



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L52-835-HIA-(L40)-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] 03-01-2022

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4' LED SURFACE MOUNT LUMINAIRE

[LUMCAT] SLF-4-L52-835-HIA-(L40)-DIM-UNV

[MORE] WITH 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	4004
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	140
Total Luminaire Watts	28.5
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	5668	4690	4812
55	4798	4020	4269
65	3858	3397	3660
75	2710	2721	3081
85	828	2189	2695

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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	1292.842	1292.842	1292.842	1292.842	1292.842
5	1306.638	1287.586	1282.331	1281.017	1280.360
10	1279.046	1264.594	1261.309	1264.594	1261.309
15	1239.630	1228.463	1233.718	1239.630	1238.317
20	1181.164	1172.623	1191.017	1201.528	1205.470
25	1116.784	1105.616	1131.894	1156.200	1158.171
30	1038.609	1032.040	1066.200	1101.675	1102.989
35	950.580	947.296	989.996	1035.982	1041.894
40	857.296	848.756	903.938	959.777	972.259
45	750.216	741.019	813.939	877.661	897.369
50	635.253	637.881	724.596	791.603	819.851
55	526.859	543.283	633.282	704.888	736.421
60	422.407	451.969	545.253	622.114	649.706
65	323.867	360.656	464.451	536.713	561.020
70	231.897	275.254	384.305	457.882	477.589
75	150.437	196.423	304.159	384.962	398.758
80	79.489	134.671	239.123	319.269	330.437
85	21.022	86.715	182.627	261.459	273.941
90	2.628	54.525	141.897	212.846	228.612
95	0.657	32.190	107.080	168.831	187.226
100	0.000	19.051	77.518	130.729	149.124
105	0.000	13.139	57.153	99.197	118.905
110	0.000	9.854	45.328	80.803	97.226
115	0.000	8.540	34.160	65.036	77.518
120	0.000	7.883	28.905	53.211	62.409
125	0.000	5.255	21.022	42.044	49.927
130	0.000	4.599	17.080	32.190	38.102
135	0.000	3.285	13.139	25.620	29.562
140	0.000	3.285	9.854	19.708	23.650
145	0.000	1.314	8.540	15.766	17.737
150	0.000	0.000	7.883	13.796	15.766
155	0.000	0.000	5.255	9.854	12.482
160	0.000	0.000	4.599	6.569	8.540
165	0.000	0.000	0.000	4.599	5.255
170	0.000	0.000	0.000	0.000	3.285
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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Zone	Lumens	%Lamp	%Fixt
0-20	470.26	N.A.	11.70
0-30	992.31	N.A.	24.80
0-40	1612.53	N.A.	40.30
0-60	2804.27	N.A.	70.00
0-80	3562.01	N.A.	89.00
0-90	3751.45	N.A.	93.70
10-90	3629.35	N.A.	90.60
20-40	1142.27	N.A.	28.50
20-50	1770.99	N.A.	44.20
40-70	1639.79	N.A.	41.00
60-80	757.74	N.A.	18.90
70-80	309.69	N.A.	7.70
80-90	189.44	N.A.	4.70
90-110	173.80	N.A.	4.30
90-120	211.03	N.A.	5.30
90-130	232.45	N.A.	5.80
90-150	249.37	N.A.	6.20
90-180	252.56	N.A.	6.30
110-180	78.76	N.A.	2.00
0-180	4004.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	122.10
10-20	348.16
20-30	522.05
30-40	620.22
40-50	628.71
50-60	563.03
60-70	448.05
70-80	309.69
80-90	189.44
90-100	111.27
100-110	62.53
110-120	37.23
120-130	21.43
130-140	11.25
140-150	5.66
150-160	2.58
160-170	0.60
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	14.6	16.2	15.1	16.6	17.1	17.7	19.3	18.2	19.7	20.2
	3H	15.9	17.3	16.3	17.7	18.2	20.0	21.4	20.5	21.9	22.4
	4H	16.2	17.5	16.7	18.0	18.5	21.1	22.4	21.6	22.9	23.4
	6H	16.4	17.6	16.9	18.1	18.6	22.1	23.4	22.6	23.8	24.4
	8H	16.4	17.6	17.0	18.1	18.7	22.7	23.9	23.2	24.4	24.9
	12H	16.4	17.6	17.0	18.1	18.6	23.3	24.4	23.8	24.9	25.5

### UGR Viewed Endwise

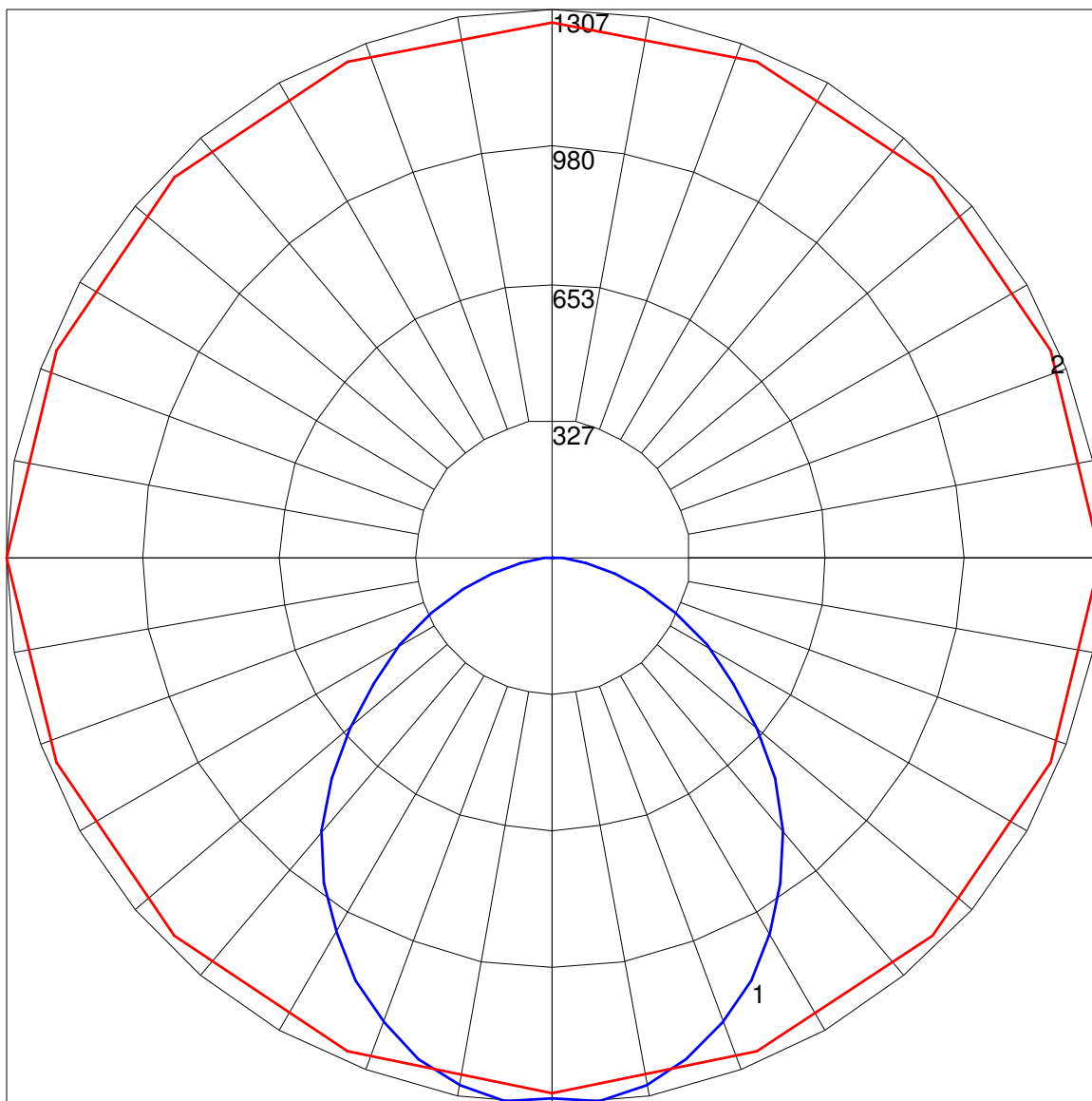
4H	2H	15.6	16.9	16.1	17.4	17.9	18.1	19.4	18.6	19.9	20.4
	3H	17.1	18.2	17.6	18.7	19.3	20.6	21.7	21.1	22.2	22.7
	4H	17.5	18.6	18.1	19.1	19.6	21.8	22.8	22.3	23.3	23.9
	6H	17.8	18.7	18.4	19.3	19.8	23.1	24.0	23.6	24.5	25.1
	8H	17.9	18.7	18.4	19.3	19.9	23.7	24.6	24.3	25.1	25.7
	12H	17.9	18.6	18.5	19.2	19.8	24.4	25.2	25.0	25.8	26.4

8H	4H	18.3	19.1	18.8	19.7	20.3	22.0	22.8	22.5	23.3	23.9
	6H	18.7	19.4	19.3	20.0	20.6	23.4	24.1	23.9	24.7	25.3
	8H	18.8	19.5	19.4	20.1	20.7	24.2	24.8	24.8	25.4	26.0
	12H	18.9	19.5	19.5	20.1	20.7	25.0	25.6	25.6	26.2	26.9

12H	4H	18.5	19.2	19.0	19.8	20.4	21.9	22.7	22.5	23.3	23.9
	6H	19.0	19.7	19.6	20.2	20.9	23.4	24.1	24.0	24.6	25.3
	8H	19.2	19.8	19.8	20.4	21.1	24.2	24.8	24.8	25.4	26.1

Maximum UGR = 26.9

POLAR GRAPH



Maximum Candela = 1306.638 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.)