



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L98-850-HIA-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20114.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 07-NOV-2019

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4' LED SURFACE MOUNT LUMINAIRE

[LUMCAT] SLF-4-L98-850-HIA-DIM-UNV

[MORE] WHITE FLAT REFLECTOR w/FROSTED ACRYLIC LENS

[LAMPCAT] HLM 80 CRI 5000K CCT

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] Indoor, Classroom, Commercial, Industrial, Manufacturing, Office, Direct

[\_SEARCH\_MOUNTING] Pendant, Surface, Suspended

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	10403
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	139
Total Luminaire Watts	75
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.06 ft
Luminous Width (90-270)	0.47 ft
Luminous Height	0.23 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	14726	12185	12503
55	12465	10444	11091
65	10025	8825	9508
75	7041	7070	8004
85	2151	5688	7003

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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	3359.000	3359.000	3359.000	3359.000	3359.000
5	3394.843	3345.346	3331.691	3328.278	3326.571
10	3323.157	3285.607	3277.073	3285.607	3277.073
15	3220.749	3191.733	3205.387	3220.749	3217.335
20	3068.843	3046.654	3094.445	3121.754	3131.995
25	2901.575	2872.560	2940.832	3003.984	3009.104
30	2698.465	2681.397	2770.151	2862.319	2865.732
35	2469.753	2461.219	2572.161	2691.638	2706.999
40	2227.386	2205.197	2348.569	2493.648	2526.077
45	1949.176	1925.281	2114.736	2280.297	2331.501
50	1650.484	1657.312	1882.610	2056.705	2130.098
55	1368.861	1411.531	1645.364	1831.406	1913.333
60	1097.478	1174.285	1416.652	1616.348	1688.034
65	841.457	937.038	1206.714	1394.463	1457.615
70	602.504	715.153	998.483	1189.646	1240.850
75	390.859	510.336	790.253	1000.190	1036.033
80	206.524	349.896	621.278	829.509	858.525
85	54.618	225.299	474.493	679.310	711.739
90	6.827	141.665	368.671	553.006	593.970
95	1.707	83.634	278.210	438.650	486.441
100	0.000	49.497	201.403	339.655	387.446
105	0.000	34.136	148.492	257.728	308.932
110	0.000	25.602	117.770	209.938	252.608
115	0.000	22.189	88.754	168.974	201.403
120	0.000	20.482	75.100	138.252	162.147
125	0.000	13.654	54.618	109.236	129.717
130	0.000	11.948	44.377	83.634	98.995
135	0.000	8.534	34.136	66.566	76.806
140	0.000	8.534	25.602	51.204	61.445
145	0.000	3.414	22.189	40.963	46.084
150	0.000	0.000	20.482	35.843	40.963
155	0.000	0.000	13.654	25.602	32.429
160	0.000	0.000	11.948	17.068	22.189
165	0.000	0.000	0.000	11.948	13.654
170	0.000	0.000	0.000	0.000	8.534
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	1221.8	N.A.	11.70
0-30	2578.17	N.A.	24.80
0-40	4189.6	N.A.	40.30
0-60	7285.91	N.A.	70.00
0-80	9254.65	N.A.	89.00
0-90	9746.84	N.A.	93.70
10-90	9429.61	N.A.	90.60
20-40	2967.8	N.A.	28.50
20-50	4601.29	N.A.	44.20
40-70	4260.43	N.A.	41.00
60-80	1968.73	N.A.	18.90
70-80	804.62	N.A.	7.70
80-90	492.19	N.A.	4.70
90-110	451.55	N.A.	4.30
90-120	548.28	N.A.	5.30
90-130	603.95	N.A.	5.80
90-150	647.89	N.A.	6.20
90-180	656.18	N.A.	6.30
110-180	204.63	N.A.	2.00
0-180	10403.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	317.23
10-20	904.57
20-30	1356.37
30-40	1611.43
40-50	1633.49
50-60	1462.83
60-70	1164.11
70-80	804.62
80-90	492.19
90-100	289.09
100-110	162.46
110-120	96.73
120-130	55.68
130-140	29.24
140-150	14.71
150-160	6.69
160-170	1.55
170-180	0.04

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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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	106	101	96	92	103	98	94	90	92	89	86	87	84	82	83	80	78	76
2	96	87	80	74	93	85	78	73	80	75	70	76	71	67	72	68	65	62
3	87	77	68	61	84	74	67	60	71	64	58	67	61	57	64	59	55	52
4	80	68	59	52	77	66	58	51	63	55	50	60	53	48	57	51	47	45
5	74	61	51	45	71	59	50	44	56	49	43	53	47	42	51	45	41	39
6	68	54	45	39	66	53	45	38	51	43	38	48	42	37	46	40	36	34
7	63	49	41	34	61	48	40	34	46	39	33	44	38	33	42	36	32	30
8	59	45	36	31	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	28	53	40	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	24	22

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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

X=2H	Y=2H	18.9	20.4	19.4	20.9	21.3	21.0	22.6	21.5	23.0	23.5
	3H	20.4	21.8	20.9	22.2	22.7	23.3	24.7	23.8	25.2	25.7
	4H	20.9	22.2	21.4	22.7	23.2	24.4	25.7	24.9	26.2	26.7
	6H	21.2	22.4	21.7	22.9	23.4	25.4	26.7	25.9	27.1	27.7
	8H	21.3	22.4	21.8	22.9	23.5	26.0	27.2	26.5	27.7	28.2
	12H	21.3	22.4	21.8	22.9	23.5	26.6	27.7	27.1	28.2	28.8

UGR Viewed Endwise

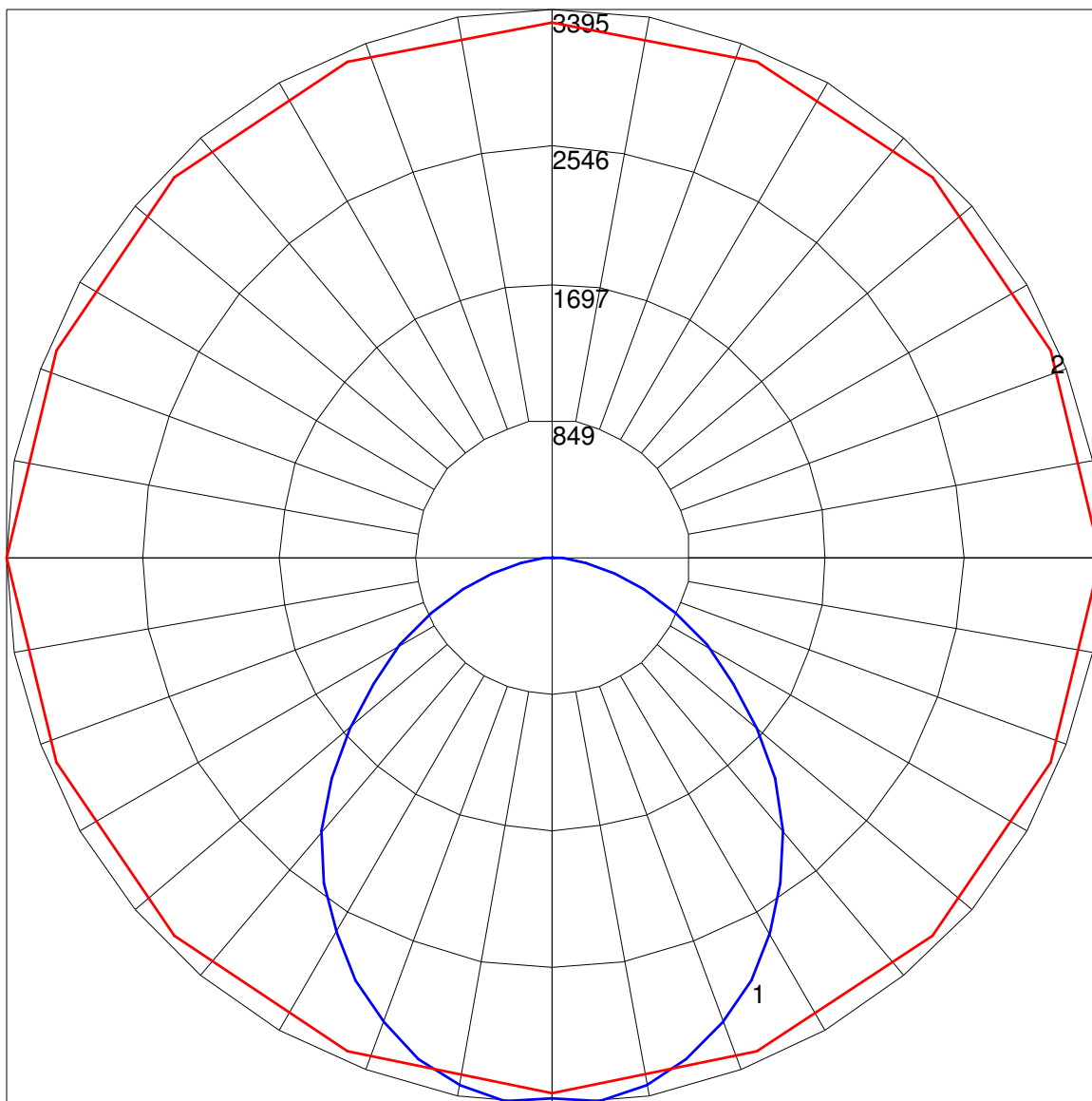
4H	2H	19.7	21.0	20.1	21.4	22.0	21.4	22.7	21.9	23.2	23.7
	3H	21.3	22.5	21.8	23.0	23.5	23.9	25.0	24.4	25.5	26.0
	4H	21.9	22.9	22.4	23.5	24.0	25.1	26.1	25.6	26.6	27.2
	6H	22.3	23.2	22.9	23.8	24.4	26.4	27.3	26.9	27.8	28.4
	8H	22.5	23.3	23.0	23.8	24.4	27.0	27.9	27.6	28.4	29.0
	12H	22.5	23.3	23.1	23.9	24.5	27.7	28.5	28.3	29.1	29.7

8H	4H	22.4	23.3	23.0	23.8	24.4	25.3	26.1	25.8	26.6	27.2
	6H	23.0	23.7	23.6	24.3	24.9	26.7	27.4	27.2	28.0	28.6
	8H	23.2	23.8	23.8	24.4	25.0	27.5	28.1	28.1	28.7	29.3
	12H	23.3	23.9	23.9	24.5	25.2	28.3	28.9	28.9	29.5	30.2

12H	4H	22.5	23.3	23.1	23.9	24.5	25.3	26.0	25.8	26.6	27.2
	6H	23.2	23.8	23.8	24.4	25.1	26.7	27.4	27.3	27.9	28.6
	8H	23.4	24.0	24.0	24.6	25.3	27.5	28.1	28.1	28.7	29.4

Maximum UGR = 30.2

POLAR GRAPH



Maximum Candela = 3394.843 Located At Horizontal Angle = 0, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)