



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] 01-27-2023

[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	4084
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	31.9
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	5781	4784	4908
55	4893	4100	4354
65	3935	3465	3733
75	2764	2775	3142
85	844	2233	2749

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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	1318.673	1318.673	1318.673	1318.673	1318.673
5	1332.744	1313.313	1307.952	1306.612	1305.942
10	1304.602	1289.861	1286.510	1289.861	1286.510
15	1264.398	1253.007	1258.368	1264.398	1263.058
20	1204.763	1196.052	1214.814	1225.535	1229.555
25	1139.098	1127.707	1154.509	1179.301	1181.311
30	1059.361	1052.660	1087.503	1123.686	1125.026
35	969.573	966.223	1009.777	1056.681	1062.711
40	874.425	865.714	921.999	978.954	991.685
45	765.206	755.825	830.201	895.197	915.298
50	647.946	650.626	739.073	807.419	836.232
55	537.386	554.137	645.935	718.972	751.134
60	430.847	461.000	556.148	634.544	662.687
65	330.338	367.862	473.731	547.437	572.229
70	236.530	280.754	391.984	467.030	487.132
75	153.443	200.347	310.237	392.654	406.725
80	81.077	137.362	243.901	325.648	337.039
85	21.442	88.448	186.276	266.683	279.414
90	2.680	55.615	144.732	217.099	233.180
95	0.670	32.833	109.219	172.205	190.966
100	0.000	19.432	79.067	133.341	152.103
105	0.000	13.401	58.295	101.179	121.280
110	0.000	10.051	46.234	82.417	99.168
115	0.000	8.711	34.843	66.336	79.067
120	0.000	8.041	29.483	54.275	63.655
125	0.000	5.360	21.442	42.884	50.924
130	0.000	4.690	17.421	32.833	38.863
135	0.000	3.350	13.401	26.132	30.153
140	0.000	3.350	10.051	20.102	24.122
145	0.000	1.340	8.711	16.081	18.092
150	0.000	0.000	8.041	14.071	16.081
155	0.000	0.000	5.360	10.051	12.731
160	0.000	0.000	4.690	6.701	8.711
165	0.000	0.000	0.000	4.690	5.360
170	0.000	0.000	0.000	0.000	3.350
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	479.65	N.A.	11.70
0-30	1012.13	N.A.	24.80
0-40	1644.75	N.A.	40.30
0-60	2860.3	N.A.	70.00
0-80	3633.18	N.A.	89.00
0-90	3826.41	N.A.	93.70
10-90	3701.87	N.A.	90.60
20-40	1165.1	N.A.	28.50
20-50	1806.37	N.A.	44.20
40-70	1672.55	N.A.	41.00
60-80	772.88	N.A.	18.90
70-80	315.88	N.A.	7.70
80-90	193.22	N.A.	4.70
90-110	177.27	N.A.	4.30
90-120	215.24	N.A.	5.30
90-130	237.10	N.A.	5.80
90-150	254.35	N.A.	6.20
90-180	257.60	N.A.	6.30
110-180	80.33	N.A.	2.00
0-180	4084.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	124.54
10-20	355.12
20-30	532.48
30-40	632.62
40-50	641.27
50-60	574.27
60-70	457.01
70-80	315.88
80-90	193.22
90-100	113.49
100-110	63.78
110-120	37.97
120-130	21.86
130-140	11.48
140-150	5.77
150-160	2.63
160-170	0.61
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	14.7	16.3	15.2	16.7	17.2	17.8	19.4	18.3	19.8	20.3
	3H	16.0	17.4	16.4	17.8	18.3	20.1	21.5	20.6	22.0	22.5
	4H	16.3	17.6	16.8	18.1	18.6	21.2	22.5	21.7	23.0	23.5
	6H	16.5	17.7	17.0	18.2	18.7	22.2	23.5	22.7	23.9	24.5
	8H	16.5	17.7	17.1	18.2	18.8	22.8	24.0	23.3	24.5	25.0
	12H	16.5	17.7	17.1	18.2	18.7	23.4	24.5	23.9	25.0	25.6

UGR Viewed Endwise

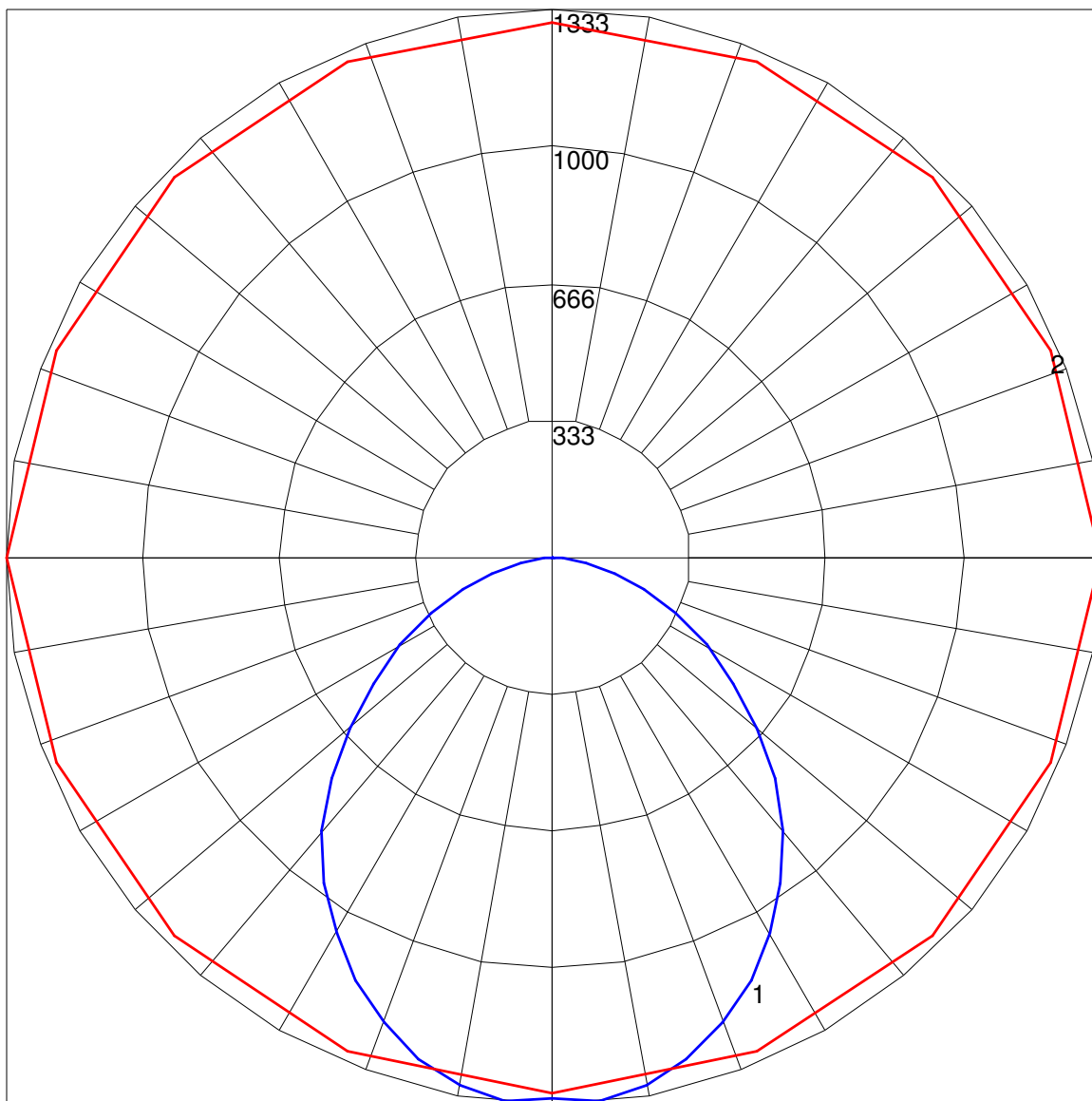
4H	2H	15.7	17.0	16.2	17.5	18.0	18.2	19.5	18.7	20.0	20.5
	3H	17.2	18.3	17.7	18.8	19.4	20.7	21.8	21.2	22.3	22.8
	4H	17.6	18.7	18.2	19.2	19.7	21.9	22.9	22.4	23.4	24.0
	6H	17.9	18.8	18.5	19.4	19.9	23.2	24.1	23.7	24.6	25.2
	8H	18.0	18.8	18.5	19.4	20.0	23.8	24.7	24.4	25.2	25.8
	12H	18.0	18.7	18.6	19.3	19.9	24.5	25.3	25.1	25.9	26.5

8H	4H	18.4	19.2	18.9	19.8	20.4	22.1	22.9	22.6	23.4	24.0
	6H	18.8	19.5	19.4	20.1	20.7	23.5	24.2	24.0	24.8	25.4
	8H	18.9	19.6	19.5	20.2	20.8	24.3	24.9	24.9	25.5	26.1
	12H	19.0	19.6	19.6	20.2	20.8	25.1	25.7	25.7	26.3	27.0

12H	4H	18.6	19.3	19.1	19.9	20.5	22.0	22.8	22.6	23.4	24.0
	6H	19.1	19.8	19.7	20.3	21.0	23.5	24.2	24.1	24.7	25.4
	8H	19.3	19.9	19.9	20.5	21.2	24.3	24.9	24.9	25.5	26.2

Maximum UGR = 27.0

POLAR GRAPH



Maximum Candela = 1332.744 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.)