



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : ASMS-4-L46-8TW-A-DIM-UNV 4000K\_.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-L50/8TW-A-DIM-UNV 4000k

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4670
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	39.8
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	7352	6872	6741
55	6020	5760	5666
65	4725	4783	4720
75	3452	3865	3822
85	2246	3299	3516

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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	1787.168	1787.168	1787.168	1787.168	1787.168
5	1816.586	1818.425	1814.748	1814.748	1814.748
10	1770.620	1765.104	1765.104	1763.265	1763.265
15	1737.524	1732.008	1732.008	1728.331	1726.492
20	1654.785	1651.108	1641.914	1634.560	1632.721
25	1572.046	1570.207	1561.014	1553.659	1553.659
30	1459.888	1454.372	1447.018	1443.340	1443.340
35	1366.117	1364.278	1364.278	1364.278	1364.278
40	1198.800	1198.800	1209.832	1213.509	1211.670
45	1042.515	1049.869	1071.933	1079.288	1079.288
50	866.004	882.552	911.970	923.002	923.002
55	698.687	722.589	763.040	779.588	777.749
60	546.079	573.659	625.141	641.689	641.689
65	410.019	446.792	501.951	522.177	520.338
70	290.507	330.957	389.794	406.342	404.503
75	189.381	224.315	286.829	305.216	305.216
80	108.480	139.737	202.251	227.993	231.670
85	47.805	75.385	136.060	163.640	165.478
90	11.032	36.773	77.223	106.642	110.319
95	0.000	9.193	40.450	66.191	71.707
100	0.000	0.000	14.709	36.773	44.128
105	0.000	0.000	0.000	20.225	23.902
110	0.000	0.000	0.000	11.032	12.871
115	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	3.677	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	656.63	N.A.	14.10
0-30	1373.8	N.A.	29.40
0-40	2217.13	N.A.	47.50
0-60	3709.47	N.A.	79.40
0-80	4477.52	N.A.	95.90
0-90	4612.74	N.A.	98.80
10-90	4441.57	N.A.	95.10
20-40	1560.5	N.A.	33.40
20-50	2379.01	N.A.	50.90
40-70	1973.87	N.A.	42.30
60-80	768.04	N.A.	16.40
70-80	286.52	N.A.	6.10
80-90	135.23	N.A.	2.90
90-110	55.26	N.A.	1.20
90-120	56.59	N.A.	1.20
90-130	56.80	N.A.	1.20
90-150	56.80	N.A.	1.20
90-180	56.80	N.A.	1.20
110-180	1.54	N.A.	0.00
0-180	4669.54	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	171.18
10-20	485.45
20-30	717.17
30-40	843.33
40-50	818.51
50-60	673.84
60-70	481.52
70-80	286.52
80-90	135.23
90-100	44.94
100-110	10.32
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	217	217	217	217	212	212	212	212	202	202	202	193	193	193	185	185	185	181
1	199	190	182	175	193	185	178	172	177	171	166	170	165	161	163	159	155	151
2	181	166	154	144	176	163	151	142	156	146	138	149	142	135	144	137	131	127
3	166	147	132	120	161	144	130	119	138	126	117	133	123	114	128	119	112	108
4	152	131	115	103	148	128	113	102	123	110	100	119	108	99	115	105	97	93
5	140	117	101	89	136	115	100	89	111	98	87	107	95	86	103	93	85	81
6	130	106	90	78	126	104	89	78	100	87	77	97	85	76	94	84	75	71
7	121	96	80	69	117	95	80	69	92	78	68	89	77	68	86	75	67	64
8	112	88	73	62	109	87	72	62	84	71	61	82	70	61	79	68	60	57
9	105	81	66	56	102	80	66	56	78	65	56	75	64	55	73	63	55	51
10	99	75	61	51	96	74	60	51	72	59	51	70	58	50	68	58	50	47

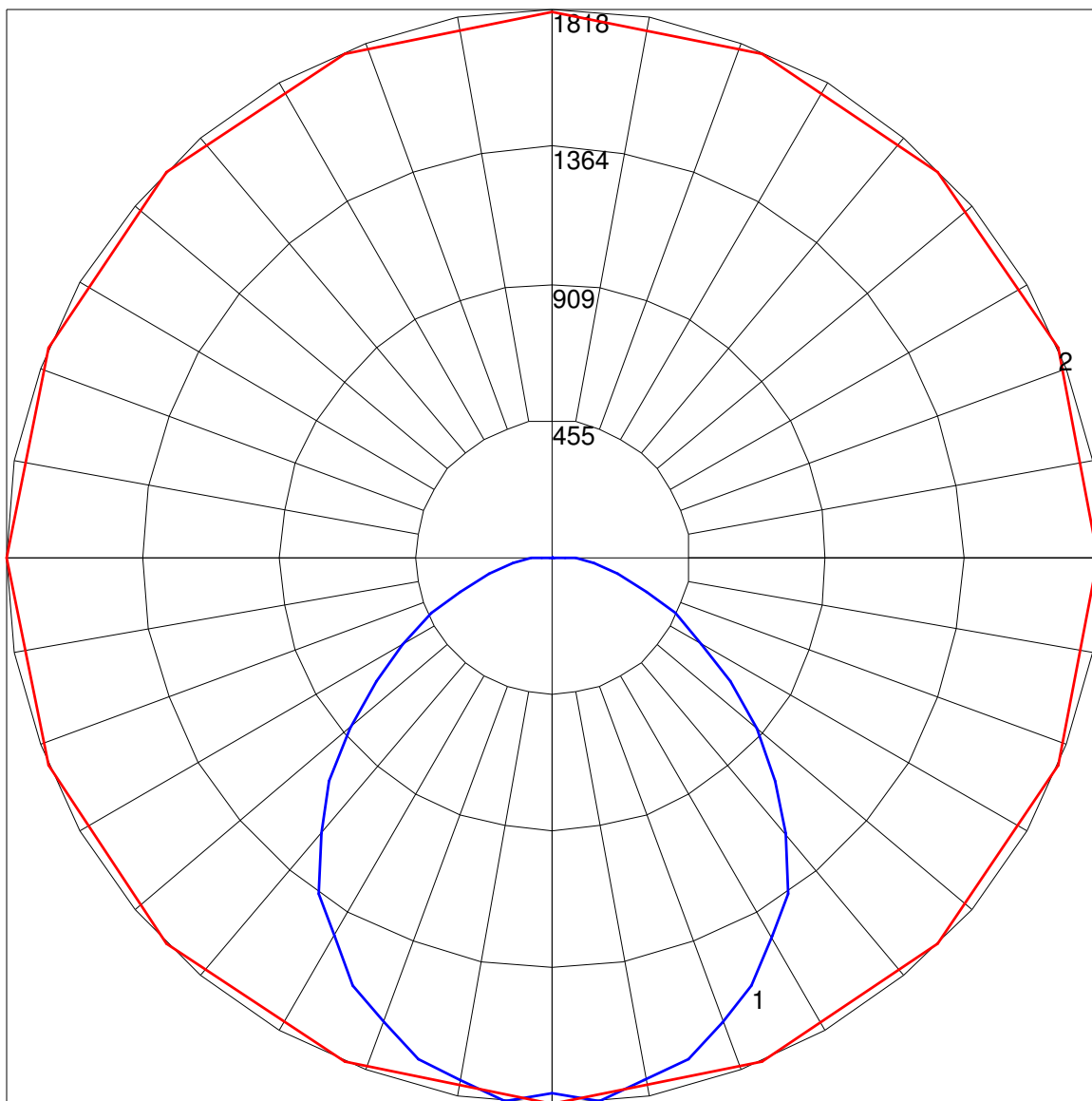
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**UGR TABLE - CORRECTED**

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 = 1818.425 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.)