



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L52-830-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-L52-830-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	5041
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	136
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	7136	5905	6059
55	6040	5061	5374
65	4858	4276	4607
75	3412	3426	3879
85	1042	2756	3393

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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	1627.677	1627.677	1627.677	1627.677	1627.677
5	1645.045	1621.060	1614.443	1612.789	1611.962
10	1610.308	1592.112	1587.977	1592.112	1587.977
15	1560.684	1546.624	1553.240	1560.684	1559.030
20	1487.074	1476.322	1499.480	1512.714	1517.676
25	1406.021	1391.961	1425.044	1455.646	1458.127
30	1307.600	1299.329	1342.337	1386.999	1388.653
35	1196.772	1192.637	1246.397	1304.292	1311.735
40	1079.328	1068.576	1138.050	1208.351	1224.066
45	944.516	932.937	1024.741	1104.967	1129.780
50	799.778	803.086	912.260	996.621	1032.185
55	663.311	683.988	797.297	887.448	927.147
60	531.807	569.025	686.469	783.237	817.974
65	407.746	454.062	584.739	675.717	706.319
70	291.956	346.543	483.837	576.469	601.281
75	189.399	247.294	382.934	484.664	502.032
80	100.076	169.550	301.054	401.957	416.017
85	26.466	109.173	229.926	329.174	344.889
90	3.308	68.647	178.647	267.971	287.821
95	0.827	40.526	134.813	212.557	235.715
100	0.000	23.985	97.594	164.587	187.745
105	0.000	16.541	71.955	124.888	149.700
110	0.000	12.406	57.068	101.730	122.407
115	0.000	10.752	43.008	81.880	97.594
120	0.000	9.925	36.391	66.993	78.572
125	0.000	6.617	26.466	52.933	62.857
130	0.000	5.789	21.504	40.526	47.970
135	0.000	4.135	16.541	32.256	37.218
140	0.000	4.135	12.406	24.812	29.775
145	0.000	1.654	10.752	19.850	22.331
150	0.000	0.000	9.925	17.368	19.850
155	0.000	0.000	6.617	12.406	15.714
160	0.000	0.000	5.789	8.271	10.752
165	0.000	0.000	0.000	5.789	6.617
170	0.000	0.000	0.000	0.000	4.135
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	592.05	N.A.	11.70
0-30	1249.31	N.A.	24.80
0-40	2030.16	N.A.	40.30
0-60	3530.55	N.A.	70.00
0-80	4484.54	N.A.	89.00
0-90	4723.04	N.A.	93.70
10-90	4569.32	N.A.	90.60
20-40	1438.11	N.A.	28.50
20-50	2229.66	N.A.	44.20
40-70	2064.48	N.A.	41.00
60-80	953.99	N.A.	18.90
70-80	389.90	N.A.	7.70
80-90	238.50	N.A.	4.70
90-110	218.81	N.A.	4.30
90-120	265.68	N.A.	5.30
90-130	292.66	N.A.	5.80
90-150	313.95	N.A.	6.20
90-180	317.96	N.A.	6.30
110-180	99.16	N.A.	2.00
0-180	5041.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	153.72
10-20	438.33
20-30	657.26
30-40	780.86
40-50	791.54
50-60	708.84
60-70	564.10
70-80	389.90
80-90	238.50
90-100	140.08
100-110	78.72
110-120	46.87
120-130	26.98
130-140	14.17
140-150	7.13
150-160	3.24
160-170	0.75
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

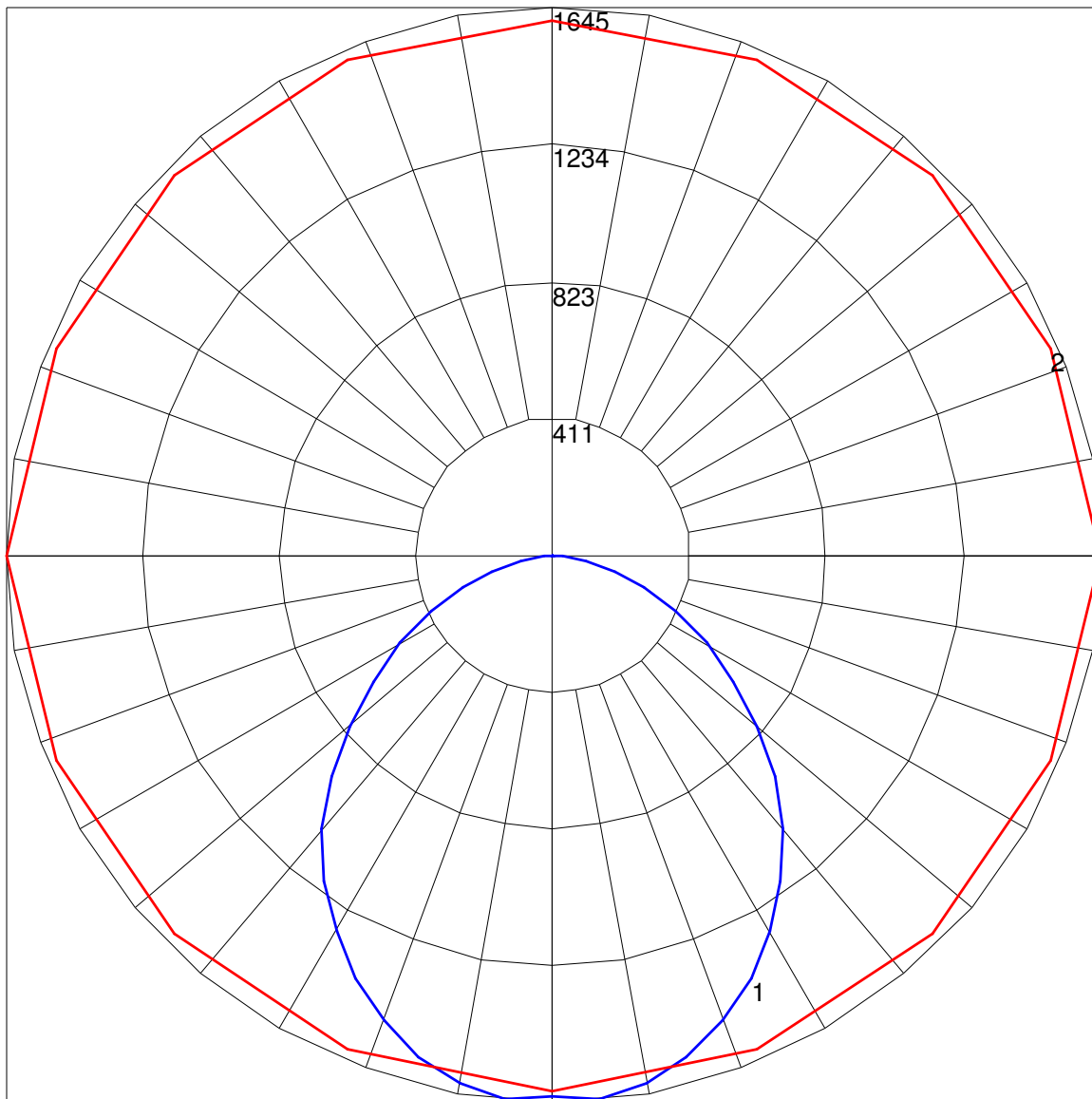
Reflectances

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	16.4	17.9	16.9	18.4	18.8	18.5	20.1	19.0	20.5	21.0
	3H	17.9	19.3	18.4	19.7	20.2	20.8	22.2	21.3	22.7	23.2
	4H	18.4	19.7	18.9	20.2	20.7	21.9	23.2	22.4	23.7	24.2
	6H	18.7	19.9	19.2	20.4	20.9	22.9	24.2	23.4	24.6	25.2
	8H	18.8	19.9	19.3	20.4	21.0	23.5	24.7	24.0	25.2	25.7
	12H	18.8	19.9	19.3	20.4	21.0	24.1	25.2	24.6	25.7	26.3
4H	2H	17.2	18.5	17.6	18.9	19.5	18.9	20.2	19.4	20.7	21.2
	3H	18.8	20.0	19.3	20.5	21.0	21.4	22.5	21.9	23.0	23.5
	4H	19.4	20.4	19.9	21.0	21.5	22.6	23.6	23.1	24.1	24.7
	6H	19.8	20.7	20.4	21.3	21.9	23.9	24.8	24.4	25.3	25.9
	8H	20.0	20.8	20.5	21.3	21.9	24.5	25.4	25.1	25.9	26.5
	12H	20.0	20.8	20.6	21.4	22.0	25.2	26.0	25.8	26.6	27.2
8H	4H	19.9	20.8	20.5	21.3	21.9	22.8	23.6	23.3	24.1	24.7
	6H	20.5	21.2	21.1	21.8	22.4	24.2	24.9	24.7	25.5	26.1
	8H	20.7	21.3	21.3	21.9	22.5	25.0	25.6	25.6	26.2	26.8
	12H	20.8	21.4	21.4	22.0	22.7	25.8	26.4	26.4	27.0	27.7
12H	4H	20.0	20.8	20.6	21.4	22.0	22.8	23.5	23.3	24.1	24.7
	6H	20.7	21.3	21.3	21.9	22.6	24.2	24.9	24.8	25.4	26.1
	8H	20.9	21.5	21.5	22.1	22.8	25.0	25.6	25.6	26.2	26.9

Maximum UGR = 27.7

POLAR GRAPH



Maximum Candela = 1645.045 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.)