



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L26-827-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-L26-827-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	2776
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	138
Total Luminaire Watts	20.13
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	3930	3252	3336
55	3326	2787	2960
65	2675	2355	2537
75	1879	1887	2136
85	574	1518	1869

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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	896.336	896.336	896.336	896.336	896.336
5	905.901	892.692	889.049	888.138	887.682
10	886.771	876.751	874.474	876.751	874.474
15	859.444	851.701	855.345	859.444	858.533
20	818.909	812.988	825.740	833.028	835.760
25	774.274	766.531	784.749	801.601	802.968
30	720.075	715.520	739.204	763.799	764.709
35	659.044	656.767	686.371	718.253	722.352
40	594.369	588.448	626.706	665.420	674.074
45	520.130	513.754	564.309	608.488	622.152
50	440.425	442.247	502.367	548.824	568.408
55	365.275	376.662	439.059	488.704	510.565
60	292.858	313.353	378.028	431.316	450.445
65	224.539	250.045	322.007	372.107	388.959
70	160.776	190.836	266.441	317.452	331.116
75	104.299	136.181	210.876	266.897	276.461
80	55.110	93.368	165.786	221.351	229.094
85	14.575	60.120	126.617	181.271	189.925
90	1.822	37.803	98.378	147.568	158.498
95	0.455	22.317	74.239	117.052	129.805
100	0.000	13.208	53.744	90.636	103.388
105	0.000	9.109	39.625	68.774	82.437
110	0.000	6.832	31.426	56.021	67.407
115	0.000	5.921	23.684	45.090	53.744
120	0.000	5.465	20.040	36.892	43.268
125	0.000	3.644	14.575	29.149	34.615
130	0.000	3.188	11.842	22.317	26.416
135	0.000	2.277	9.109	17.763	20.495
140	0.000	2.277	6.832	13.664	16.396
145	0.000	0.911	5.921	10.931	12.297
150	0.000	0.000	5.465	9.565	10.931
155	0.000	0.000	3.644	6.832	8.654
160	0.000	0.000	3.188	4.555	5.921
165	0.000	0.000	0.000	3.188	3.644
170	0.000	0.000	0.000	0.000	2.277
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	326.03	N.A.	11.70
0-30	687.97	N.A.	24.80
0-40	1117.98	N.A.	40.30
0-60	1944.22	N.A.	70.00
0-80	2469.57	N.A.	89.00
0-90	2600.91	N.A.	93.70
10-90	2516.25	N.A.	90.60
20-40	791.95	N.A.	28.50
20-50	1227.84	N.A.	44.20
40-70	1136.88	N.A.	41.00
60-80	525.35	N.A.	18.90
70-80	214.71	N.A.	7.70
80-90	131.34	N.A.	4.70
90-110	120.49	N.A.	4.30
90-120	146.31	N.A.	5.30
90-130	161.16	N.A.	5.80
90-150	172.89	N.A.	6.20
90-180	175.10	N.A.	6.30
110-180	54.60	N.A.	2.00
0-180	2776.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	84.65
10-20	241.38
20-30	361.94
30-40	430.00
40-50	435.89
50-60	390.35
60-70	310.64
70-80	214.71
80-90	131.34
90-100	77.14
100-110	43.35
110-120	25.81
120-130	14.86
130-140	7.80
140-150	3.92
150-160	1.79
160-170	0.41
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

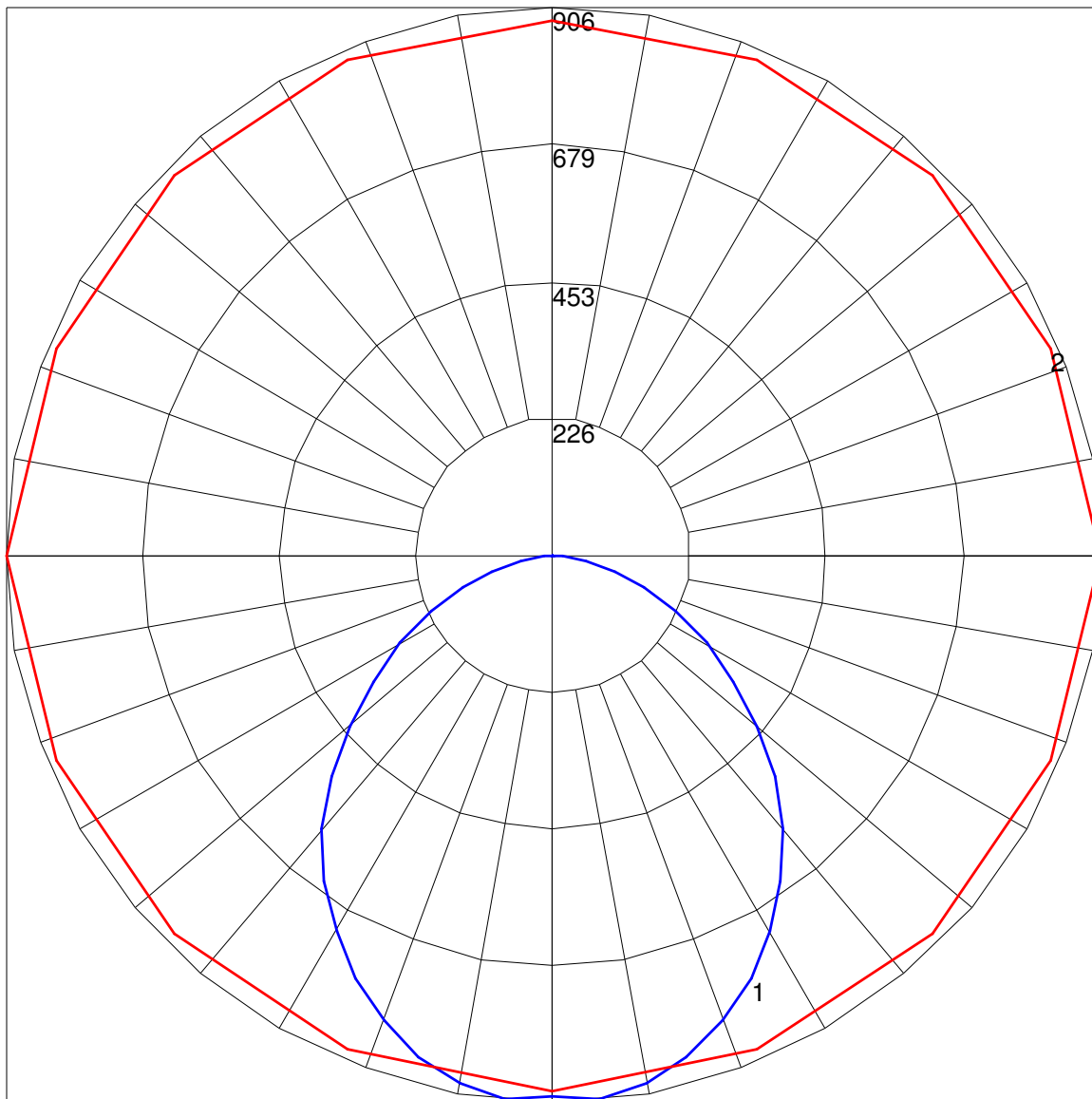
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	14.3	15.8	14.8	16.3	16.7	16.4	18.0	16.9	18.4	18.9
	3H	15.8	17.2	16.3	17.6	18.1	18.7	20.1	19.2	20.6	21.1
	4H	16.3	17.6	16.8	18.1	18.6	19.8	21.1	20.3	21.6	22.1
	6H	16.6	17.8	17.1	18.3	18.8	20.8	22.1	21.3	22.5	23.1
	8H	16.7	17.8	17.2	18.3	18.9	21.4	22.6	21.9	23.1	23.6
	12H	16.7	17.8	17.2	18.3	18.9	22.0	23.1	22.5	23.6	24.2
4H	2H	15.1	16.4	15.5	16.8	17.3	16.8	18.1	17.3	18.6	19.1
	3H	16.7	17.9	17.2	18.4	18.9	19.3	20.4	19.8	20.9	21.4
	4H	17.3	18.3	17.8	18.9	19.4	20.5	21.5	21.0	22.0	22.6
	6H	17.7	18.6	18.3	19.2	19.8	21.8	22.7	22.3	23.2	23.8
	8H	17.9	18.7	18.4	19.2	19.8	22.4	23.3	23.0	23.8	24.4
	12H	17.9	18.7	18.5	19.2	19.9	23.1	23.9	23.7	24.5	25.1
8H	4H	17.8	18.7	18.4	19.2	19.8	20.7	21.5	21.2	22.0	22.6
	6H	18.4	19.1	19.0	19.7	20.3	22.1	22.8	22.6	23.4	24.0
	8H	18.6	19.2	19.2	19.8	20.4	22.9	23.5	23.5	24.1	24.7
	12H	18.7	19.3	19.3	19.9	20.6	23.7	24.3	24.3	24.9	25.6
12H	4H	17.9	18.7	18.5	19.3	19.9	20.6	21.4	21.2	22.0	22.6
	6H	18.6	19.2	19.2	19.8	20.5	22.1	22.8	22.7	23.3	24.0
	8H	18.8	19.4	19.4	20.0	20.7	22.9	23.5	23.5	24.1	24.8

Maximum UGR = 25.6

POLAR GRAPH



Maximum Candela = 905.901 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.)