



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-2-L45-840-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
 [ISSUE DATE] 05-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-L45-840-HIA-DIM-UNV
 [LAMPCAT] HLM 80 CRI 4000K 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	4772
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	139
Total Luminaire Watts	34.4
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	10937	9887	10718
55	9129	8325	9598
65	7071	6855	8331
75	5030	5669	7092
85	2143	4760	6257

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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	1504.042	1504.042	1504.042	1504.042	1504.042
5	1508.081	1498.656	1491.923	1493.270	1485.191
10	1481.151	1477.112	1473.072	1481.151	1477.112
15	1434.024	1432.677	1438.063	1450.182	1451.528
20	1374.778	1380.164	1390.936	1413.826	1421.905
25	1283.215	1295.334	1323.610	1354.580	1369.392
30	1183.574	1206.465	1254.939	1296.680	1312.838
35	1077.201	1101.438	1167.416	1226.662	1249.553
40	953.323	985.639	1063.736	1143.179	1167.416
45	828.098	867.147	953.323	1047.578	1075.854
50	696.141	751.348	837.524	946.590	977.560
55	585.728	639.588	733.843	855.028	890.037
60	465.889	525.135	628.816	747.308	789.050
65	358.169	416.069	529.175	642.281	685.369
70	265.261	323.160	445.692	552.065	587.074
75	179.085	234.291	362.209	465.889	491.473
80	105.027	169.659	293.537	386.446	412.029
85	41.742	117.146	231.598	323.160	339.318
90	0.000	71.365	180.431	261.221	274.686
95	0.000	49.821	144.076	215.440	227.559
100	0.000	32.316	106.374	172.352	181.778
105	0.000	28.277	91.562	140.036	154.848
110	0.000	17.505	65.979	110.413	122.532
115	0.000	16.158	57.900	92.909	105.027
120	0.000	14.812	45.781	76.751	88.869
125	0.000	10.772	35.009	61.939	71.365
130	0.000	0.000	33.663	55.207	60.593
135	0.000	0.000	22.891	40.395	49.821
140	0.000	0.000	20.198	35.009	39.049
145	0.000	0.000	0.000	26.930	32.316
150	0.000	0.000	0.000	22.891	26.930
155	0.000	0.000	0.000	18.851	18.851
160	0.000	0.000	0.000	16.158	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	10.772	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	549.11	N.A.	11.50
0-30	1160.53	N.A.	24.30
0-40	1888.07	N.A.	39.60
0-60	3287.19	N.A.	68.90
0-80	4186.3	N.A.	87.70
0-90	4423.72	N.A.	92.70
10-90	4281.52	N.A.	89.70
20-40	1338.95	N.A.	28.10
20-50	2075.98	N.A.	43.50
40-70	1925.12	N.A.	40.30
60-80	899.11	N.A.	18.80
70-80	373.12	N.A.	7.80
80-90	237.42	N.A.	5.00
90-110	231.33	N.A.	4.80
90-120	285.76	N.A.	6.00
90-130	318.83	N.A.	6.70
90-150	344.68	N.A.	7.20
90-180	348.35	N.A.	7.30
110-180	117.02	N.A.	2.50
0-180	4772.08	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	142.20
10-20	406.91
20-30	611.42
30-40	727.53
40-50	737.02
50-60	662.10
60-70	525.99
70-80	373.12
80-90	237.42
90-100	143.17
100-110	88.16
110-120	54.43
120-130	33.06
130-140	18.02
140-150	7.84
150-160	3.21
160-170	0.33
170-180	0.13

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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

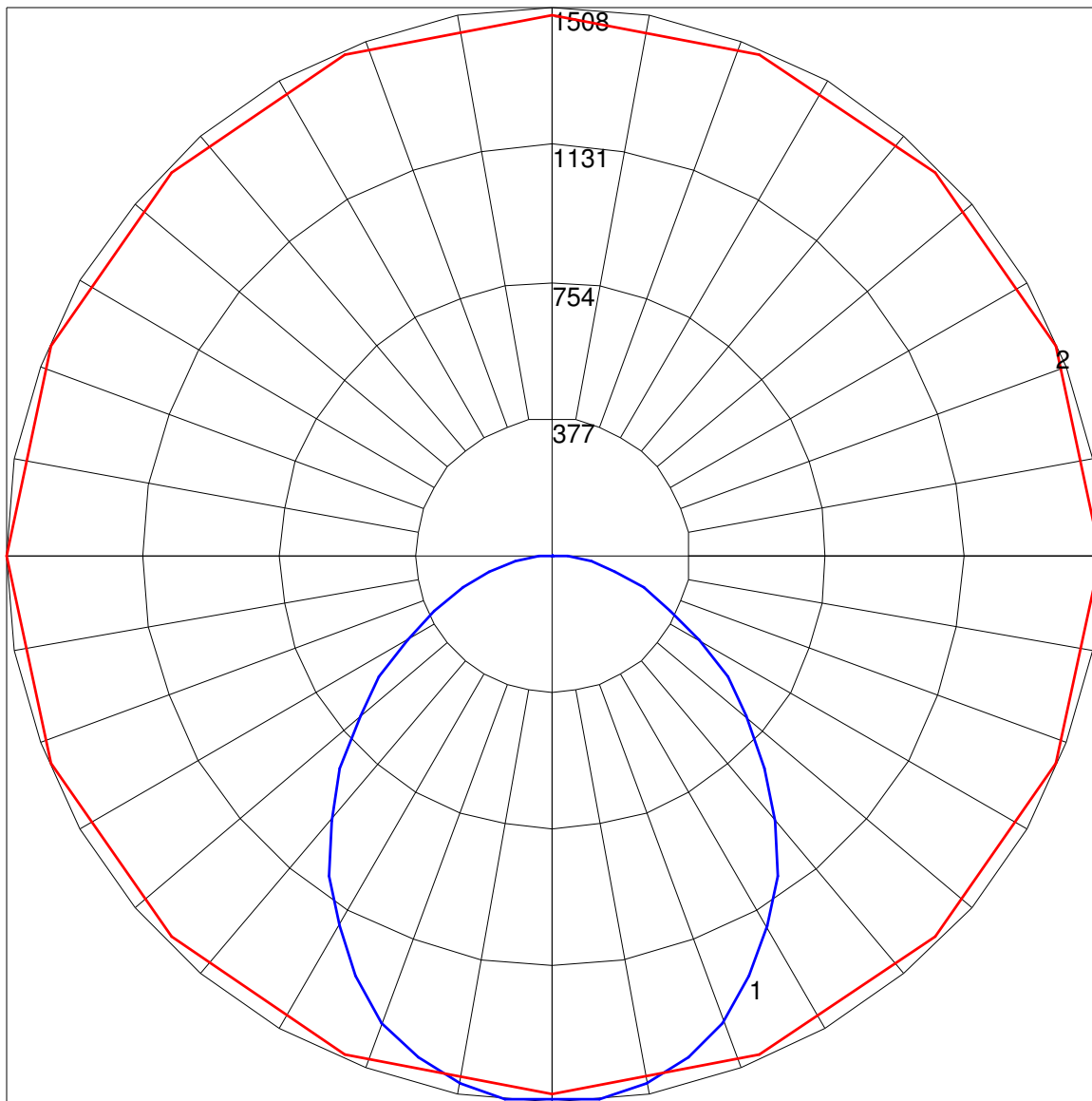
Reflectances

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	17.9	19.4	18.4	19.9	20.4	20.3	21.8	20.8	22.3	22.8
	3H	19.3	20.7	19.8	21.2	21.7	22.5	23.9	23.0	24.4	24.9
	4H	19.8	21.1	20.3	21.6	22.1	23.6	24.9	24.1	25.4	25.9
	6H	20.1	21.3	20.7	21.8	22.4	24.6	25.8	25.1	26.3	26.9
	8H	20.2	21.4	20.7	21.9	22.5	25.1	26.3	25.6	26.8	27.3
	12H	20.3	21.4	20.8	21.9	22.5	25.6	26.7	26.2	27.2	27.8
4H	2H	18.6	19.9	19.1	20.4	21.0	20.6	21.9	21.1	22.4	22.9
	3H	20.3	21.4	20.8	21.9	22.5	23.1	24.2	23.6	24.7	25.3
	4H	20.9	21.9	21.4	22.4	23.0	24.3	25.3	24.8	25.8	26.4
	6H	21.3	22.2	21.9	22.8	23.4	25.5	26.4	26.1	27.0	27.6
	8H	21.5	22.3	22.0	22.9	23.5	26.1	27.0	26.7	27.5	28.1
	12H	21.5	22.3	22.1	22.9	23.5	26.8	27.5	27.3	28.1	28.7
8H	4H	21.4	22.2	22.0	22.8	23.4	24.4	25.3	25.0	25.8	26.5
	6H	22.0	22.7	22.6	23.3	24.0	25.8	26.5	26.4	27.1	27.8
	8H	22.3	22.9	22.9	23.5	24.1	26.6	27.2	27.2	27.8	28.5
	12H	22.4	23.0	23.0	23.6	24.3	27.4	28.0	28.0	28.6	29.3
12H	4H	21.5	22.3	22.1	22.9	23.5	24.4	25.2	25.0	25.8	26.4
	6H	22.2	22.9	22.9	23.5	24.2	25.9	26.5	26.5	27.1	27.8
	8H	22.5	23.1	23.1	23.7	24.4	26.6	27.2	27.2	27.8	28.5

Maximum UGR = 29.3

POLAR GRAPH



Maximum Candela = 1508.081 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.)