



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L52-850-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] 06-NOV-2019

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4' LED SURFACE MOUNT LUMINAIRE

[LUMCAT] SLF-4-L52-850-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	5397
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	145
Total Luminaire Watts	37.16
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	7640	6322	6486
55	6467	5418	5754
65	5201	4578	4933
75	3653	3668	4153
85	1116	2951	3633

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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>
<b>0</b>	1742.623	1742.623	1742.623	1742.623	1742.623
<b>5</b>	1761.218	1735.539	1728.455	1726.684	1725.799
<b>10</b>	1724.028	1704.547	1700.120	1704.547	1700.120
<b>15</b>	1670.899	1655.846	1662.930	1670.899	1669.128
<b>20</b>	1592.091	1580.580	1605.373	1619.541	1624.854
<b>25</b>	1505.314	1490.261	1525.680	1558.443	1561.099
<b>30</b>	1399.942	1391.087	1437.132	1484.948	1486.719
<b>35</b>	1281.288	1276.861	1334.417	1396.400	1404.370
<b>40</b>	1155.550	1144.039	1218.419	1293.685	1310.509
<b>45</b>	1011.217	998.820	1097.108	1183.000	1209.564
<b>50</b>	856.258	859.800	976.683	1067.002	1105.078
<b>55</b>	710.154	732.291	853.602	950.119	992.622
<b>60</b>	569.363	609.210	734.948	838.549	875.739
<b>65</b>	436.541	486.128	626.034	723.436	756.199
<b>70</b>	312.574	371.016	518.005	617.179	643.743
<b>75</b>	202.775	264.758	409.977	518.891	537.486
<b>80</b>	107.143	181.523	322.314	430.343	445.396
<b>85</b>	28.335	116.883	246.163	352.421	369.245
<b>90</b>	3.542	73.495	191.263	286.895	308.147
<b>95</b>	0.885	43.388	144.333	227.568	252.362
<b>100</b>	0.000	25.679	104.487	176.210	201.004
<b>105</b>	0.000	17.710	77.037	133.707	160.272
<b>110</b>	0.000	13.282	61.098	108.914	131.051
<b>115</b>	0.000	11.511	46.045	87.662	104.487
<b>120</b>	0.000	10.626	38.961	71.724	84.121
<b>125</b>	0.000	7.084	28.335	56.671	67.296
<b>130</b>	0.000	6.198	23.022	43.388	51.358
<b>135</b>	0.000	4.427	17.710	34.534	39.847
<b>140</b>	0.000	4.427	13.282	26.564	31.877
<b>145</b>	0.000	1.771	11.511	21.251	23.908
<b>150</b>	0.000	0.000	10.626	18.595	21.251
<b>155</b>	0.000	0.000	7.084	13.282	16.824
<b>160</b>	0.000	0.000	6.198	8.855	11.511
<b>165</b>	0.000	0.000	0.000	6.198	7.084
<b>170</b>	0.000	0.000	0.000	0.000	4.427
<b>175</b>	0.000	0.000	0.000	0.000	0.000
<b>180</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	633.86	N.A.	11.70
0-30	1337.53	N.A.	24.80
0-40	2173.53	N.A.	40.30
0-60	3779.87	N.A.	70.00
0-80	4801.24	N.A.	89.00
0-90	5056.58	N.A.	93.70
10-90	4892.01	N.A.	90.60
20-40	1539.67	N.A.	28.50
20-50	2387.11	N.A.	44.20
40-70	2210.28	N.A.	41.00
60-80	1021.36	N.A.	18.90
70-80	417.43	N.A.	7.70
80-90	255.35	N.A.	4.70
90-110	234.26	N.A.	4.30
90-120	284.44	N.A.	5.30
90-130	313.33	N.A.	5.80
90-150	336.12	N.A.	6.20
90-180	340.42	N.A.	6.30
110-180	106.16	N.A.	2.00
0-180	5397.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	164.58
10-20	469.28
20-30	703.67
30-40	836.00
40-50	847.44
50-60	758.90
60-70	603.93
70-80	417.43
80-90	255.35
90-100	149.98
100-110	84.28
110-120	50.18
120-130	28.88
130-140	15.17
140-150	7.63
150-160	3.47
160-170	0.81
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	16.7	18.2	17.2	18.7	19.1	18.8	20.4	19.3	20.8	21.3
	3H	18.2	19.6	18.7	20.0	20.5	21.1	22.5	21.6	23.0	23.5
	4H	18.7	20.0	19.2	20.5	21.0	22.2	23.5	22.7	24.0	24.5
	6H	19.0	20.2	19.5	20.7	21.2	23.2	24.5	23.7	24.9	25.5
	8H	19.1	20.2	19.6	20.7	21.3	23.8	25.0	24.3	25.5	26.0
	12H	19.1	20.2	19.6	20.7	21.3	24.4	25.5	24.9	26.0	26.6

UGR Viewed Endwise

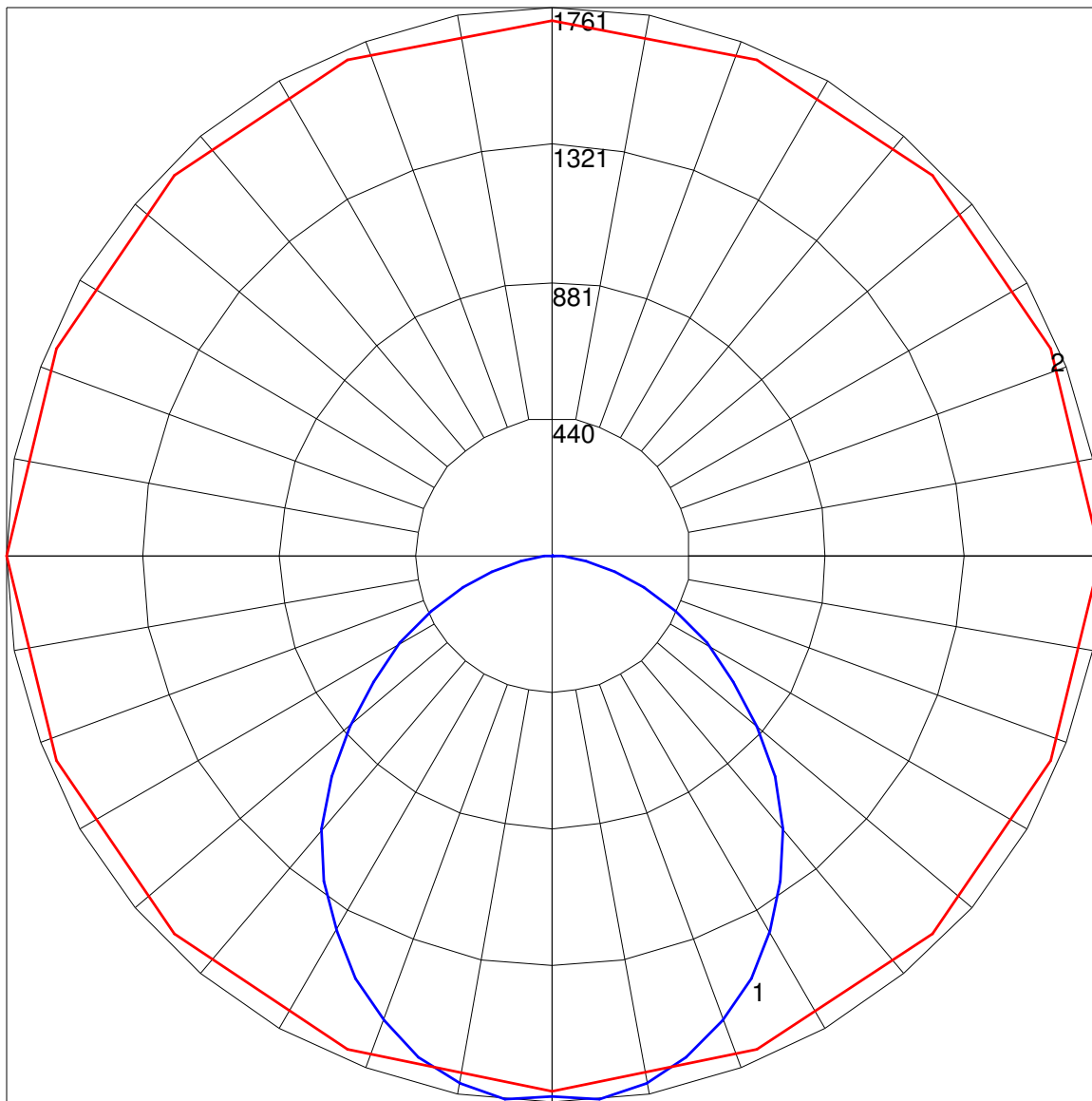
4H	2H	17.5	18.8	17.9	19.2	19.8	19.2	20.5	19.7	21.0	21.5
	3H	19.1	20.3	19.6	20.8	21.3	21.7	22.8	22.2	23.3	23.8
	4H	19.7	20.7	20.2	21.3	21.8	22.9	23.9	23.4	24.4	25.0
	6H	20.1	21.0	20.7	21.6	22.2	24.2	25.1	24.7	25.6	26.2
	8H	20.3	21.1	20.8	21.6	22.2	24.8	25.7	25.4	26.2	26.8
	12H	20.3	21.1	20.9	21.7	22.3	25.5	26.3	26.1	26.9	27.5

8H	4H	20.2	21.1	20.8	21.6	22.2	23.1	23.9	23.6	24.4	25.0
	6H	20.8	21.5	21.4	22.1	22.7	24.5	25.2	25.0	25.8	26.4
	8H	21.0	21.6	21.6	22.2	22.8	25.3	25.9	25.9	26.5	27.1
	12H	21.1	21.7	21.7	22.3	23.0	26.1	26.7	26.7	27.3	28.0

12H	4H	20.3	21.1	20.9	21.7	22.3	23.1	23.8	23.6	24.4	25.0
	6H	21.0	21.6	21.6	22.2	22.9	24.5	25.2	25.1	25.7	26.4
	8H	21.2	21.8	21.8	22.4	23.1	25.3	25.9	25.9	26.5	27.2

Maximum UGR = 28.0

POLAR GRAPH



Maximum Candela = 1761.218 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.)