



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L98-840-HIA-(L57)-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] 03-30-2022

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-56 LED 22"ARRAYS 54"SURFACE MOUNT LUMINAIRE

[LUMCAT] SLF-4-L98-840-HIA-(L57)-DIM-UNV

[MORE] WHITE FLAT REFLECTOR w/FROSTED ACRYLIC LENS

[LAMPCAT] HLM 80 CRI 4000K 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	5942
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	147
Total Luminaire Watts	40.4
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	8411	6960	7141
55	7120	5966	6335
65	5726	5041	5431
75	4022	4038	4572
85	1229	3249	4000

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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	1918.598	1918.598	1918.598	1918.598	1918.598
5	1939.071	1910.799	1903.000	1901.050	1900.075
10	1898.125	1876.677	1871.803	1876.677	1871.803
15	1839.631	1823.058	1830.857	1839.631	1837.682
20	1752.865	1740.192	1767.489	1783.087	1788.937
25	1657.326	1640.752	1679.748	1715.819	1718.744
30	1541.313	1531.564	1582.258	1634.903	1636.853
35	1410.677	1405.802	1469.170	1537.413	1546.187
40	1272.241	1259.567	1341.459	1424.325	1442.848
45	1113.333	1099.684	1207.898	1302.463	1331.710
50	942.726	946.625	1075.312	1174.751	1216.672
55	781.868	806.240	939.801	1046.065	1092.860
60	626.859	670.729	809.165	923.228	964.174
65	480.624	535.219	689.252	796.491	832.562
70	344.139	408.482	570.315	679.503	708.750
75	223.252	291.494	451.377	571.290	591.763
80	117.963	199.854	354.863	473.800	490.373
85	31.197	128.686	271.021	388.009	406.532
90	3.900	80.916	210.578	315.867	339.264
95	0.975	47.770	158.908	250.549	277.846
100	0.000	28.272	115.038	194.005	221.302
105	0.000	19.498	84.816	147.210	176.456
110	0.000	14.623	67.268	119.912	144.285
115	0.000	12.674	50.695	96.515	115.038
120	0.000	11.699	42.895	78.967	92.615
125	0.000	7.799	31.197	62.393	74.092
130	0.000	6.824	25.347	47.770	56.544
135	0.000	4.874	19.498	38.021	43.870
140	0.000	4.874	14.623	29.247	35.096
145	0.000	1.950	12.674	23.398	26.322
150	0.000	0.000	11.699	20.473	23.398
155	0.000	0.000	7.799	14.623	18.523
160	0.000	0.000	6.824	9.749	12.674
165	0.000	0.000	0.000	6.824	7.799
170	0.000	0.000	0.000	0.000	4.874
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	697.87	N.A.	11.70
0-30	1472.6	N.A.	24.80
0-40	2393.02	N.A.	40.30
0-60	4161.58	N.A.	70.00
0-80	5286.08	N.A.	89.00
0-90	5567.21	N.A.	93.70
10-90	5386.02	N.A.	90.60
20-40	1695.15	N.A.	28.50
20-50	2628.17	N.A.	44.20
40-70	2433.48	N.A.	41.00
60-80	1124.5	N.A.	18.90
70-80	459.58	N.A.	7.70
80-90	281.13	N.A.	4.70
90-110	257.92	N.A.	4.30
90-120	313.17	N.A.	5.30
90-130	344.97	N.A.	5.80
90-150	370.06	N.A.	6.20
90-180	374.80	N.A.	6.30
110-180	116.88	N.A.	2.00
0-180	5942.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	181.20
10-20	516.67
20-30	774.73
30-40	920.42
40-50	933.02
50-60	835.54
60-70	664.92
70-80	459.58
80-90	281.13
90-100	165.12
100-110	92.80
110-120	55.25
120-130	31.80
130-140	16.70
140-150	8.40
150-160	3.82
160-170	0.89
170-180	0.02

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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

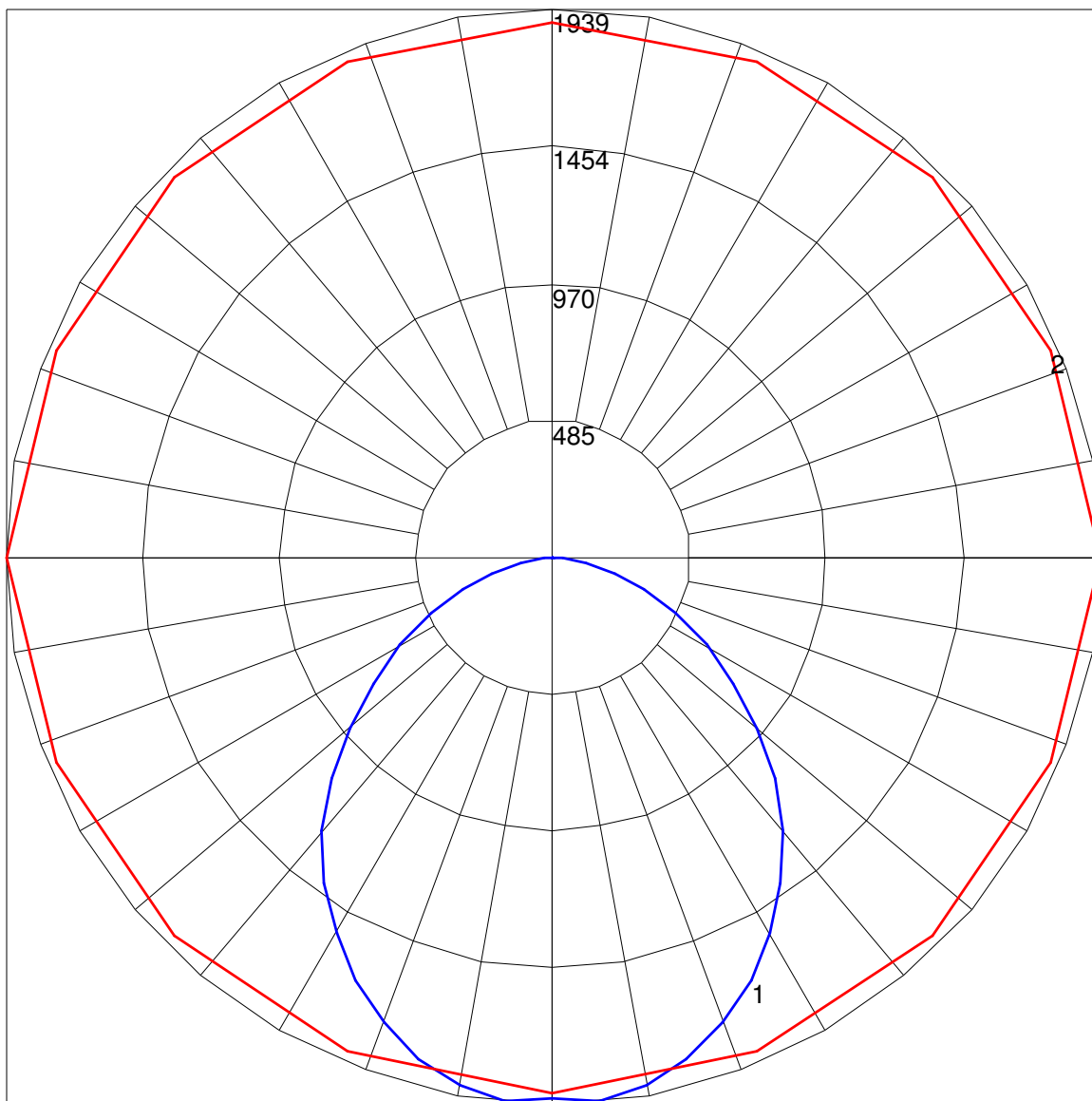
X=2H	Y=2H	16.0	17.6	16.5	18.0	18.5	19.1	20.7	19.6	21.1	21.6
	3H	17.3	18.7	17.7	19.1	19.6	21.4	22.8	21.9	23.3	23.8
	4H	17.6	18.9	18.1	19.4	19.9	22.5	23.8	23.0	24.3	24.8
	6H	17.8	19.0	18.3	19.5	20.0	23.5	24.8	24.0	25.2	25.8
	8H	17.8	19.0	18.4	19.5	20.1	24.1	25.3	24.6	25.8	26.3
	12H	17.8	19.0	18.4	19.5	20.0	24.7	25.8	25.2	26.3	26.9

UGR Viewed Endwise

4H	2H	17.0	18.4	17.5	18.8	19.3	19.5	20.8	20.0	21.3	21.8
	3H	18.5	19.6	19.0	20.1	20.7	22.0	23.1	22.5	23.6	24.1
	4H	18.9	20.0	19.5	20.5	21.0	23.2	24.2	23.7	24.7	25.3
	6H	19.2	20.1	19.8	20.7	21.2	24.5	25.4	25.0	25.9	26.5
	8H	19.3	20.1	19.8	20.7	21.3	25.1	26.0	25.7	26.5	27.1
	12H	19.3	20.0	19.9	20.6	21.2	25.8	26.6	26.4	27.2	27.8
8H	4H	19.7	20.5	20.2	21.1	21.7	23.4	24.2	23.9	24.7	25.3
	6H	20.1	20.8	20.7	21.4	22.0	24.8	25.5	25.3	26.1	26.7
	8H	20.2	20.9	20.8	21.5	22.1	25.6	26.2	26.2	26.8	27.4
	12H	20.3	20.9	20.9	21.5	22.1	26.4	27.0	27.0	27.6	28.3
12H	4H	19.9	20.6	20.4	21.2	21.8	23.4	24.1	23.9	24.7	25.3
	6H	20.4	21.1	21.0	21.6	22.3	24.8	25.5	25.4	26.0	26.7
	8H	20.6	21.2	21.2	21.8	22.5	25.6	26.2	26.2	26.8	27.5

Maximum UGR = 28.3

POLAR GRAPH



Maximum Candela = 1939.071 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.)