



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L26-850-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-L26-850-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	3033
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	151
Total Luminaire Watts	20.13
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	4293	3553	3645
55	3634	3045	3234
65	2923	2573	2772
75	2053	2061	2334
85	627	1658	2042

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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	979.318	979.318	979.318	979.318	979.318
5	989.768	975.337	971.356	970.361	969.863
10	968.868	957.920	955.432	957.920	955.432
15	939.011	930.551	934.532	939.011	938.016
20	894.723	888.253	902.187	910.149	913.135
25	845.956	837.496	857.401	875.813	877.306
30	786.739	781.763	807.639	834.510	835.506
35	720.058	717.569	749.915	784.748	789.227
40	649.395	642.926	684.726	727.024	736.479
45	568.283	561.316	616.552	664.822	679.750
50	481.200	483.190	548.876	599.633	621.031
55	399.092	411.533	479.707	533.947	557.833
60	319.970	342.363	413.025	471.247	492.147
65	245.327	273.194	351.818	406.556	424.968
70	175.660	208.503	291.108	346.842	361.770
75	113.955	148.789	230.399	291.606	302.056
80	60.212	102.012	181.134	241.844	250.303
85	15.924	65.686	138.339	198.053	207.508
90	1.990	41.303	107.486	161.229	173.172
95	0.498	24.383	81.112	127.889	141.822
100	0.000	14.431	58.719	99.027	112.960
105	0.000	9.952	43.293	75.141	90.069
110	0.000	7.464	34.336	61.207	73.648
115	0.000	6.469	25.876	49.264	58.719
120	0.000	5.971	21.895	40.307	47.274
125	0.000	3.981	15.924	31.848	37.819
130	0.000	3.483	12.938	24.383	28.862
135	0.000	2.488	9.952	19.407	22.393
140	0.000	2.488	7.464	14.929	17.914
145	0.000	0.995	6.469	11.943	13.436
150	0.000	0.000	5.971	10.450	11.943
155	0.000	0.000	3.981	7.464	9.455
160	0.000	0.000	3.483	4.976	6.469
165	0.000	0.000	0.000	3.483	3.981
170	0.000	0.000	0.000	0.000	2.488
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	356.22	N.A.	11.70
0-30	751.67	N.A.	24.80
0-40	1221.48	N.A.	40.30
0-60	2124.21	N.A.	70.00
0-80	2698.2	N.A.	89.00
0-90	2841.7	N.A.	93.70
10-90	2749.21	N.A.	90.60
20-40	865.26	N.A.	28.50
20-50	1341.51	N.A.	44.20
40-70	1242.13	N.A.	41.00
60-80	573.98	N.A.	18.90
70-80	234.59	N.A.	7.70
80-90	143.50	N.A.	4.70
90-110	131.65	N.A.	4.30
90-120	159.85	N.A.	5.30
90-130	176.08	N.A.	5.80
90-150	188.89	N.A.	6.20
90-180	191.31	N.A.	6.30
110-180	59.66	N.A.	2.00
0-180	3033.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	92.49
10-20	263.73
20-30	395.45
30-40	469.81
40-50	476.24
50-60	426.49
60-70	339.40
70-80	234.59
80-90	143.50
90-100	84.28
100-110	47.37
110-120	28.20
120-130	16.23
130-140	8.52
140-150	4.29
150-160	1.95
160-170	0.45
170-180	0.01

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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**

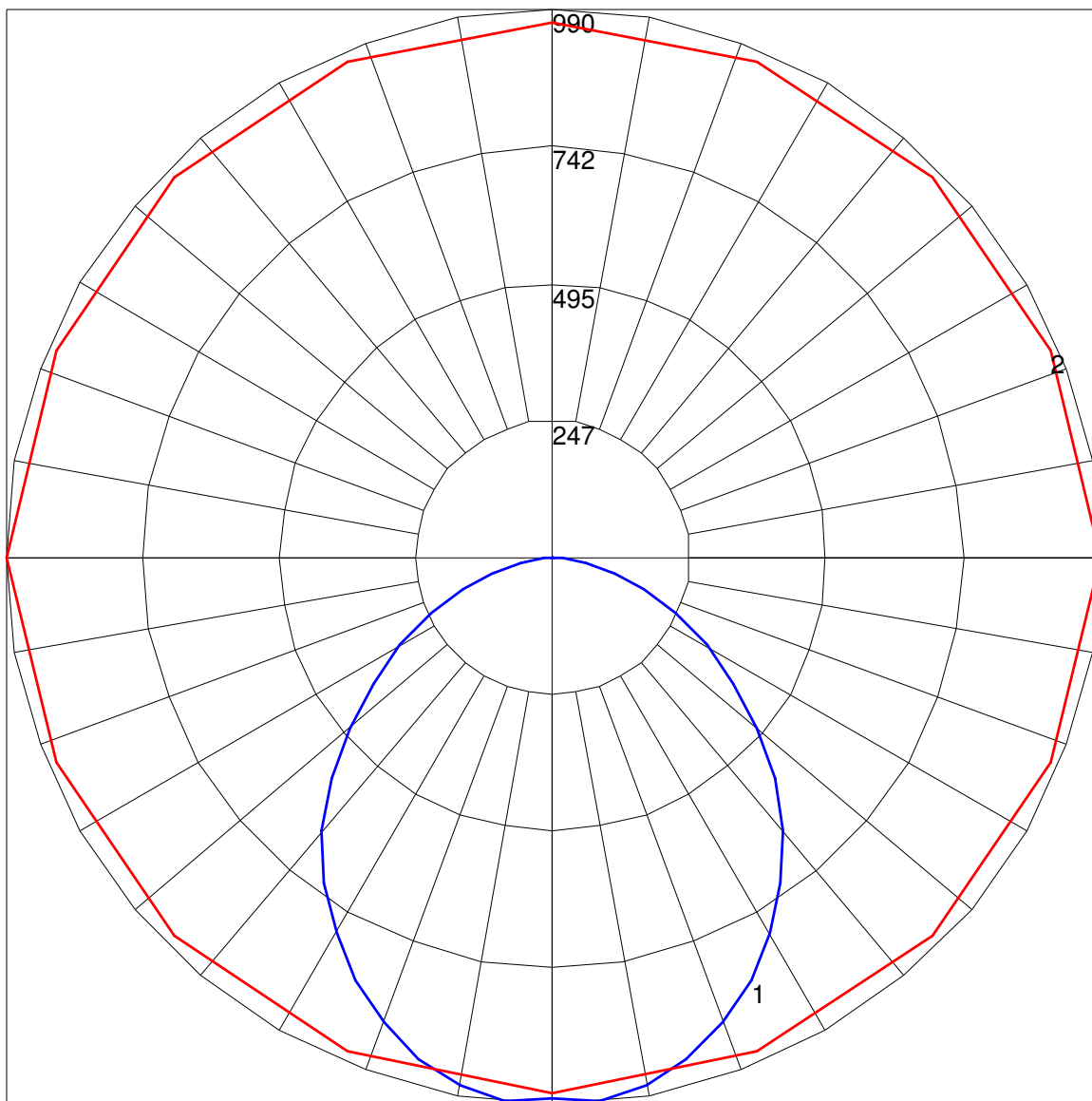
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	14.7	16.2	15.2	16.7	17.1	16.8	18.4	17.3	18.8	19.3
	3H	16.2	17.6	16.7	18.0	18.5	19.1	20.5	19.6	21.0	21.5
	4H	16.7	18.0	17.2	18.5	19.0	20.2	21.5	20.7	22.0	22.5
	6H	17.0	18.2	17.5	18.7	19.2	21.2	22.5	21.7	22.9	23.5
	8H	17.1	18.2	17.6	18.7	19.3	21.8	23.0	22.3	23.5	24.0
	12H	17.1	18.2	17.6	18.7	19.3	22.4	23.5	22.9	24.0	24.6
4H	2H	15.5	16.8	15.9	17.2	17.8	17.2	18.5	17.7	19.0	19.5
	3H	17.1	18.3	17.6	18.8	19.3	19.7	20.8	20.2	21.3	21.8
	4H	17.7	18.7	18.2	19.3	19.8	20.9	21.9	21.4	22.4	23.0
	6H	18.1	19.0	18.7	19.6	20.2	22.2	23.1	22.7	23.6	24.2
	8H	18.3	19.1	18.8	19.6	20.2	22.8	23.7	23.4	24.2	24.8
	12H	18.3	19.1	18.9	19.6	20.3	23.5	24.3	24.1	24.9	25.5
8H	4H	18.2	19.1	18.8	19.6	20.2	21.1	21.9	21.6	22.4	23.0
	6H	18.8	19.5	19.4	20.1	20.7	22.5	23.2	23.0	23.8	24.4
	8H	19.0	19.6	19.6	20.2	20.8	23.3	23.9	23.9	24.5	25.1
	12H	19.1	19.7	19.7	20.3	21.0	24.1	24.7	24.7	25.3	26.0
12H	4H	18.3	19.1	18.9	19.7	20.3	21.0	21.8	21.6	22.4	23.0
	6H	19.0	19.6	19.6	20.2	20.9	22.5	23.2	23.1	23.7	24.4
	8H	19.2	19.8	19.8	20.4	21.1	23.3	23.9	23.9	24.5	25.2

Maximum UGR = 26.0

POLAR GRAPH



Maximum Candela = 989.768 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.)