



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L52-835-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] 03-20-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4' LED SURFACE MOUNT LUMINAIRE

[LUMCAT] SLF-4-L52-835-HIA-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	5092
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	137
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	7208	5964	6120
55	6101	5112	5429
65	4907	4320	4654
75	3447	3461	3918
85	1053	2784	3428

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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	1644.144	1644.144	1644.144	1644.144	1644.144
5	1661.688	1637.460	1630.777	1629.106	1628.270
10	1626.600	1608.220	1604.043	1608.220	1604.043
15	1576.473	1562.271	1568.954	1576.473	1574.802
20	1502.119	1491.258	1514.651	1528.018	1533.030
25	1420.246	1406.044	1439.461	1470.372	1472.879
30	1320.829	1312.475	1355.917	1401.031	1402.702
35	1208.880	1204.703	1259.006	1317.487	1325.006
40	1090.248	1079.387	1149.564	1220.576	1236.450
45	954.071	942.375	1035.109	1116.146	1141.210
50	807.869	811.211	921.489	1006.704	1042.628
55	670.022	690.908	805.363	896.426	936.527
60	537.187	574.782	693.414	791.161	826.249
65	411.871	458.656	590.655	682.554	713.465
70	294.910	350.049	488.732	582.301	607.364
75	191.316	249.796	386.808	489.567	507.111
80	101.088	171.265	304.100	406.023	420.226
85	26.734	110.278	232.252	332.505	348.378
90	3.342	69.341	180.455	270.682	290.733
95	0.835	40.937	136.177	214.708	238.100
100	0.000	24.228	98.582	166.252	189.645
105	0.000	16.709	72.683	126.151	151.214
110	0.000	12.532	57.645	102.759	123.645
115	0.000	10.861	43.443	82.708	98.582
120	0.000	10.025	36.759	67.671	79.367
125	0.000	6.684	26.734	53.468	63.493
130	0.000	5.848	21.721	40.937	48.455
135	0.000	4.177	16.709	32.582	37.595
140	0.000	4.177	12.532	25.063	30.076
145	0.000	1.671	10.861	20.051	22.557
150	0.000	0.000	10.025	17.544	20.051
155	0.000	0.000	6.684	12.532	15.873
160	0.000	0.000	5.848	8.354	10.861
165	0.000	0.000	0.000	5.848	6.684
170	0.000	0.000	0.000	0.000	4.177
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	598.04	N.A.	11.70
0-30	1261.95	N.A.	24.80
0-40	2050.7	N.A.	40.30
0-60	3566.27	N.A.	70.00
0-80	4529.91	N.A.	89.00
0-90	4770.83	N.A.	93.70
10-90	4615.55	N.A.	90.60
20-40	1452.66	N.A.	28.50
20-50	2252.21	N.A.	44.20
40-70	2085.37	N.A.	41.00
60-80	963.64	N.A.	18.90
70-80	393.84	N.A.	7.70
80-90	240.92	N.A.	4.70
90-110	221.02	N.A.	4.30
90-120	268.37	N.A.	5.30
90-130	295.62	N.A.	5.80
90-150	317.13	N.A.	6.20
90-180	321.18	N.A.	6.30
110-180	100.16	N.A.	2.00
0-180	5092.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	155.28
10-20	442.76
20-30	663.91
30-40	788.76
40-50	799.55
50-60	716.01
60-70	569.80
70-80	393.84
80-90	240.92
90-100	141.50
100-110	79.52
110-120	47.34
120-130	27.25
130-140	14.31
140-150	7.20
150-160	3.28
160-170	0.76
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**

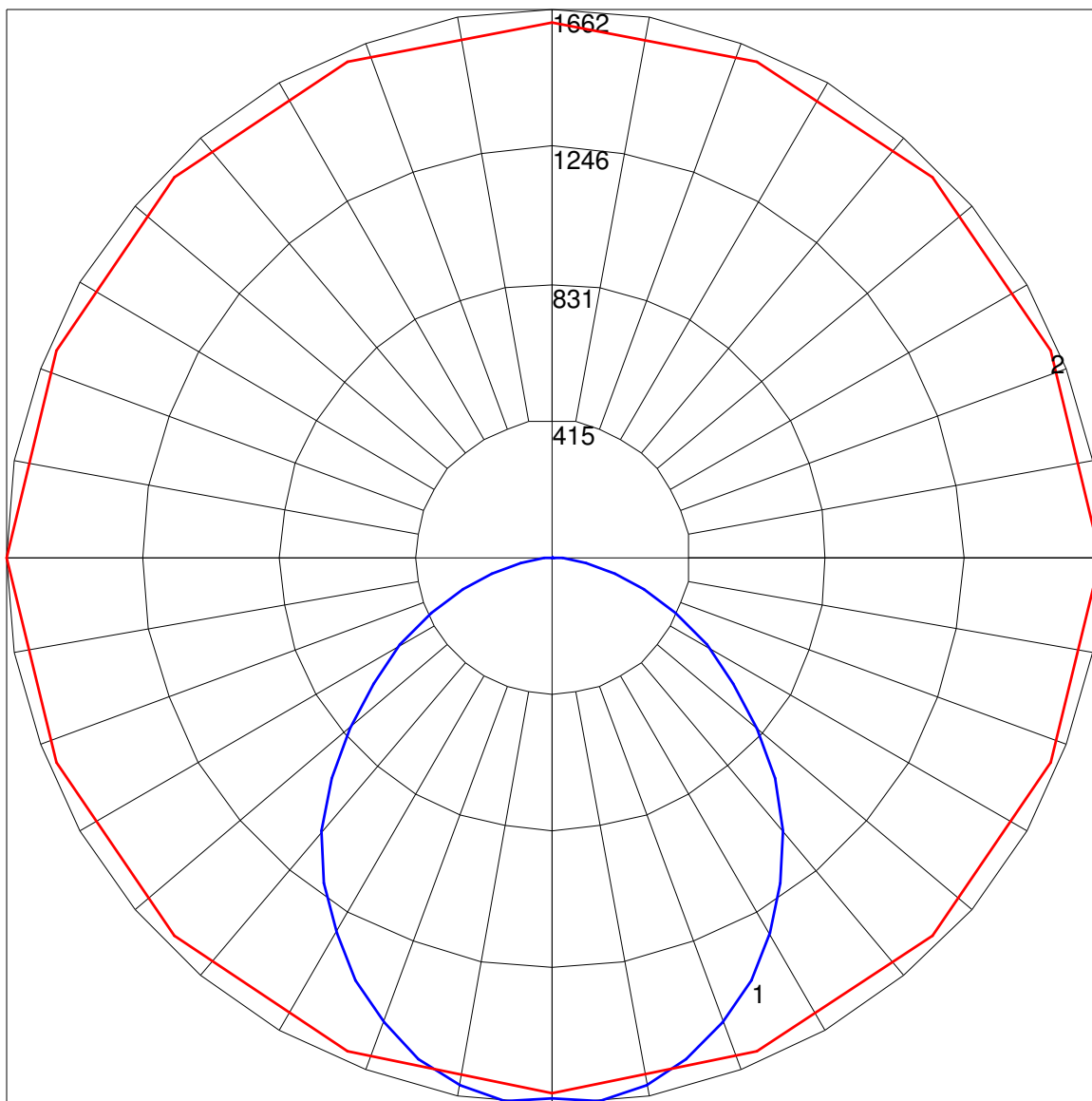
Reflectances

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	15.5	17.1	16.0	17.5	18.0	18.6	20.2	19.1	20.6	21.1
	3H	16.8	18.2	17.2	18.6	19.1	20.9	22.3	21.4	22.8	23.3
	4H	17.1	18.4	17.6	18.9	19.4	22.0	23.3	22.5	23.8	24.3
	6H	17.3	18.5	17.8	19.0	19.5	23.0	24.3	23.5	24.7	25.3
	8H	17.3	18.5	17.9	19.0	19.6	23.6	24.8	24.1	25.3	25.8
	12H	17.3	18.5	17.9	19.0	19.5	24.2	25.3	24.7	25.8	26.4
4H	2H	16.5	17.9	17.0	18.3	18.8	19.0	20.3	19.5	20.8	21.3
	3H	18.0	19.1	18.5	19.6	20.2	21.5	22.6	22.0	23.1	23.6
	4H	18.4	19.5	19.0	20.0	20.5	22.7	23.7	23.2	24.2	24.8
	6H	18.7	19.6	19.3	20.2	20.7	24.0	24.9	24.5	25.4	26.0
	8H	18.8	19.6	19.3	20.2	20.8	24.6	25.5	25.2	26.0	26.6
	12H	18.8	19.5	19.4	20.1	20.7	25.3	26.1	25.9	26.7	27.3
8H	4H	19.2	20.0	19.7	20.6	21.2	22.9	23.7	23.4	24.2	24.8
	6H	19.6	20.3	20.2	20.9	21.5	24.3	25.0	24.8	25.6	26.2
	8H	19.7	20.4	20.3	21.0	21.6	25.1	25.7	25.7	26.3	26.9
	12H	19.8	20.4	20.4	21.0	21.6	25.9	26.5	26.5	27.1	27.8
12H	4H	19.4	20.1	19.9	20.7	21.3	22.9	23.6	23.4	24.2	24.8
	6H	19.9	20.6	20.5	21.1	21.8	24.3	25.0	24.9	25.5	26.2
	8H	20.1	20.7	20.7	21.3	22.0	25.1	25.7	25.7	26.3	27.0

Maximum UGR = 27.8

POLAR GRAPH



Maximum Candela = 1661.688 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.)