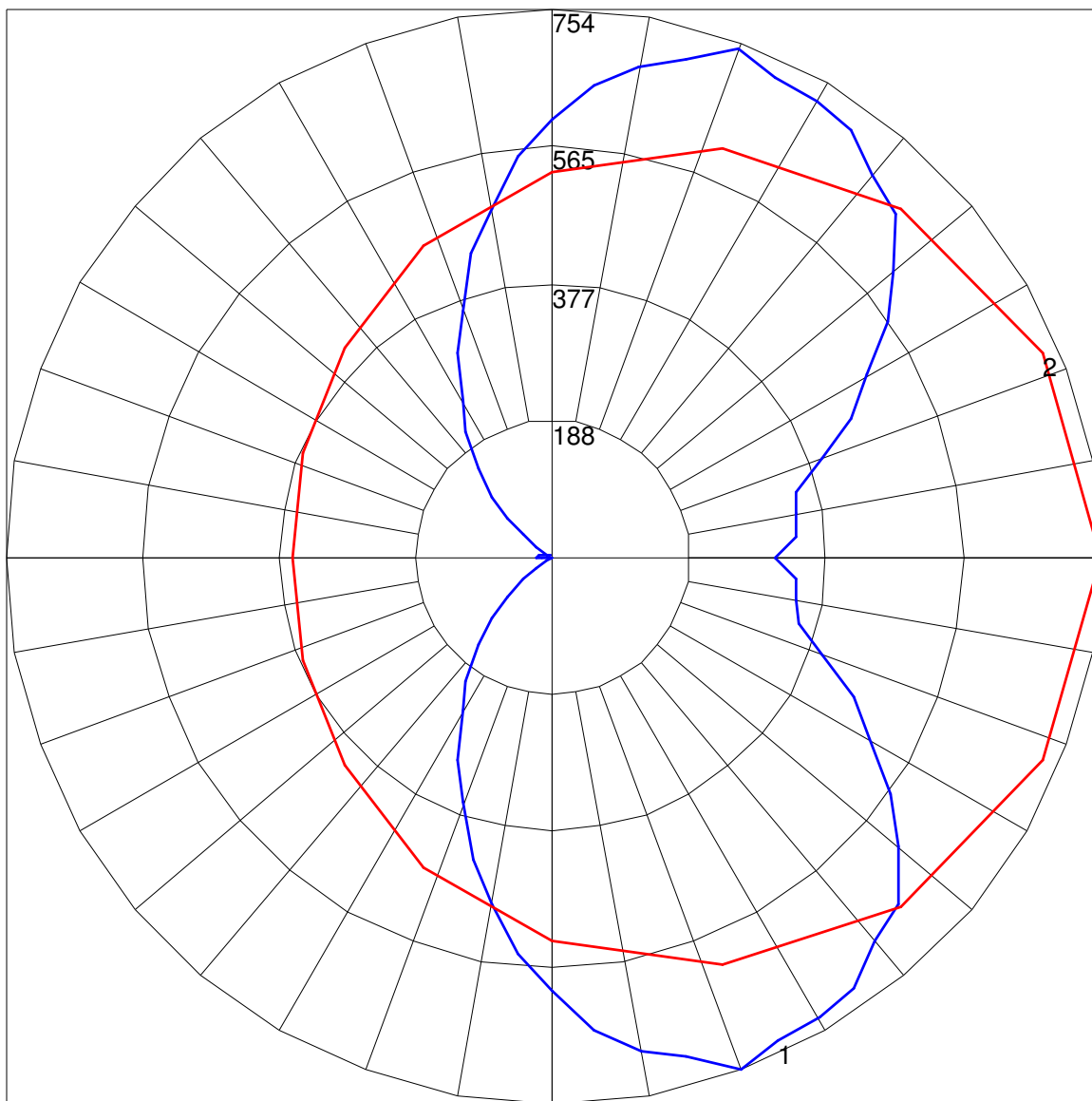
4H	2H	15.9	16.7	16.9	17.7	19.0	9.5	10.3	10.5	11.3	12.6
	3H	18.5	19.2	19.5	20.2	21.5	10.8	11.5	11.8	12.5	13.8
	4H	19.9	20.4	20.9	21.5	22.8	11.2	11.8	12.2	12.8	14.2
	6H	21.5	22.0	22.5	23.0	24.3	11.5	12.0	12.5	13.0	14.3
	8H	22.4	22.9	23.4	23.9	25.2	11.5	12.0	12.5	13.0	14.4
	12H	23.4	23.9	24.4	24.9	26.2	11.5	11.9	12.5	13.0	14.3

8H	4H	19.9	20.4	20.9	21.4	22.7	12.1	12.6	13.1	13.6	14.9
	6H	21.6	22.0	22.7	23.1	24.4	12.5	12.9	13.6	14.0	15.3
	8H	22.7	23.0	23.7	24.1	25.5	12.7	13.0	13.7	14.1	15.4
	12H	23.9	24.2	24.9	25.3	26.7	12.7	13.0	13.8	14.1	15.5

12H	4H	19.8	20.3	20.9	21.3	22.7	12.4	12.8	13.4	13.9	15.2
	6H	21.6	22.0	22.7	23.0	24.4	13.0	13.3	14.0	14.4	15.8
	8H	22.7	23.0	23.8	24.1	25.5	13.2	13.5	14.2	14.6	16.0

Maximum UGR = 26.7

POLAR GRAPH



Maximum Candela = 753.944 Located At Horizontal Angle = 0, Vertical Angle = 20
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (20) (Through Max. Cd.)