



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L52-835-HIA-(L37)-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 APRIL 2020

[MANUFAC] WILLIAMS INDOOR

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

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

[LUMCAT] SLF-4-L52-835-HIA-(L37)-DIM-UNV

[MORE] WHITE FLAT REFLECTOR w/FROSTED ACRYLIC LENS

[LAMPCAT] HLM 80 CRI 3500K 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	3780
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	135
Total Luminaire Watts	28
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	5351	4428	4543
55	4529	3795	4030
65	3643	3207	3455
75	2559	2569	2908
85	782	2067	2545

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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>	1220.515	1220.515	1220.515	1220.515	1220.515
<b>5</b>	1233.539	1215.554	1210.592	1209.352	1208.732
<b>10</b>	1207.491	1193.847	1190.747	1193.847	1190.747
<b>15</b>	1170.281	1159.738	1164.699	1170.281	1169.040
<b>20</b>	1115.085	1107.022	1124.387	1134.310	1138.031
<b>25</b>	1054.307	1043.764	1068.571	1091.518	1093.378
<b>30</b>	980.505	974.304	1006.553	1040.043	1041.283
<b>35</b>	897.401	894.300	934.612	978.025	983.606
<b>40</b>	809.336	801.273	853.368	906.084	917.867
<b>45</b>	708.246	699.564	768.404	828.561	847.167
<b>50</b>	599.715	602.195	684.059	747.317	773.985
<b>55</b>	497.385	512.889	597.854	665.454	695.222
<b>60</b>	398.776	426.684	514.750	587.311	613.359
<b>65</b>	305.749	340.479	438.468	506.687	529.634
<b>70</b>	218.924	259.856	362.806	432.266	450.871
<b>75</b>	142.021	185.434	287.144	363.426	376.450
<b>80</b>	75.042	127.137	225.746	301.408	311.951
<b>85</b>	19.846	81.864	172.410	246.832	258.615
<b>90</b>	2.481	51.475	133.959	200.938	215.823
<b>95</b>	0.620	30.389	101.089	159.386	176.751
<b>100</b>	0.000	17.985	73.181	123.416	140.781
<b>105</b>	0.000	12.404	53.956	93.647	112.253
<b>110</b>	0.000	9.303	42.792	76.282	91.787
<b>115</b>	0.000	8.062	32.249	61.398	73.181
<b>120</b>	0.000	7.442	27.288	50.235	58.917
<b>125</b>	0.000	4.961	19.846	39.692	47.134
<b>130</b>	0.000	4.341	16.125	30.389	35.970
<b>135</b>	0.000	3.101	12.404	24.187	27.908
<b>140</b>	0.000	3.101	9.303	18.605	22.326
<b>145</b>	0.000	1.240	8.062	14.884	16.745
<b>150</b>	0.000	0.000	7.442	13.024	14.884
<b>155</b>	0.000	0.000	4.961	9.303	11.783
<b>160</b>	0.000	0.000	4.341	6.202	8.062
<b>165</b>	0.000	0.000	0.000	4.341	4.961
<b>170</b>	0.000	0.000	0.000	0.000	3.101
<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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Zone	Lumens	%Lamp	%Fixt
0-20	443.95	N.A.	11.70
0-30	936.79	N.A.	24.80
0-40	1522.32	N.A.	40.30
0-60	2647.39	N.A.	70.00
0-80	3362.74	N.A.	89.00
0-90	3541.58	N.A.	93.70
10-90	3426.31	N.A.	90.60
20-40	1078.37	N.A.	28.50
20-50	1671.91	N.A.	44.20
40-70	1548.05	N.A.	41.00
60-80	715.35	N.A.	18.90
70-80	292.36	N.A.	7.70
80-90	178.84	N.A.	4.70
90-110	164.07	N.A.	4.30
90-120	199.22	N.A.	5.30
90-130	219.45	N.A.	5.80
90-150	235.42	N.A.	6.20
90-180	238.43	N.A.	6.30
110-180	74.35	N.A.	2.00
0-180	3780.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	115.27
10-20	328.68
20-30	492.85
30-40	585.53
40-50	593.54
50-60	531.53
60-70	422.99
70-80	292.36
80-90	178.84
90-100	105.04
100-110	59.03
110-120	35.15
120-130	20.23
130-140	10.62
140-150	5.34
150-160	2.43
160-170	0.56
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

X=2H	Y=2H	14.4	16.0	14.9	16.4	16.9	17.5	19.1	18.0	19.5	20.0
	3H	15.7	17.1	16.1	17.5	18.0	19.8	21.2	20.3	21.7	22.2
	4H	16.0	17.3	16.5	17.8	18.3	20.9	22.2	21.4	22.7	23.2
	6H	16.2	17.4	16.7	17.9	18.4	21.9	23.2	22.4	23.6	24.2
	8H	16.2	17.4	16.8	17.9	18.5	22.5	23.7	23.0	24.2	24.7
	12H	16.2	17.4	16.8	17.9	18.4	23.1	24.2	23.6	24.7	25.3

### UGR Viewed Endwise

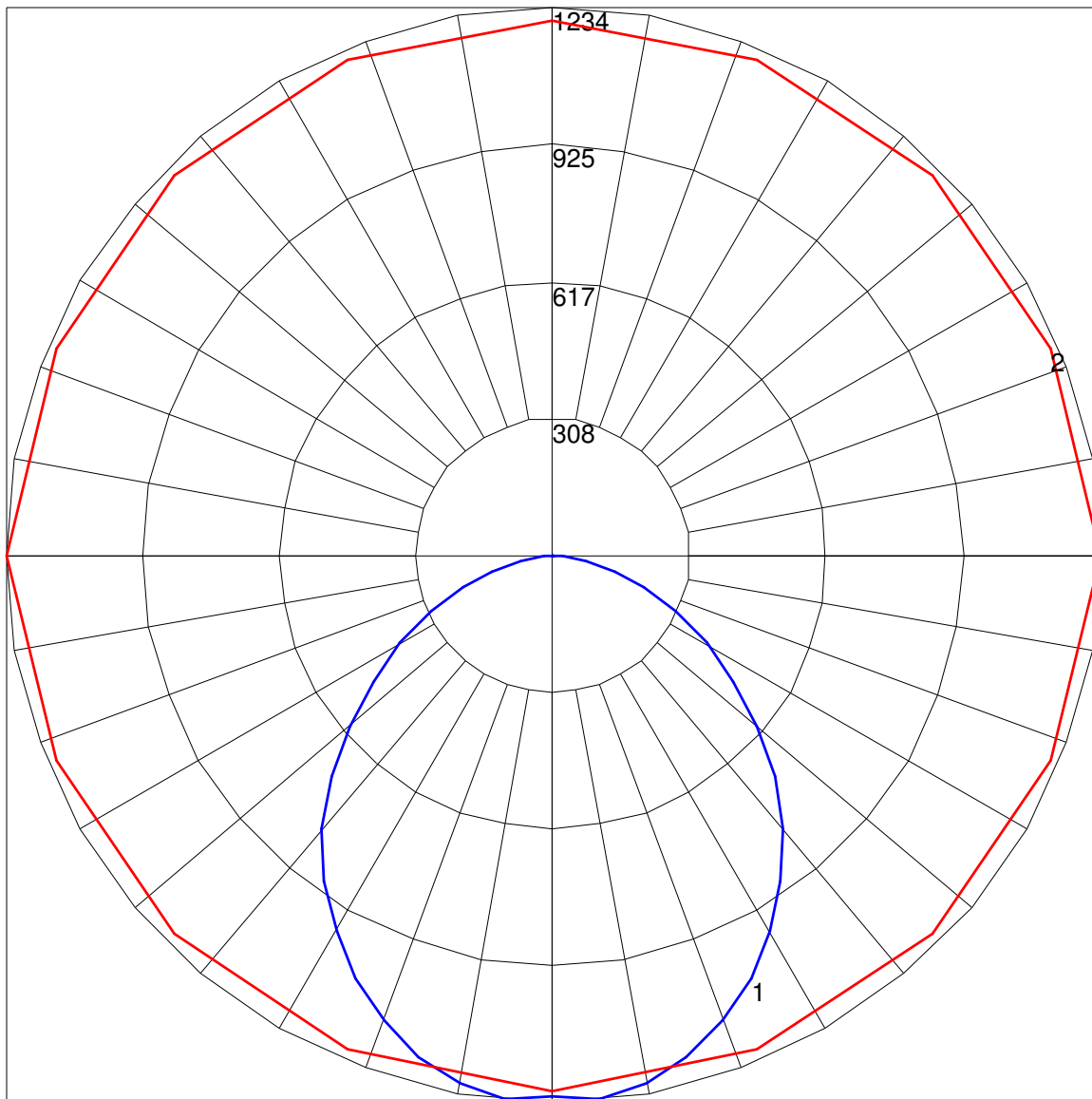
4H	2H	15.4	16.7	15.9	17.2	17.7	17.9	19.2	18.4	19.7	20.2
	3H	16.9	18.0	17.4	18.5	19.1	20.4	21.5	20.9	22.0	22.5
	4H	17.3	18.4	17.9	18.9	19.4	21.6	22.6	22.1	23.1	23.7
	6H	17.6	18.5	18.2	19.1	19.6	22.9	23.8	23.4	24.3	24.9
	8H	17.7	18.5	18.2	19.1	19.7	23.5	24.4	24.1	24.9	25.5
	12H	17.7	18.4	18.3	19.0	19.6	24.2	25.0	24.8	25.6	26.2

8H	4H	18.1	18.9	18.6	19.5	20.1	21.8	22.6	22.3	23.1	23.7
	6H	18.5	19.2	19.1	19.8	20.4	23.2	23.9	23.7	24.5	25.1
	8H	18.6	19.3	19.2	19.9	20.5	24.0	24.6	24.6	25.2	25.8
	12H	18.7	19.3	19.3	19.9	20.5	24.8	25.4	25.4	26.0	26.7

12H	4H	18.3	19.0	18.8	19.6	20.2	21.7	22.5	22.3	23.1	23.7
	6H	18.8	19.5	19.4	20.0	20.7	23.2	23.9	23.8	24.4	25.1
	8H	19.0	19.6	19.6	20.2	20.9	24.0	24.6	24.6	25.2	25.9

Maximum UGR = 26.7

POLAR GRAPH



Maximum Candela = 1233.539 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.)