



IES INDOOR REPORT

PHOTOMETRIC FILENAME : ASMS-4-L46-835-A-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 18639.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 03-MAR-2020

[MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 2-56 LED 22" ARRAYS 4' DIRECT/INDIRECT PENDANT MOUNT LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED CURVED LINEAR RIBBED ACRYLIC LENS

[LUMCAT] ASMS-4-L46/835-A-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4682
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	138
Total Luminaire Watts	33.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.90 ft
Luminous Width (90-270)	0.54 ft
Luminous Height	0.08 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	7372	6891	6759
55	6037	5776	5682
65	4738	4796	4733
75	3461	3875	3832
85	2252	3308	3525

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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>
0	1792.077	1792.077	1792.077	1792.077	1792.077
5	1821.577	1823.420	1819.733	1819.733	1819.733
10	1775.484	1769.953	1769.953	1768.109	1768.109
15	1742.297	1736.766	1736.766	1733.079	1731.235
20	1659.331	1655.644	1646.425	1639.050	1637.206
25	1576.364	1574.521	1565.302	1557.927	1557.927
30	1463.899	1458.367	1450.993	1447.305	1447.305
35	1369.870	1368.026	1368.026	1368.026	1368.026
40	1202.093	1202.093	1213.155	1216.843	1214.999
45	1045.378	1052.753	1074.878	1082.252	1082.252
50	868.383	884.976	914.476	925.538	925.538
55	700.606	724.574	765.136	781.729	779.886
60	547.579	575.235	626.858	643.452	643.452
65	411.145	448.019	503.330	523.611	521.767
70	291.305	331.866	390.865	407.458	405.614
75	189.901	224.932	287.617	306.054	306.054
80	108.778	140.121	202.807	228.619	232.306
85	47.936	75.592	136.434	164.089	165.933
90	11.062	36.874	77.435	106.935	110.622
95	0.000	9.219	40.561	66.373	71.904
100	0.000	0.000	14.750	36.874	44.249
105	0.000	0.000	0.000	20.281	23.968
110	0.000	0.000	0.000	11.062	12.906
115	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	3.687	0.000
125	0.000	0.000	0.000	0.000	0.000
130	0.000	0.000	0.000	0.000	0.000
135	0.000	0.000	0.000	0.000	0.000
140	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	658.43	N.A.	14.10
0-30	1377.57	N.A.	29.40
0-40	2223.22	N.A.	47.50
0-60	3719.66	N.A.	79.40
0-80	4489.81	N.A.	95.90
0-90	4625.42	N.A.	98.80
10-90	4453.77	N.A.	95.10
20-40	1564.79	N.A.	33.40
20-50	2385.54	N.A.	50.90
40-70	1979.29	N.A.	42.30
60-80	770.15	N.A.	16.40
70-80	287.31	N.A.	6.10
80-90	135.60	N.A.	2.90
90-110	55.41	N.A.	1.20
90-120	56.74	N.A.	1.20
90-130	56.95	N.A.	1.20
90-150	56.95	N.A.	1.20
90-180	56.95	N.A.	1.20
110-180	1.55	N.A.	0.00
0-180	4682.37	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	171.65
10-20	486.78
20-30	719.14
30-40	845.65
40-50	820.76
50-60	675.69
60-70	482.84
70-80	287.31
80-90	135.60
90-100	45.06
100-110	10.34
110-120	1.33
120-130	0.21
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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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	213	213	213	213	208	208	208	208	198	198	198	189	189	189	181	181	181	177
1	194	186	178	171	189	181	174	168	173	168	162	166	161	157	159	155	152	148
2	177	163	151	140	172	159	148	139	152	143	135	146	138	132	140	134	128	124
3	162	144	129	118	158	141	127	117	135	124	114	130	120	112	125	117	110	106
4	149	128	112	101	145	125	111	100	121	108	98	116	105	97	112	103	95	91
5	137	115	99	87	133	112	98	87	108	95	85	105	93	84	101	91	83	79
6	127	104	88	77	123	102	87	76	98	85	75	95	83	74	92	82	74	70
7	118	94	79	68	115	93	78	68	90	77	67	87	75	66	84	74	66	62
8	110	86	71	61	107	85	70	61	82	69	60	80	68	60	78	67	59	56
9	103	79	65	55	100	78	64	55	76	63	54	74	62	54	72	61	54	50
10	96	73	59	50	94	72	59	50	70	58	49	68	57	49	67	56	49	46

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UGR TABLE - CORRECTED

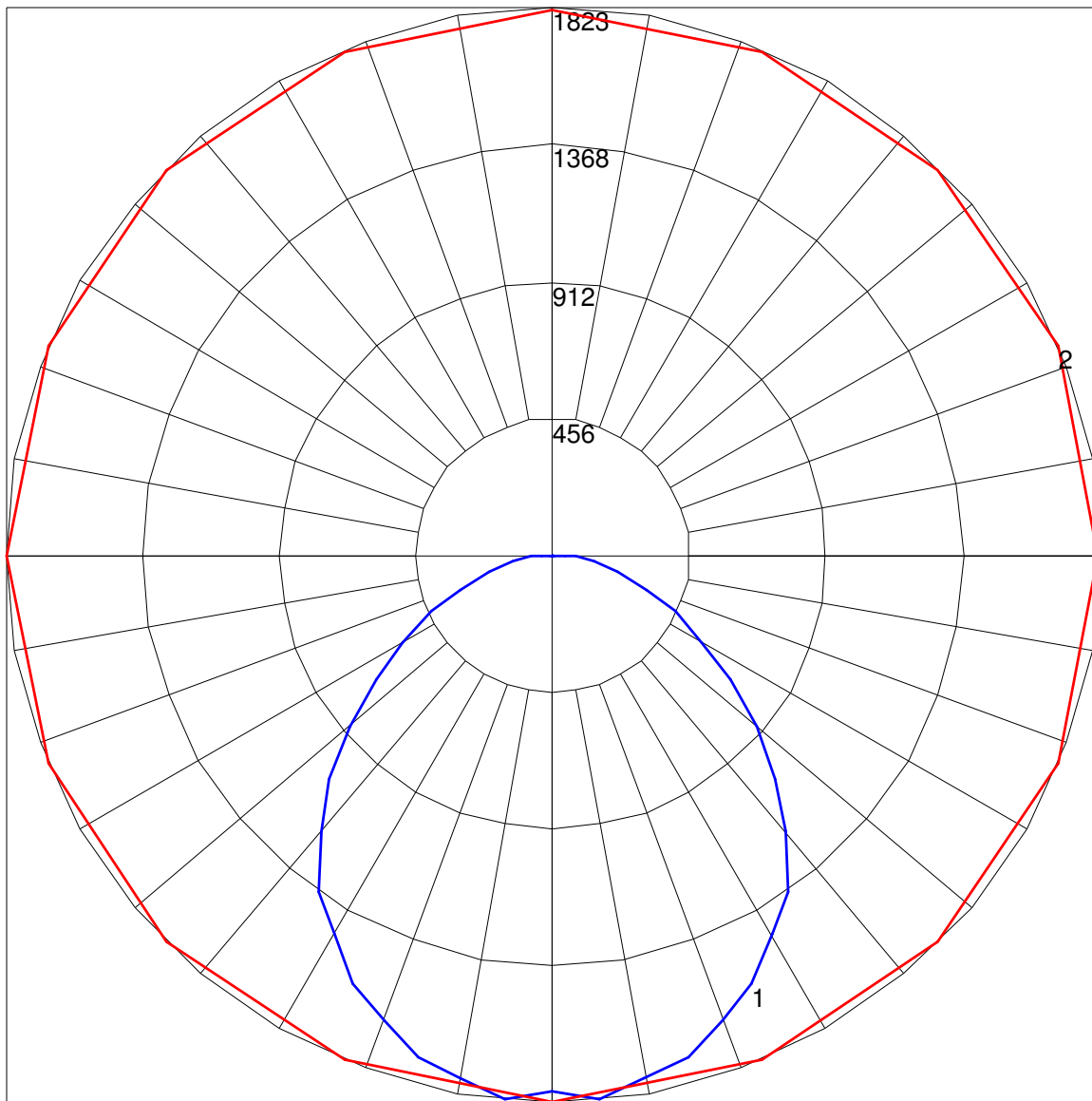
Reflectances

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	15.0	16.6	15.4	16.9	17.3	16.1	17.7	16.5	18.0	18.4
	3H	16.3	17.7	16.7	18.1	18.4	17.9	19.3	18.3	19.6	20.0
	4H	16.7	18.0	17.1	18.4	18.8	18.6	20.0	19.0	20.3	20.7
	6H	16.9	18.2	17.3	18.5	19.0	19.3	20.6	19.7	20.9	21.4
	8H	17.0	18.2	17.4	18.6	19.0	19.7	20.8	20.1	21.3	21.7
	12H	17.0	18.1	17.4	18.5	19.0	20.0	21.2	20.5	21.6	22.0
4H	2H	15.7	17.1	16.1	17.4	17.8	16.6	17.9	17.0	18.3	18.7
	3H	17.2	18.3	17.6	18.8	19.2	18.6	19.7	19.0	20.1	20.5
	4H	17.7	18.7	18.2	19.2	19.6	19.4	20.5	19.9	20.9	21.4
	6H	18.0	18.9	18.5	19.4	19.9	20.3	21.2	20.8	21.7	22.2
	8H	18.1	19.0	18.6	19.4	19.9	20.8	21.6	21.2	22.1	22.5
	12H	18.2	18.9	18.7	19.4	19.9	21.2	22.0	21.7	22.5	23.0
8H	4H	18.1	19.0	18.6	19.4	19.9	19.7	20.5	20.1	21.0	21.5
	6H	18.6	19.3	19.1	19.8	20.3	20.7	21.4	21.2	21.9	22.4
	8H	18.8	19.4	19.3	19.9	20.4	21.3	21.9	21.8	22.4	22.9
	12H	18.9	19.4	19.4	19.9	20.5	21.8	22.4	22.4	22.9	23.5
12H	4H	18.2	19.0	18.7	19.5	20.0	19.7	20.4	20.2	20.9	21.4
	6H	18.8	19.4	19.3	19.9	20.4	20.8	21.4	21.3	21.9	22.4
	8H	19.0	19.5	19.5	20.0	20.6	21.3	21.9	21.9	22.4	23.0

Maximum UGR = 23.5

POLAR GRAPH



Maximum Candela = 1823.42 Located At Horizontal Angle = 22.5, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (22.5 - 202.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)