



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-2-L13-830-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-L13-830-HIA-DIM-UNV
 [LAMPCAT] HLM 80 CRI 3000K 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	1324
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
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	3034	2743	2974
55	2533	2310	2663
65	1962	1902	2312
75	1396	1573	1968
85	595	1321	1736

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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	417.299	417.299	417.299	417.299	417.299
5	418.420	415.805	413.937	414.310	412.069
10	410.948	409.827	408.707	410.948	409.827
15	397.872	397.499	398.993	402.356	402.729
20	381.435	382.929	385.918	392.269	394.510
25	356.030	359.393	367.238	375.831	379.940
30	328.385	334.736	348.185	359.766	364.249
35	298.871	305.596	323.902	340.340	346.691
40	264.501	273.467	295.135	317.177	323.902
45	229.757	240.591	264.501	290.652	298.498
50	193.146	208.463	232.372	262.633	271.226
55	162.511	177.455	203.606	237.229	246.942
60	129.262	145.700	174.466	207.342	218.923
65	99.375	115.439	146.821	178.202	190.157
70	73.597	89.661	123.658	153.172	162.885
75	49.687	65.005	100.495	129.262	136.360
80	29.140	47.072	81.442	107.220	114.318
85	11.581	32.502	64.257	89.661	94.144
90	0.000	19.800	50.061	72.476	76.212
95	0.000	13.823	39.974	59.774	63.137
100	0.000	8.966	29.514	47.819	50.435
105	0.000	7.845	25.404	38.853	42.963
110	0.000	4.857	18.306	30.634	33.997
115	0.000	4.483	16.064	25.778	29.140
120	0.000	4.109	12.702	21.295	24.657
125	0.000	2.989	9.713	17.185	19.800
130	0.000	0.000	9.340	15.317	16.812
135	0.000	0.000	6.351	11.208	13.823
140	0.000	0.000	5.604	9.713	10.834
145	0.000	0.000	0.000	7.472	8.966
150	0.000	0.000	0.000	6.351	7.472
155	0.000	0.000	0.000	5.230	5.230
160	0.000	0.000	0.000	4.483	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	2.989	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	152.35	N.A.	11.50
0-30	321.99	N.A.	24.30
0-40	523.85	N.A.	39.60
0-60	912.04	N.A.	68.90
0-80	1161.5	N.A.	87.70
0-90	1227.37	N.A.	92.70
10-90	1187.92	N.A.	89.70
20-40	371.50	N.A.	28.10
20-50	575.98	N.A.	43.50
40-70	534.13	N.A.	40.30
60-80	249.46	N.A.	18.80
70-80	103.52	N.A.	7.80
80-90	65.87	N.A.	5.00
90-110	64.18	N.A.	4.80
90-120	79.29	N.A.	6.00
90-130	88.46	N.A.	6.70
90-150	95.63	N.A.	7.20
90-180	96.65	N.A.	7.30
110-180	32.47	N.A.	2.50
0-180	1324.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	39.45
10-20	112.90
20-30	169.64
30-40	201.86
40-50	204.49
50-60	183.70
60-70	145.94
70-80	103.52
80-90	65.87
90-100	39.72
100-110	24.46
110-120	15.10
120-130	9.17
130-140	5.00
140-150	2.17
150-160	0.89
160-170	0.09
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

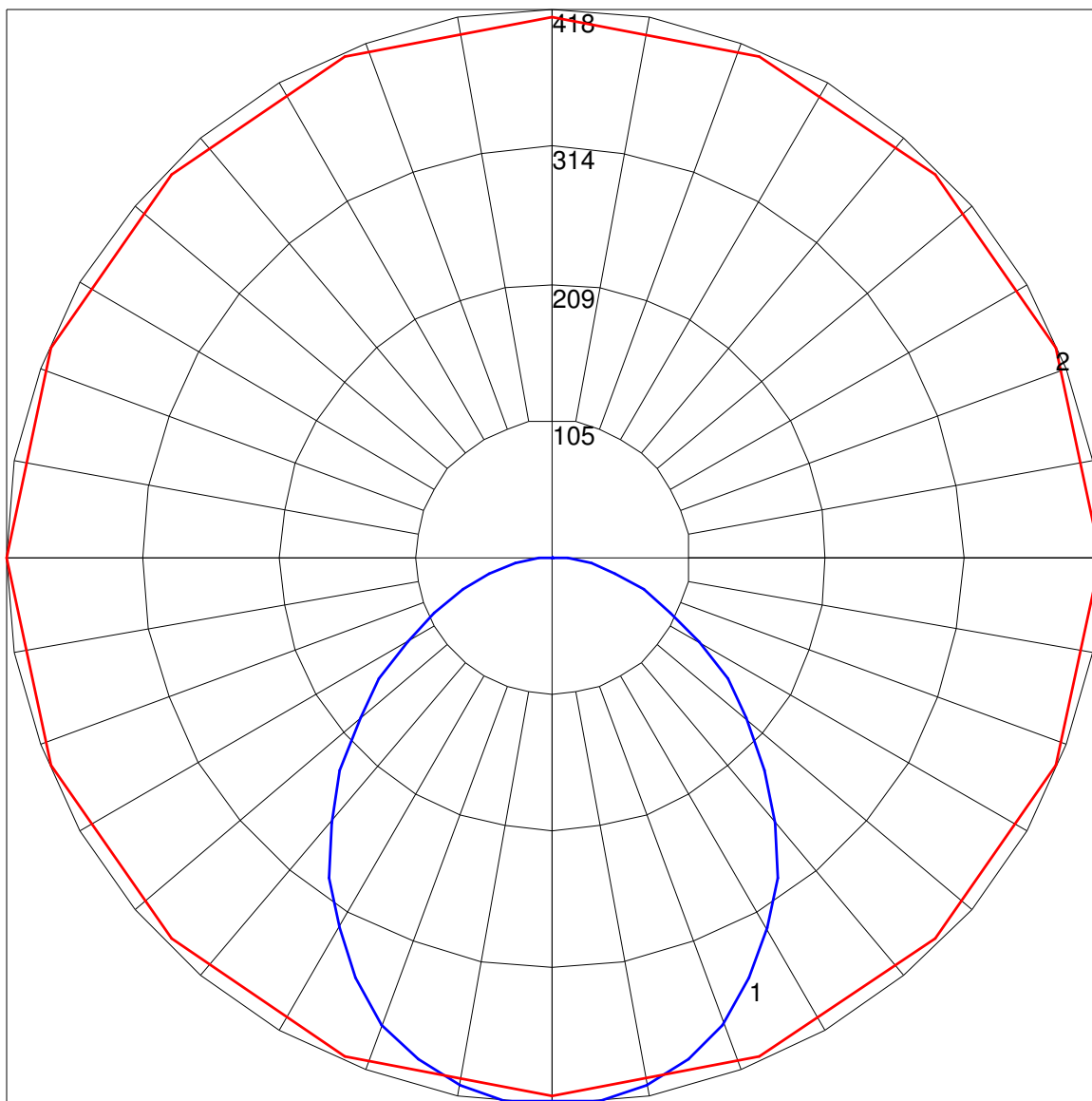
Reflectances

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	13.5	15.0	14.0	15.5	16.0	15.9	17.4	16.4	17.9	18.4
	3H	14.9	16.3	15.4	16.8	17.3	18.1	19.5	18.6	20.0	20.5
	4H	15.4	16.7	15.9	17.2	17.7	19.2	20.5	19.7	21.0	21.5
	6H	15.7	16.9	16.3	17.4	18.0	20.2	21.4	20.7	21.9	22.5
	8H	15.8	17.0	16.3	17.5	18.1	20.7	21.9	21.2	22.4	22.9
	12H	15.9	17.0	16.4	17.5	18.1	21.2	22.3	21.8	22.8	23.4
4H	2H	14.2	15.5	14.7	16.0	16.6	16.2	17.5	16.7	18.0	18.5
	3H	15.9	17.0	16.4	17.5	18.1	18.7	19.8	19.2	20.3	20.9
	4H	16.5	17.5	17.0	18.0	18.6	19.9	20.9	20.4	21.4	22.0
	6H	16.9	17.8	17.5	18.4	19.0	21.1	22.0	21.7	22.6	23.2
	8H	17.1	17.9	17.6	18.5	19.1	21.7	22.6	22.3	23.1	23.7
	12H	17.1	17.9	17.7	18.5	19.1	22.4	23.1	22.9	23.7	24.3
8H	4H	17.0	17.8	17.6	18.4	19.0	20.0	20.9	20.6	21.4	22.1
	6H	17.6	18.3	18.2	18.9	19.6	21.4	22.1	22.0	22.7	23.4
	8H	17.9	18.5	18.5	19.1	19.7	22.2	22.8	22.8	23.4	24.1
	12H	18.0	18.6	18.6	19.2	19.9	23.0	23.6	23.6	24.2	24.9
12H	4H	17.1	17.9	17.7	18.5	19.1	20.0	20.8	20.6	21.4	22.0
	6H	17.8	18.5	18.5	19.1	19.8	21.5	22.1	22.1	22.7	23.4
	8H	18.1	18.7	18.7	19.3	20.0	22.2	22.8	22.9	23.4	24.1

Maximum UGR = 24.9

POLAR GRAPH



Maximum Candela = 418.42 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.)