



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L52-930-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] 13-MAR-2020

[MANUFAC] WILLIAMS INDOOR

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

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

[LUMCAT] SLF-4-L52-930-HIA-DIM-UNV

[MORE] WHITE FLAT REFLECTOR w/FROSTED ACRYLIC LENS

[LAMPCAT] HLM 90 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	4314
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
Total Luminaire Watts	42
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	6107	5053	5185
55	5169	4331	4599
65	4157	3660	3943
75	2920	2932	3319
85	892	2359	2904

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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	1392.937	1392.937	1392.937	1392.937	1392.937
5	1407.801	1387.275	1381.613	1380.197	1379.489
10	1378.074	1362.502	1358.963	1362.502	1358.963
15	1335.606	1323.573	1329.236	1335.606	1334.190
20	1272.612	1263.411	1283.229	1294.554	1298.801
25	1203.249	1191.216	1219.528	1245.716	1247.840
30	1119.021	1111.943	1148.749	1186.969	1188.385
35	1024.177	1020.638	1066.644	1116.190	1122.560
40	923.670	914.469	973.924	1034.086	1047.534
45	808.300	798.391	876.956	945.612	966.846
50	684.436	687.267	780.696	852.891	883.326
55	567.650	585.345	682.313	759.462	793.436
60	455.111	486.962	587.468	670.280	700.008
65	348.942	388.579	500.410	578.267	604.455
70	249.851	296.565	414.059	493.332	514.566
75	162.085	211.630	327.708	414.767	429.631
80	85.643	145.098	257.637	343.988	356.020
85	22.649	93.429	196.767	281.702	295.150
90	2.831	58.747	152.883	229.325	246.312
95	0.708	34.682	115.370	181.903	201.721
100	0.000	20.526	83.520	140.851	160.669
105	0.000	14.156	61.578	106.877	128.111
110	0.000	10.617	48.838	87.059	104.753
115	0.000	9.201	36.805	70.072	83.520
120	0.000	8.494	31.143	57.331	67.240
125	0.000	5.662	22.649	45.299	53.792
130	0.000	4.955	18.403	34.682	41.052
135	0.000	3.539	14.156	27.604	31.851
140	0.000	3.539	10.617	21.234	25.481
145	0.000	1.416	9.201	16.987	19.110
150	0.000	0.000	8.494	14.864	16.987
155	0.000	0.000	5.662	10.617	13.448
160	0.000	0.000	4.955	7.078	9.201
165	0.000	0.000	0.000	4.955	5.662
170	0.000	0.000	0.000	0.000	3.539
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	506.67	N.A.	11.70
0-30	1069.13	N.A.	24.80
0-40	1737.38	N.A.	40.30
0-60	3021.38	N.A.	70.00
0-80	3837.79	N.A.	89.00
0-90	4041.9	N.A.	93.70
10-90	3910.35	N.A.	90.60
20-40	1230.71	N.A.	28.50
20-50	1908.1	N.A.	44.20
40-70	1766.75	N.A.	41.00
60-80	816.41	N.A.	18.90
70-80	333.67	N.A.	7.70
80-90	204.11	N.A.	4.70
90-110	187.25	N.A.	4.30
90-120	227.36	N.A.	5.30
90-130	250.45	N.A.	5.80
90-150	268.67	N.A.	6.20
90-180	272.11	N.A.	6.30
110-180	84.86	N.A.	2.00
0-180	4314.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	131.55
10-20	375.11
20-30	562.47
30-40	668.24
40-50	677.39
50-60	606.62
60-70	482.74
70-80	333.67
80-90	204.11
90-100	119.88
100-110	67.37
110-120	40.11
120-130	23.09
130-140	12.12
140-150	6.10
150-160	2.77
160-170	0.64
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**

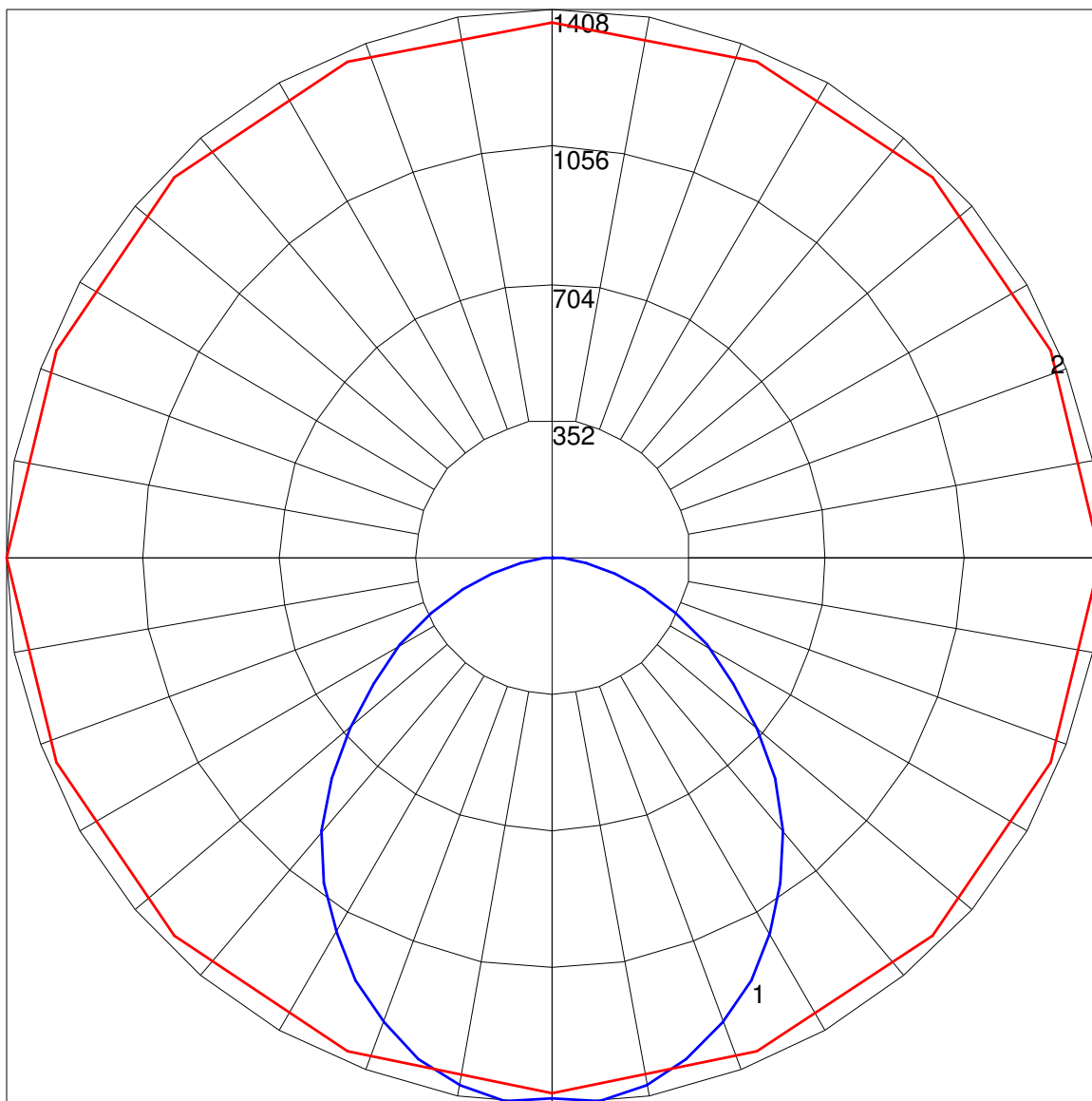
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	14.9	16.5	15.4	16.9	17.4	18.0	19.6	18.5	20.0	20.5
	3H	16.2	17.6	16.6	18.0	18.5	20.3	21.7	20.8	22.2	22.7
	4H	16.5	17.8	17.0	18.3	18.8	21.4	22.7	21.9	23.2	23.7
	6H	16.7	17.9	17.2	18.4	18.9	22.4	23.7	22.9	24.1	24.7
	8H	16.7	17.9	17.3	18.4	19.0	23.0	24.2	23.5	24.7	25.2
	12H	16.7	17.9	17.3	18.4	18.9	23.6	24.7	24.1	25.2	25.8
4H	2H	15.9	17.2	16.4	17.7	18.2	18.4	19.7	18.9	20.2	20.7
	3H	17.4	18.5	17.9	19.0	19.6	20.9	22.0	21.4	22.5	23.0
	4H	17.8	18.9	18.4	19.4	19.9	22.1	23.1	22.6	23.6	24.2
	6H	18.1	19.0	18.7	19.6	20.1	23.4	24.3	23.9	24.8	25.4
	8H	18.2	19.0	18.7	19.6	20.2	24.0	24.9	24.6	25.4	26.0
	12H	18.2	18.9	18.8	19.5	20.1	24.7	25.5	25.3	26.1	26.7
8H	4H	18.6	19.4	19.1	20.0	20.6	22.3	23.1	22.8	23.6	24.2
	6H	19.0	19.7	19.6	20.3	20.9	23.7	24.4	24.2	25.0	25.6
	8H	19.1	19.8	19.7	20.4	21.0	24.5	25.1	25.1	25.7	26.3
	12H	19.2	19.8	19.8	20.4	21.0	25.3	25.9	25.9	26.5	27.2
12H	4H	18.8	19.5	19.3	20.1	20.7	22.2	23.0	22.8	23.6	24.2
	6H	19.3	20.0	19.9	20.5	21.2	23.7	24.4	24.3	24.9	25.6
	8H	19.5	20.1	20.1	20.7	21.4	24.5	25.1	25.1	25.7	26.4

Maximum UGR = 27.2

POLAR GRAPH



Maximum Candela = 1407.801 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.)