

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L98-830-HIA-DRV-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] 09-08-2023

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836

[LUMINAIRE] 4' LED SURFACE MOUNT LUMINAIRE

[LUMCAT] SLF-4-L98-830-HIA-DRV-UNV

[MORE] WITH FROSTED ACRYLIC LENS

[LAMPCAT] HLM 80 CRI 3000K 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	9758
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	130
Total Luminaire Watts	74.78
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	13813	11430	11728
55	11692	9797	10404
65	9403	8278	8919
75	6605	6632	7508
85	2018	5335	6569

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : SLF-4-L98-830-HIA-DRV-UNV\_.IES**

**CANDELA TABULATION**

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	3150.736	3150.736	3150.736	3150.736	3150.736
5	3184.357	3137.929	3125.121	3121.919	3120.318
10	3117.116	3081.894	3073.889	3081.894	3073.889
15	3021.057	2993.840	3006.648	3021.057	3017.855
20	2878.569	2857.756	2902.584	2928.200	2937.806
25	2721.673	2694.456	2758.495	2817.732	2822.535
30	2531.156	2515.146	2598.397	2684.850	2688.052
35	2316.624	2308.619	2412.683	2524.752	2539.161
40	2089.284	2068.471	2202.954	2339.038	2369.456
45	1828.324	1805.910	1983.619	2138.915	2186.944
50	1548.152	1554.555	1765.885	1929.186	1998.028
55	1283.989	1324.014	1543.349	1717.856	1794.703
60	1029.433	1101.477	1328.817	1516.132	1583.373
65	789.285	878.940	1131.896	1308.004	1367.240
70	565.147	670.812	936.576	1115.886	1163.915
75	366.625	478.694	741.256	938.177	971.797
80	193.719	328.202	582.758	778.078	805.295
85	51.231	211.330	445.074	637.192	667.610
90	6.404	132.882	345.813	518.719	557.142
95	1.601	78.448	260.960	411.453	456.280
100	0.000	46.429	188.916	318.596	363.423
105	0.000	32.020	139.286	241.749	289.778
110	0.000	24.015	110.468	196.921	236.946
115	0.000	20.813	83.251	158.497	188.916
120	0.000	19.212	70.443	129.680	152.093
125	0.000	12.808	51.231	102.463	121.675
130	0.000	11.207	41.626	78.448	92.857
135	0.000	8.005	32.020	62.438	72.044
140	0.000	8.005	24.015	48.030	57.635
145	0.000	3.202	20.813	38.424	43.227
150	0.000	0.000	19.212	33.621	38.424
155	0.000	0.000	12.808	24.015	30.419
160	0.000	0.000	11.207	16.010	20.813
165	0.000	0.000	0.000	11.207	12.808
170	0.000	0.000	0.000	0.000	8.005
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : SLF-4-L98-830-HIA-DRV-UNV\_.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1146.05	N.A.	11.70
0-30	2418.32	N.A.	24.80
0-40	3929.84	N.A.	40.30
0-60	6834.18	N.A.	70.00
0-80	8680.84	N.A.	89.00
0-90	9142.52	N.A.	93.70
10-90	8844.96	N.A.	90.60
20-40	2783.79	N.A.	28.50
20-50	4316.00	N.A.	44.20
40-70	3996.27	N.A.	41.00
60-80	1846.67	N.A.	18.90
70-80	754.73	N.A.	7.70
80-90	461.68	N.A.	4.70
90-110	423.55	N.A.	4.30
90-120	514.28	N.A.	5.30
90-130	566.51	N.A.	5.80
90-150	607.72	N.A.	6.20
90-180	615.49	N.A.	6.30
110-180	191.94	N.A.	2.00
0-180	9758.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	297.56
10-20	848.49
20-30	1272.27
30-40	1511.52
40-50	1532.21
50-60	1372.13
60-70	1091.94
70-80	754.73
80-90	461.68
90-100	271.16
100-110	152.39
110-120	90.73
120-130	52.22
130-140	27.42
140-150	13.79
150-160	6.28
160-170	1.46
170-180	0.04

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : SLF-4-L98-830-HIA-DRV-UNV\_.IES**

**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

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : SLF-4-L98-830-HIA-DRV-UNV\_.IES**

**UGR TABLE - CORRECTED**

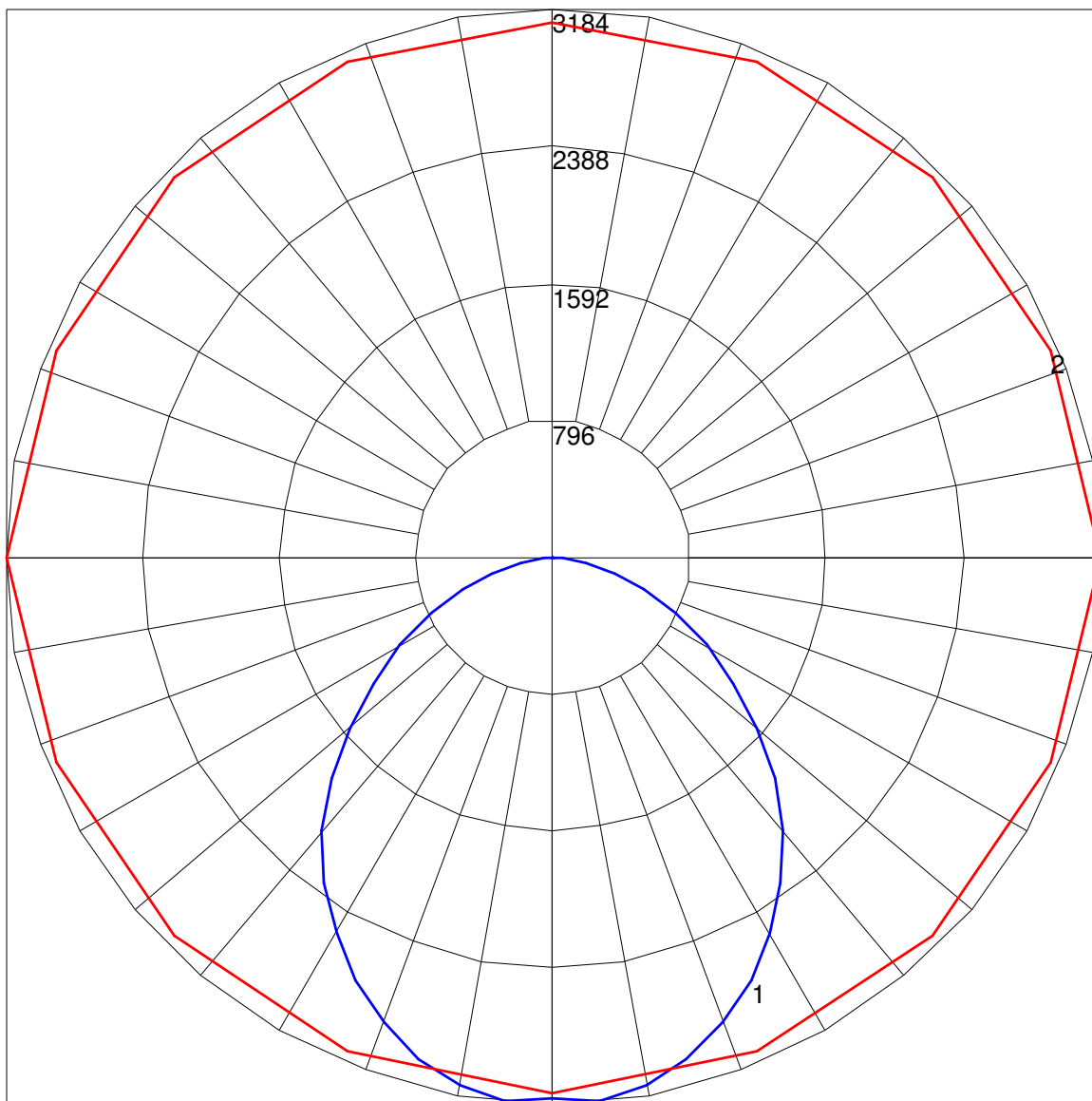
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	17.7	19.3	18.2	19.7	20.2	20.8	22.4	21.3	22.8	23.3
	3H	19.0	20.4	19.4	20.8	21.3	23.1	24.5	23.6	25.0	25.5
	4H	19.3	20.6	19.8	21.1	21.6	24.2	25.5	24.7	26.0	26.5
	6H	19.5	20.7	20.0	21.2	21.7	25.2	26.5	25.7	26.9	27.5
	8H	19.5	20.7	20.1	21.2	21.8	25.8	27.0	26.3	27.5	28.0
	12H	19.5	20.7	20.1	21.2	21.7	26.4	27.5	26.9	28.0	28.6
4H	2H	18.7	20.1	19.2	20.5	21.0	21.2	22.5	21.7	23.0	23.5
	3H	20.2	21.3	20.7	21.8	22.4	23.7	24.8	24.2	25.3	25.8
	4H	20.6	21.7	21.2	22.2	22.7	24.9	25.9	25.4	26.4	27.0
	6H	20.9	21.8	21.5	22.4	22.9	26.2	27.1	26.7	27.6	28.2
	8H	21.0	21.8	21.5	22.4	23.0	26.8	27.7	27.4	28.2	28.8
	12H	21.0	21.7	21.6	22.3	22.9	27.5	28.3	28.1	28.9	29.5
8H	4H	21.4	22.2	21.9	22.8	23.4	25.1	25.9	25.6	26.4	27.0
	6H	21.8	22.5	22.4	23.1	23.7	26.5	27.2	27.0	27.8	28.4
	8H	21.9	22.6	22.5	23.2	23.8	27.3	27.9	27.9	28.5	29.1
	12H	22.0	22.6	22.6	23.2	23.8	28.1	28.7	28.7	29.3	30.0
12H	4H	21.6	22.3	22.1	22.9	23.5	25.1	25.8	25.6	26.4	27.0
	6H	22.1	22.8	22.7	23.3	24.0	26.5	27.2	27.1	27.7	28.4
	8H	22.3	22.9	22.9	23.5	24.2	27.3	27.9	27.9	28.5	29.2

Maximum UGR = 30.0

POLAR GRAPH



Maximum Candela = 3184.357 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.)