



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L52-827-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] 07-NOV-2019

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4' LED SURFACE MOUNT LUMINAIRE

[LUMCAT] SLF-4-L52-827-HIA-DIM-UNV

[MORE] WHITE FLAT REFLECTOR w/FROSTED ACRYLIC LENS

[LAMPCAT] HLM 80 CRI 2700K 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	4939
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
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	6992	5785	5936
55	5918	4959	5266
65	4759	4190	4514
75	3343	3357	3800
85	1021	2700	3325

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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	1594.742	1594.742	1594.742	1594.742	1594.742
5	1611.759	1588.259	1581.777	1580.156	1579.346
10	1577.725	1559.898	1555.846	1559.898	1555.846
15	1529.105	1515.329	1521.812	1529.105	1527.484
20	1456.985	1446.450	1469.140	1482.105	1486.967
25	1377.572	1363.796	1396.210	1426.192	1428.623
30	1281.142	1273.039	1315.176	1358.934	1360.555
35	1172.557	1168.505	1221.177	1277.901	1285.194
40	1057.489	1046.955	1115.023	1183.901	1199.298
45	925.404	914.059	1004.007	1082.609	1106.920
50	783.595	786.837	893.801	976.455	1011.300
55	649.890	670.148	781.164	869.491	908.387
60	521.046	557.511	672.579	767.389	801.423
65	399.496	444.875	572.908	662.045	692.027
70	286.049	339.531	474.047	564.804	589.115
75	185.567	242.291	375.186	474.857	491.874
80	98.051	166.119	294.962	393.823	407.599
85	25.931	106.964	225.274	322.514	337.910
90	3.241	67.258	175.033	262.549	281.997
95	0.810	39.706	132.085	208.256	230.946
100	0.000	23.500	95.620	161.257	183.946
105	0.000	16.207	70.499	122.361	146.671
110	0.000	12.155	55.913	99.671	119.930
115	0.000	10.534	42.137	80.223	95.620
120	0.000	9.724	35.655	65.637	76.982
125	0.000	6.483	25.931	51.862	61.586
130	0.000	5.672	21.069	39.706	47.000
135	0.000	4.052	16.207	31.603	36.465
140	0.000	4.052	12.155	24.310	29.172
145	0.000	1.621	10.534	19.448	21.879
150	0.000	0.000	9.724	17.017	19.448
155	0.000	0.000	6.483	12.155	15.396
160	0.000	0.000	5.672	8.103	10.534
165	0.000	0.000	0.000	5.672	6.483
170	0.000	0.000	0.000	0.000	4.052
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	580.07	N.A.	11.70
0-30	1224.03	N.A.	24.80
0-40	1989.08	N.A.	40.30
0-60	3459.11	N.A.	70.00
0-80	4393.8	N.A.	89.00
0-90	4627.48	N.A.	93.70
10-90	4476.87	N.A.	90.60
20-40	1409.01	N.A.	28.50
20-50	2184.54	N.A.	44.20
40-70	2022.71	N.A.	41.00
60-80	934.69	N.A.	18.90
70-80	382.01	N.A.	7.70
80-90	233.68	N.A.	4.70
90-110	214.38	N.A.	4.30
90-120	260.30	N.A.	5.30
90-130	286.74	N.A.	5.80
90-150	307.60	N.A.	6.20
90-180	311.53	N.A.	6.30
110-180	97.15	N.A.	2.00
0-180	4939.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	150.61
10-20	429.46
20-30	643.96
30-40	765.06
40-50	775.53
50-60	694.50
60-70	552.68
70-80	382.01
80-90	233.68
90-100	137.25
100-110	77.13
110-120	45.92
120-130	26.43
130-140	13.88
140-150	6.98
150-160	3.18
160-170	0.74
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

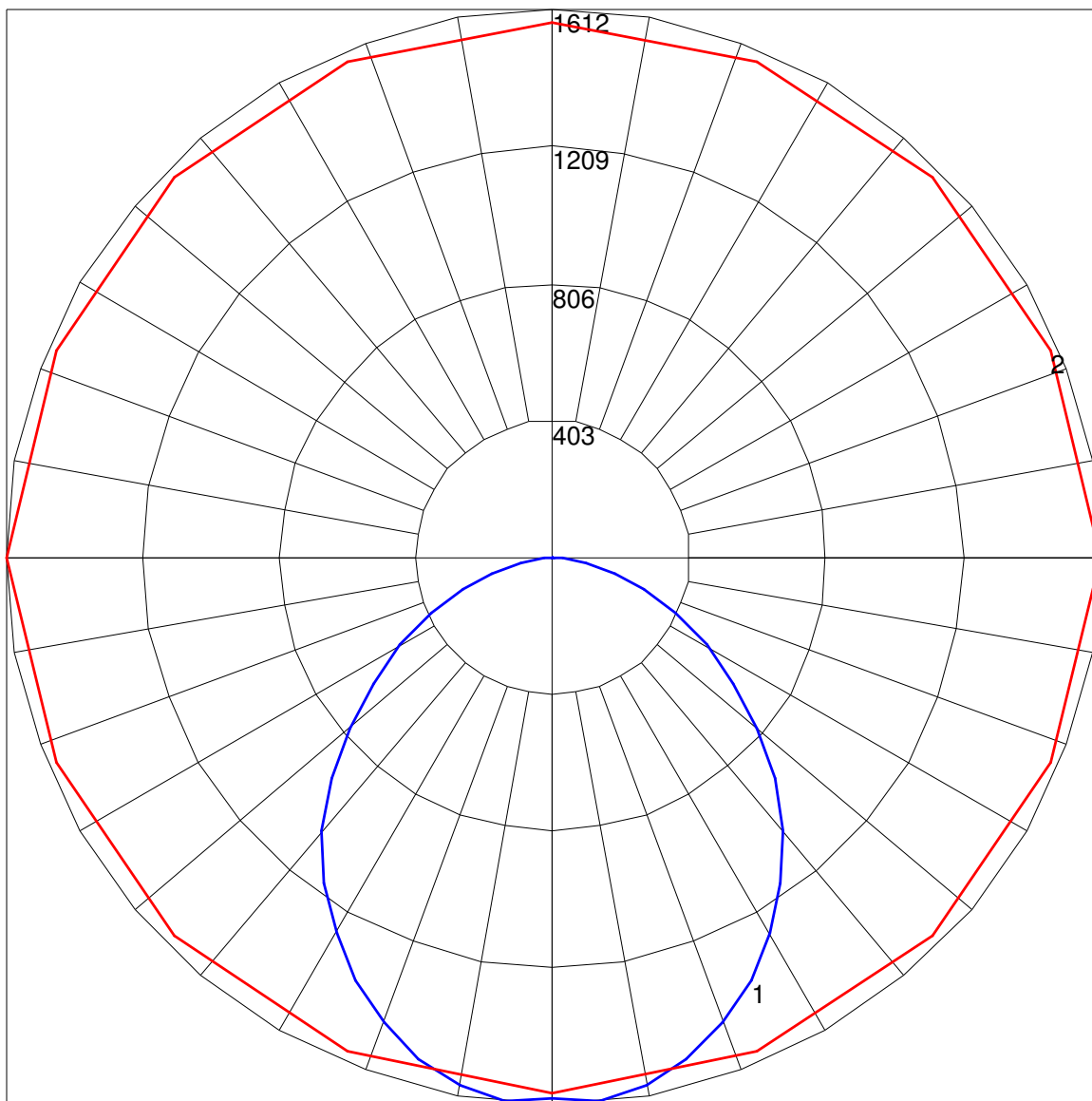
Reflectances

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	16.3	17.8	16.8	18.3	18.7	18.4	20.0	18.9	20.4	20.9
	3H	17.8	19.2	18.3	19.6	20.1	20.7	22.1	21.2	22.6	23.1
	4H	18.3	19.6	18.8	20.1	20.6	21.8	23.1	22.3	23.6	24.1
	6H	18.6	19.8	19.1	20.3	20.8	22.8	24.1	23.3	24.5	25.1
	8H	18.7	19.8	19.2	20.3	20.9	23.4	24.6	23.9	25.1	25.6
	12H	18.7	19.8	19.2	20.3	20.9	24.0	25.1	24.5	25.6	26.2
4H	2H	17.1	18.4	17.5	18.8	19.4	18.8	20.1	19.3	20.6	21.1
	3H	18.7	19.9	19.2	20.4	20.9	21.3	22.4	21.8	22.9	23.4
	4H	19.3	20.3	19.8	20.9	21.4	22.5	23.5	23.0	24.0	24.6
	6H	19.7	20.6	20.3	21.2	21.8	23.8	24.7	24.3	25.2	25.8
	8H	19.9	20.7	20.4	21.2	21.8	24.4	25.3	25.0	25.8	26.4
	12H	19.9	20.7	20.5	21.3	21.9	25.1	25.9	25.7	26.5	27.1
8H	4H	19.8	20.7	20.4	21.2	21.8	22.7	23.5	23.2	24.0	24.6
	6H	20.4	21.1	21.0	21.7	22.3	24.1	24.8	24.6	25.4	26.0
	8H	20.6	21.2	21.2	21.8	22.4	24.9	25.5	25.5	26.1	26.7
	12H	20.7	21.3	21.3	21.9	22.6	25.7	26.3	26.3	26.9	27.6
12H	4H	19.9	20.7	20.5	21.3	21.9	22.7	23.4	23.2	24.0	24.6
	6H	20.6	21.2	21.2	21.8	22.5	24.1	24.8	24.7	25.3	26.0
	8H	20.8	21.4	21.4	22.0	22.7	24.9	25.5	25.5	26.1	26.8

Maximum UGR = 27.6

POLAR GRAPH



Maximum Candela = 1611.759 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.)