



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-2-L13-835-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] 03-20-2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO64836  
 [LUMINAIRE] 2' LED DIRECT/INDIRECT STAIRWELL LIGHT  
 [MORE] WITH FROSTED POLYCARBONATE LENS  
 [LUMCAT] SLF-2-L13-835-HIA-DIM-UNV  
 [LAMPCAT] HLM 80 CRI 3500K 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	1338
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
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	3067	2772	3005
55	2560	2334	2691
65	1983	1922	2336
75	1410	1589	1989
85	601	1335	1755

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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	421.712	421.712	421.712	421.712	421.712
5	422.844	420.201	418.314	418.691	416.426
10	415.293	414.161	413.028	415.293	414.161
15	402.080	401.702	403.212	406.610	406.988
20	385.468	386.978	389.998	396.416	398.682
25	359.795	363.193	371.121	379.805	383.958
30	331.857	338.275	351.867	363.571	368.101
35	302.032	308.827	327.327	343.938	350.357
40	267.298	276.359	298.256	320.531	327.327
45	232.187	243.135	267.298	293.726	301.654
50	195.188	210.667	234.830	265.410	274.094
55	164.230	179.331	205.759	239.738	249.554
60	130.629	147.240	176.311	209.534	221.238
65	100.426	116.660	148.373	180.086	192.168
70	74.375	90.609	124.966	154.791	164.607
75	50.213	65.692	101.558	130.629	137.802
80	29.448	47.570	82.304	108.354	115.527
85	11.704	32.846	64.937	90.609	95.140
90	0.000	20.010	50.590	73.243	77.018
95	0.000	13.969	40.397	60.406	63.804
100	0.000	9.061	29.826	48.325	50.968
105	0.000	7.928	25.673	39.264	43.417
110	0.000	4.908	18.499	30.958	34.356
115	0.000	4.530	16.234	26.050	29.448
120	0.000	4.153	12.836	21.520	24.918
125	0.000	3.020	9.816	17.367	20.010
130	0.000	0.000	9.438	15.479	16.989
135	0.000	0.000	6.418	11.326	13.969
140	0.000	0.000	5.663	9.816	10.949
145	0.000	0.000	0.000	7.551	9.061
150	0.000	0.000	0.000	6.418	7.551
155	0.000	0.000	0.000	5.286	5.286
160	0.000	0.000	0.000	4.530	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	3.020	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	153.96	N.A.	11.50
0-30	325.40	N.A.	24.30
0-40	529.39	N.A.	39.60
0-60	921.68	N.A.	68.90
0-80	1173.78	N.A.	87.70
0-90	1240.35	N.A.	92.70
10-90	1200.48	N.A.	89.70
20-40	375.42	N.A.	28.10
20-50	582.07	N.A.	43.50
40-70	539.77	N.A.	40.30
60-80	252.10	N.A.	18.80
70-80	104.62	N.A.	7.80
80-90	66.57	N.A.	5.00
90-110	64.86	N.A.	4.80
90-120	80.12	N.A.	6.00
90-130	89.39	N.A.	6.70
90-150	96.64	N.A.	7.20
90-180	97.67	N.A.	7.30
110-180	32.81	N.A.	2.50
0-180	1338.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	39.87
10-20	114.09
20-30	171.43
30-40	203.99
40-50	206.65
50-60	185.64
60-70	147.48
70-80	104.62
80-90	66.57
90-100	40.14
100-110	24.72
110-120	15.26
120-130	9.27
130-140	5.05
140-150	2.20
150-160	0.90
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**

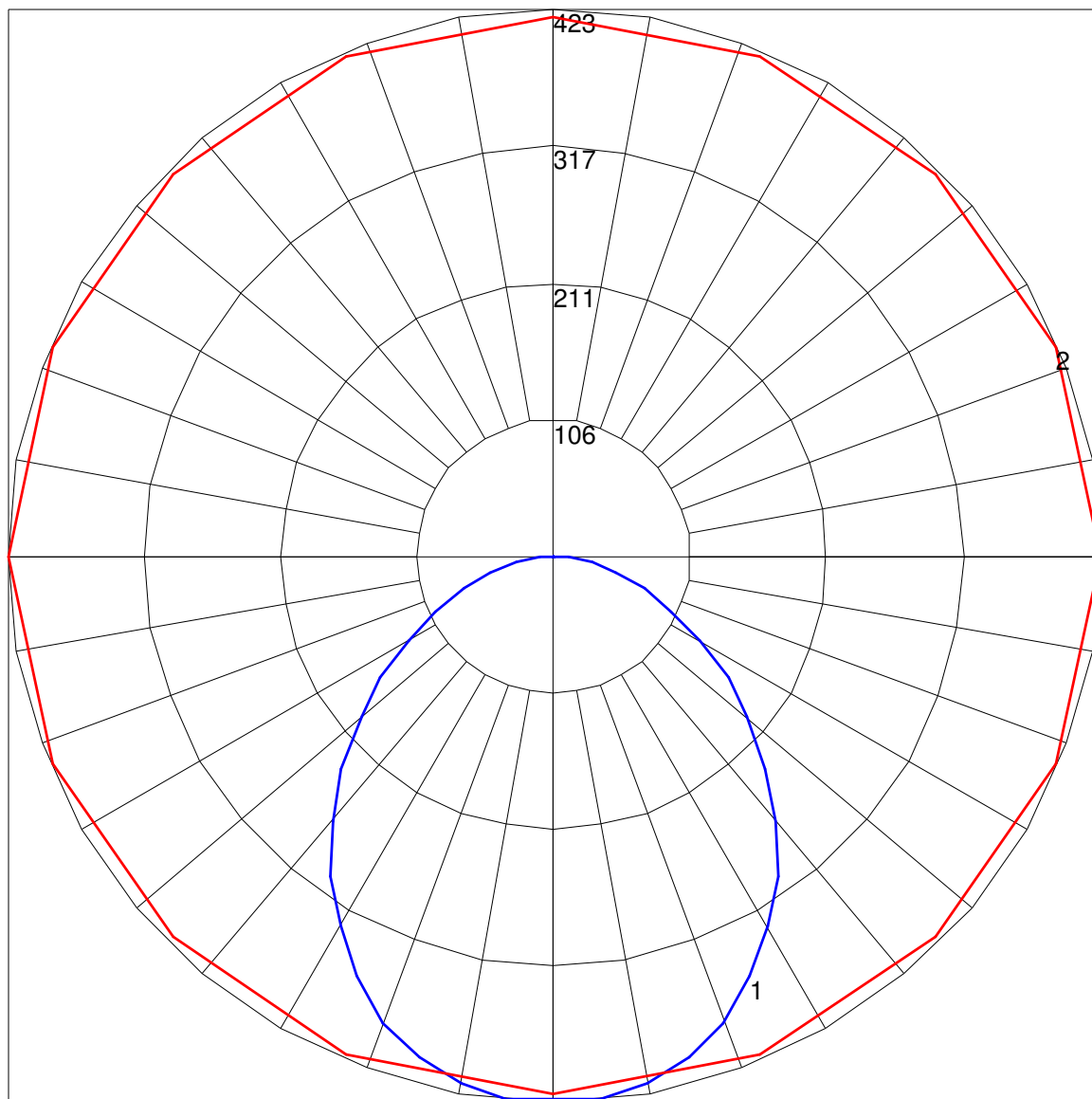
Reflectances

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	12.7	14.2	13.2	14.7	15.2	15.9	17.4	16.4	17.9	18.4
	3H	13.9	15.3	14.4	15.8	16.3	18.1	19.5	18.6	20.0	20.5
	4H	14.3	15.6	14.8	16.1	16.6	19.2	20.5	19.7	21.0	21.5
	6H	14.5	15.8	15.1	16.2	16.8	20.2	21.4	20.7	21.9	22.5
	8H	14.6	15.7	15.1	16.3	16.8	20.7	21.9	21.2	22.4	22.9
	12H	14.6	15.7	15.1	16.2	16.8	21.2	22.3	21.8	22.8	23.4
4H	2H	13.6	14.9	14.1	15.4	16.0	16.2	17.5	16.7	18.0	18.5
	3H	15.1	16.2	15.6	16.7	17.3	18.7	19.8	19.2	20.3	20.9
	4H	15.6	16.6	16.1	17.1	17.7	19.9	20.9	20.4	21.4	22.0
	6H	15.9	16.8	16.5	17.4	18.0	21.1	22.0	21.7	22.6	23.2
	8H	16.0	16.8	16.6	17.4	18.0	21.7	22.6	22.3	23.1	23.7
	12H	16.0	16.8	16.6	17.4	18.0	22.4	23.1	22.9	23.7	24.3
8H	4H	16.3	17.2	16.9	17.7	18.4	20.0	20.9	20.6	21.4	22.1
	6H	16.8	17.5	17.4	18.1	18.8	21.4	22.1	22.0	22.7	23.4
	8H	17.0	17.6	17.6	18.3	18.9	22.2	22.8	22.8	23.4	24.1
	12H	17.1	17.7	17.7	18.3	19.0	23.0	23.6	23.6	24.2	24.9
12H	4H	16.5	17.3	17.1	17.9	18.5	20.0	20.8	20.6	21.4	22.0
	6H	17.2	17.8	17.8	18.4	19.1	21.5	22.1	22.1	22.7	23.4
	8H	17.4	18.0	18.0	18.6	19.3	22.2	22.8	22.9	23.4	24.1

Maximum UGR = 24.9

POLAR GRAPH



Maximum Candela = 422.844 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.)