



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-2-L13-850-HIA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 17259.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 06-NOV-2019
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2' LED DIRECT/INDIRECT STAIRWELL LIGHT
 [MORE] WHITE REFLECTOR w/FROSTED POLYCARBONATE LENS
 [LUMCAT] SLF-2-L13-850-HIA-DIM-UNV
 [LAMPCAT] HLM 80 CRI 5000K CCT
 [_SEARCH_SOURCETYPE]LED
 [_SEARCH_APPLICATION]INDOOR,COMMERCIAL,DIRECT,LINEAR
 [_SEARCH_MOUNTING]CEILING,SURFACE,WALL

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1418
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
Total Luminaire Watts	10.05
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	2.06 ft
Luminous Width (90-270)	0.50 ft
Luminous Height	0.24 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3250	2938	3185
55	2713	2474	2852
65	2101	2037	2476
75	1495	1685	2107
85	637	1414	1859

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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	446.926	446.926	446.926	446.926	446.926
5	448.126	445.326	443.325	443.725	441.325
10	440.124	438.924	437.724	440.124	438.924
15	426.120	425.720	427.321	430.922	431.322
20	408.515	410.116	413.317	420.119	422.519
25	381.308	384.909	393.311	402.514	406.915
30	351.699	358.501	372.905	385.309	390.110
35	320.090	327.292	346.898	364.503	371.305
40	283.280	292.883	316.089	339.696	346.898
45	246.069	257.673	283.280	311.288	319.690
50	206.858	223.263	248.870	281.279	290.482
55	174.049	190.054	218.062	254.072	264.475
60	138.439	156.044	186.853	222.063	234.466
65	106.430	123.635	157.244	190.854	203.657
70	78.822	96.027	132.437	164.046	174.449
75	53.215	69.620	107.630	138.439	146.041
80	31.209	50.414	87.225	114.832	122.435
85	12.403	34.810	68.819	96.027	100.828
90	0.000	21.206	53.615	77.622	81.623
95	0.000	14.804	42.812	64.018	67.619
100	0.000	9.603	31.609	51.214	54.015
105	0.000	8.402	27.208	41.612	46.013
110	0.000	5.201	19.606	32.809	36.410
115	0.000	4.801	17.205	27.608	31.209
120	0.000	4.401	13.604	22.806	26.407
125	0.000	3.201	10.403	18.405	21.206
130	0.000	0.000	10.003	16.405	18.005
135	0.000	0.000	6.802	12.003	14.804
140	0.000	0.000	6.002	10.403	11.603
145	0.000	0.000	0.000	8.002	9.603
150	0.000	0.000	0.000	6.802	8.002
155	0.000	0.000	0.000	5.602	5.602
160	0.000	0.000	0.000	4.801	0.000
165	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	3.201	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	163.17	N.A.	11.50
0-30	344.85	N.A.	24.30
0-40	561.04	N.A.	39.60
0-60	976.79	N.A.	68.90
0-80	1243.96	N.A.	87.70
0-90	1314.51	N.A.	92.70
10-90	1272.26	N.A.	89.70
20-40	397.87	N.A.	28.10
20-50	616.88	N.A.	43.50
40-70	572.05	N.A.	40.30
60-80	267.17	N.A.	18.80
70-80	110.87	N.A.	7.80
80-90	70.55	N.A.	5.00
90-110	68.74	N.A.	4.80
90-120	84.91	N.A.	6.00
90-130	94.74	N.A.	6.70
90-150	102.42	N.A.	7.20
90-180	103.51	N.A.	7.30
110-180	34.77	N.A.	2.50
0-180	1418.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	42.25
10-20	120.91
20-30	181.68
30-40	216.19
40-50	219.01
50-60	196.74
60-70	156.30
70-80	110.87
80-90	70.55
90-100	42.54
100-110	26.20
110-120	16.17
120-130	9.82
130-140	5.35
140-150	2.33
150-160	0.95
160-170	0.10
170-180	0.04

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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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	93
1	106	100	96	91	102	97	93	89	92	88	85	86	84	81	82	79	77	75
2	96	87	80	74	92	84	78	72	80	74	69	75	71	67	71	67	64	61
3	87	76	68	61	84	74	66	60	70	63	58	66	61	56	63	58	54	52
4	80	67	58	51	77	66	57	51	62	55	49	59	53	48	56	51	46	44
5	73	60	51	44	71	59	50	44	56	48	43	53	46	41	50	45	40	38
6	68	54	45	39	65	53	44	38	50	43	37	48	41	36	46	40	35	33
7	63	49	40	34	61	48	40	34	46	38	33	44	37	32	42	36	31	29
8	58	45	36	30	56	44	36	30	42	35	29	40	34	29	38	33	28	26
9	55	41	33	27	53	40	32	27	39	31	26	37	31	26	35	30	25	24
10	51	38	30	25	50	37	30	24	36	29	24	34	28	24	33	27	23	21

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UGR TABLE - CORRECTED

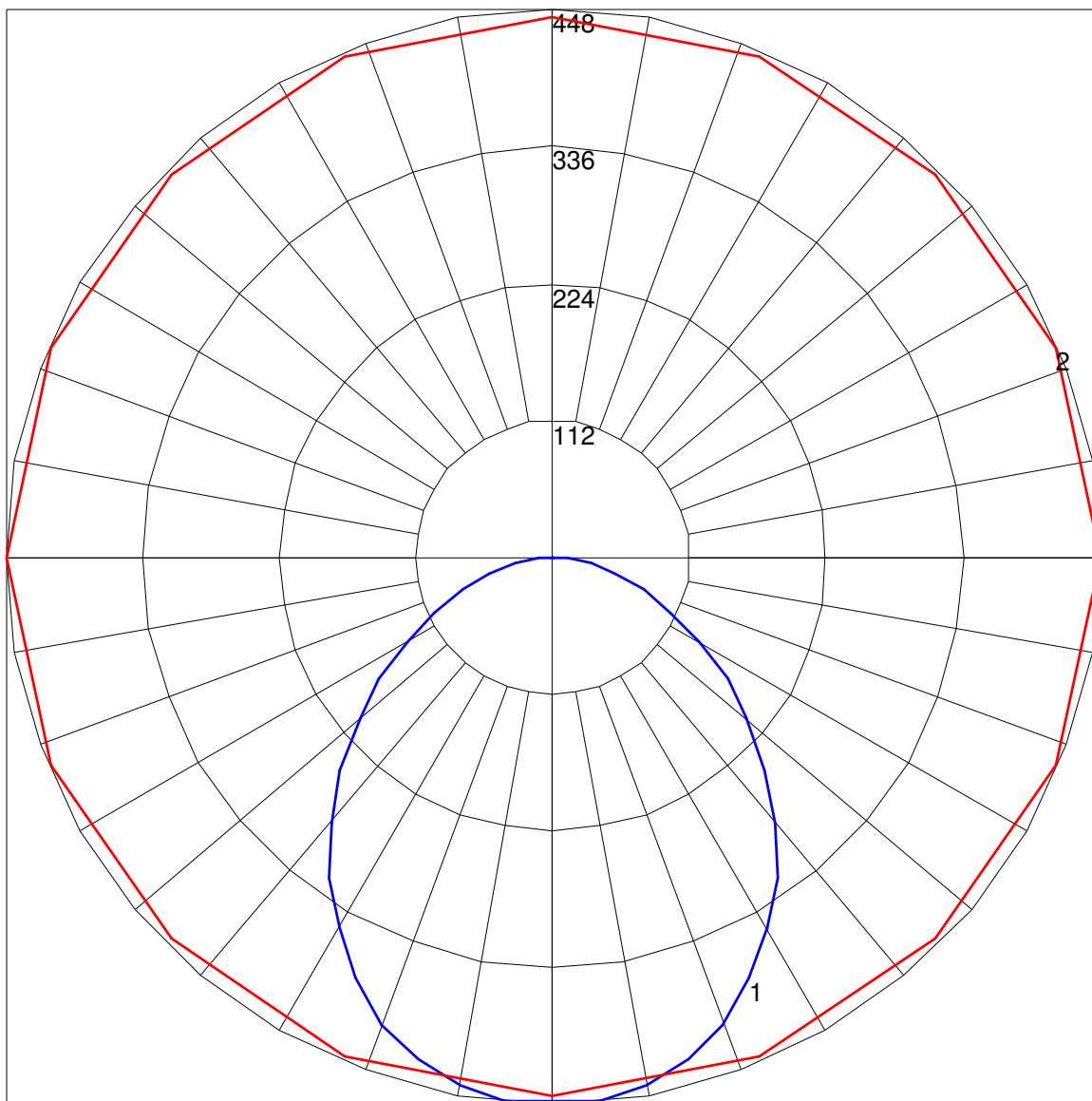
Reflectances

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	13.7	15.2	14.2	15.7	16.2	16.1	17.6	16.6	18.1	18.6
	3H	15.1	16.5	15.6	17.0	17.5	18.3	19.7	18.8	20.2	20.7
	4H	15.6	16.9	16.1	17.4	17.9	19.4	20.7	19.9	21.2	21.7
	6H	15.9	17.1	16.5	17.6	18.2	20.4	21.6	20.9	22.1	22.7
	8H	16.0	17.2	16.5	17.7	18.3	20.9	22.1	21.4	22.6	23.1
	12H	16.1	17.2	16.6	17.7	18.3	21.4	22.5	22.0	23.0	23.6
4H	2H	14.4	15.7	14.9	16.2	16.8	16.4	17.7	16.9	18.2	18.7
	3H	16.1	17.2	16.6	17.7	18.3	18.9	20.0	19.4	20.5	21.1
	4H	16.7	17.7	17.2	18.2	18.8	20.1	21.1	20.6	21.6	22.2
	6H	17.1	18.0	17.7	18.6	19.2	21.3	22.2	21.9	22.8	23.4
	8H	17.3	18.1	17.8	18.7	19.3	21.9	22.8	22.5	23.3	23.9
	12H	17.3	18.1	17.9	18.7	19.3	22.6	23.3	23.1	23.9	24.5
8H	4H	17.2	18.0	17.8	18.6	19.2	20.2	21.1	20.8	21.6	22.3
	6H	17.8	18.5	18.4	19.1	19.8	21.6	22.3	22.2	22.9	23.6
	8H	18.1	18.7	18.7	19.3	19.9	22.4	23.0	23.0	23.6	24.3
	12H	18.2	18.8	18.8	19.4	20.1	23.2	23.8	23.8	24.4	25.1
12H	4H	17.3	18.1	17.9	18.7	19.3	20.2	21.0	20.8	21.6	22.2
	6H	18.0	18.7	18.7	19.3	20.0	21.7	22.3	22.3	22.9	23.6
	8H	18.3	18.9	18.9	19.5	20.2	22.4	23.0	23.0	23.6	24.3

Maximum UGR = 25.1

POLAR GRAPH



Maximum Candela = 448.126 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.)