



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L26-830-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-L26-830-HIA-DIM-UNV

[MORE] WHITE FLAT REFLECTOR w/FROSTED ACRYLIC LENS

[LAMPCAT] HLM 80 CRI 3000K 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	2833
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
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	4010	3318	3405
55	3395	2844	3020
65	2730	2403	2589
75	1918	1925	2180
85	586	1549	1907

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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	914.741	914.741	914.741	914.741	914.741
5	924.502	911.022	907.304	906.374	905.909
10	904.980	894.754	892.430	894.754	892.430
15	877.091	869.189	872.908	877.091	876.162
20	835.723	829.681	842.695	850.132	852.921
25	790.172	782.271	800.863	818.061	819.455
30	734.860	730.212	754.382	779.482	780.411
35	672.576	670.252	700.464	733.001	737.184
40	606.573	600.531	639.575	679.083	687.915
45	530.810	524.303	575.896	620.982	634.927
50	449.469	451.328	512.682	560.093	580.079
55	372.775	384.396	448.074	498.738	521.049
60	298.871	319.787	385.790	440.172	459.694
65	229.150	255.179	328.619	379.747	396.945
70	164.077	194.754	271.912	323.971	337.915
75	106.441	138.977	215.206	272.377	282.138
80	56.242	95.285	169.190	225.896	233.798
85	14.874	61.355	129.216	184.993	193.825
90	1.859	38.579	100.398	150.598	161.753
95	0.465	22.776	75.764	119.455	132.470
100	0.000	13.479	54.847	92.497	105.511
105	0.000	9.296	40.438	70.186	84.130
110	0.000	6.972	32.072	57.171	68.791
115	0.000	6.042	24.170	46.016	54.847
120	0.000	5.578	20.452	37.649	44.157
125	0.000	3.718	14.874	29.748	35.325
130	0.000	3.254	12.085	22.776	26.959
135	0.000	2.324	9.296	18.127	20.916
140	0.000	2.324	6.972	13.944	16.733
145	0.000	0.930	6.042	11.155	12.550
150	0.000	0.000	5.578	9.761	11.155
155	0.000	0.000	3.718	6.972	8.831
160	0.000	0.000	3.254	4.648	6.042
165	0.000	0.000	0.000	3.254	3.718
170	0.000	0.000	0.000	0.000	2.324
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	332.73	N.A.	11.70
0-30	702.10	N.A.	24.80
0-40	1140.93	N.A.	40.30
0-60	1984.14	N.A.	70.00
0-80	2520.27	N.A.	89.00
0-90	2654.31	N.A.	93.70
10-90	2567.92	N.A.	90.60
20-40	808.21	N.A.	28.50
20-50	1253.05	N.A.	44.20
40-70	1160.22	N.A.	41.00
60-80	536.14	N.A.	18.90
70-80	219.12	N.A.	7.70
80-90	134.04	N.A.	4.70
90-110	122.97	N.A.	4.30
90-120	149.31	N.A.	5.30
90-130	164.47	N.A.	5.80
90-150	176.44	N.A.	6.20
90-180	178.69	N.A.	6.30
110-180	55.72	N.A.	2.00
0-180	2833.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	86.39
10-20	246.34
20-30	369.37
30-40	438.83
40-50	444.84
50-60	398.36
60-70	317.02
70-80	219.12
80-90	134.04
90-100	78.73
100-110	44.24
110-120	26.34
120-130	15.16
130-140	7.96
140-150	4.00
150-160	1.82
160-170	0.42
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

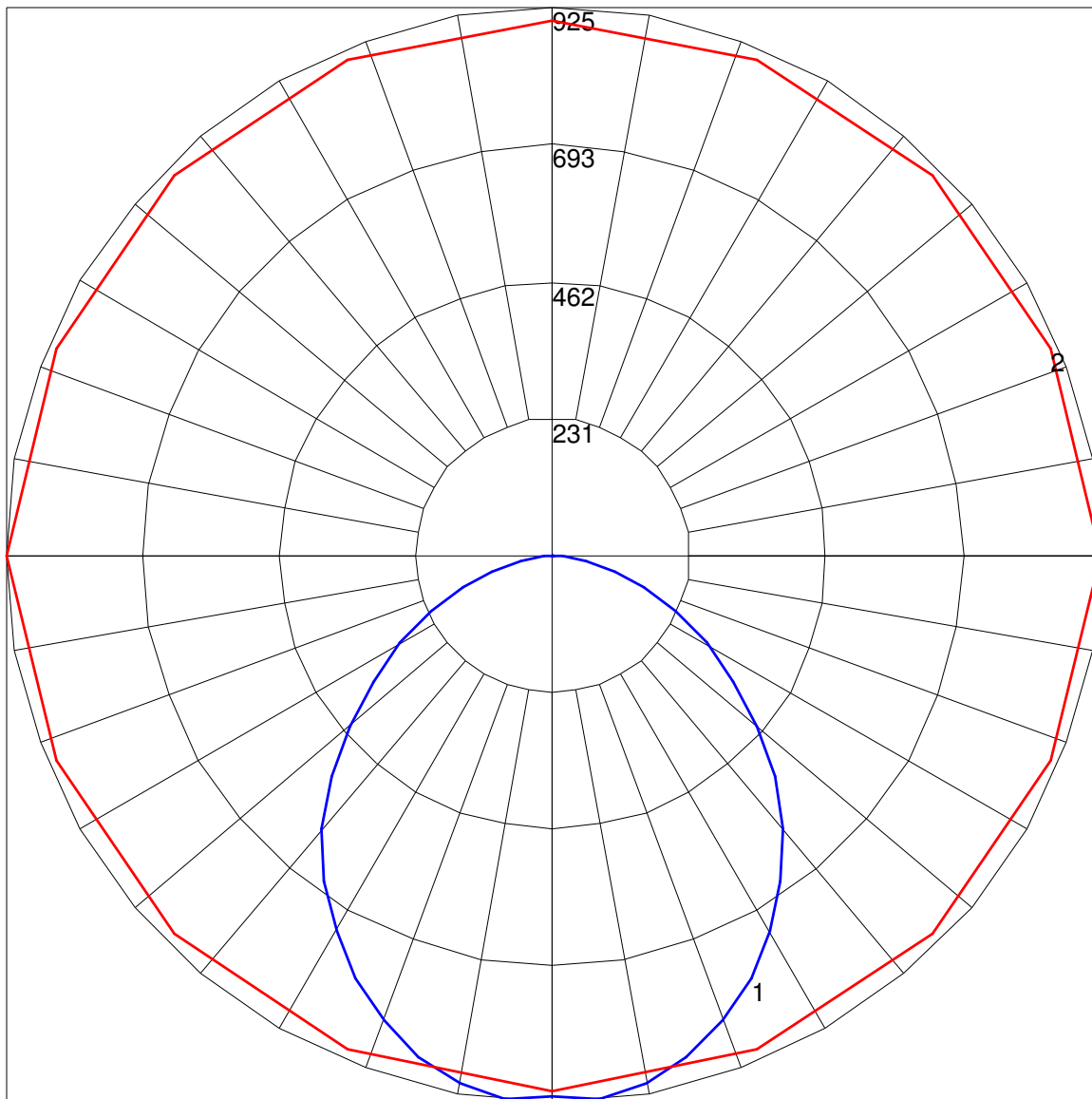
Reflectances

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	14.4	15.9	14.9	16.4	16.8	16.5	18.1	17.0	18.5	19.0
	3H	15.9	17.3	16.4	17.7	18.2	18.8	20.2	19.3	20.7	21.2
	4H	16.4	17.7	16.9	18.2	18.7	19.9	21.2	20.4	21.7	22.2
	6H	16.7	17.9	17.2	18.4	18.9	20.9	22.2	21.4	22.6	23.2
	8H	16.8	17.9	17.3	18.4	19.0	21.5	22.7	22.0	23.2	23.7
	12H	16.8	17.9	17.3	18.4	19.0	22.1	23.2	22.6	23.7	24.3
4H	2H	15.2	16.5	15.6	16.9	17.4	16.9	18.2	17.4	18.7	19.2
	3H	16.8	18.0	17.3	18.5	19.0	19.4	20.5	19.9	21.0	21.5
	4H	17.4	18.4	17.9	19.0	19.5	20.6	21.6	21.1	22.1	22.7
	6H	17.8	18.7	18.4	19.3	19.9	21.9	22.8	22.4	23.3	23.9
	8H	18.0	18.8	18.5	19.3	19.9	22.5	23.4	23.1	23.9	24.5
	12H	18.0	18.8	18.6	19.3	20.0	23.2	24.0	23.8	24.6	25.2
8H	4H	17.9	18.8	18.5	19.3	19.9	20.8	21.6	21.3	22.1	22.7
	6H	18.5	19.2	19.1	19.8	20.4	22.2	22.9	22.7	23.5	24.1
	8H	18.7	19.3	19.3	19.9	20.5	23.0	23.6	23.6	24.2	24.8
	12H	18.8	19.4	19.4	20.0	20.7	23.8	24.4	24.4	25.0	25.7
12H	4H	18.0	18.8	18.6	19.4	20.0	20.7	21.5	21.3	22.1	22.7
	6H	18.7	19.3	19.3	19.9	20.6	22.2	22.9	22.8	23.4	24.1
	8H	18.9	19.5	19.5	20.1	20.8	23.0	23.6	23.6	24.2	24.9

Maximum UGR = 25.7

POLAR GRAPH



Maximum Candela = 924.502 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.)