



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-2-L45-835-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] 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-L45-835-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	4634
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	135
Total Luminaire Watts	34.35
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	10621	9601	10408
55	8865	8084	9320
65	6867	6657	8090
75	4884	5505	6887
85	2081	4623	6077

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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	1460.547	1460.547	1460.547	1460.547	1460.547
5	1464.469	1455.316	1448.779	1450.086	1442.241
10	1438.318	1434.396	1430.473	1438.318	1434.396
15	1392.554	1391.246	1396.476	1408.244	1409.552
20	1335.021	1340.251	1350.712	1372.940	1380.785
25	1246.107	1257.875	1285.333	1315.407	1329.791
30	1149.347	1171.576	1218.648	1259.182	1274.873
35	1046.050	1069.586	1133.656	1191.189	1213.418
40	925.754	957.135	1032.974	1110.120	1133.656
45	804.151	842.070	925.754	1017.283	1044.742
50	676.010	729.620	813.304	919.216	949.290
55	568.789	621.092	712.621	830.302	864.298
60	452.416	509.949	610.631	725.697	766.231
65	347.811	404.037	513.872	623.707	665.549
70	257.590	313.815	432.803	536.100	570.097
75	173.906	227.516	351.734	452.416	477.260
80	101.990	164.753	285.049	375.270	400.114
85	40.534	113.758	224.901	313.815	329.506
90	0.000	69.301	175.213	253.667	266.743
95	0.000	48.380	139.909	209.210	220.978
100	0.000	31.381	103.297	167.368	176.521
105	0.000	27.459	88.914	135.986	150.370
110	0.000	16.998	64.071	107.220	118.988
115	0.000	15.691	56.225	90.222	101.990
120	0.000	14.383	44.457	74.531	86.299
125	0.000	10.460	33.997	60.148	69.301
130	0.000	0.000	32.689	53.610	58.840
135	0.000	0.000	22.229	39.227	48.380
140	0.000	0.000	19.613	33.997	37.919
145	0.000	0.000	0.000	26.151	31.381
150	0.000	0.000	0.000	22.229	26.151
155	0.000	0.000	0.000	18.306	18.306
160	0.000	0.000	0.000	15.691	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	10.460	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	533.23	N.A.	11.50
0-30	1126.97	N.A.	24.30
0-40	1833.47	N.A.	39.60
0-60	3192.13	N.A.	68.90
0-80	4065.24	N.A.	87.70
0-90	4295.79	N.A.	92.70
10-90	4157.71	N.A.	89.70
20-40	1300.23	N.A.	28.10
20-50	2015.94	N.A.	43.50
40-70	1869.44	N.A.	40.30
60-80	873.11	N.A.	18.80
70-80	362.33	N.A.	7.80
80-90	230.55	N.A.	5.00
90-110	224.64	N.A.	4.80
90-120	277.50	N.A.	6.00
90-130	309.61	N.A.	6.70
90-150	334.71	N.A.	7.20
90-180	338.28	N.A.	7.30
110-180	113.64	N.A.	2.50
0-180	4634.07	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	138.09
10-20	395.15
20-30	593.74
30-40	706.49
40-50	715.71
50-60	642.95
60-70	510.78
70-80	362.33
80-90	230.55
90-100	139.03
100-110	85.61
110-120	52.86
120-130	32.11
130-140	17.50
140-150	7.61
150-160	3.12
160-170	0.32
170-180	0.12

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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**

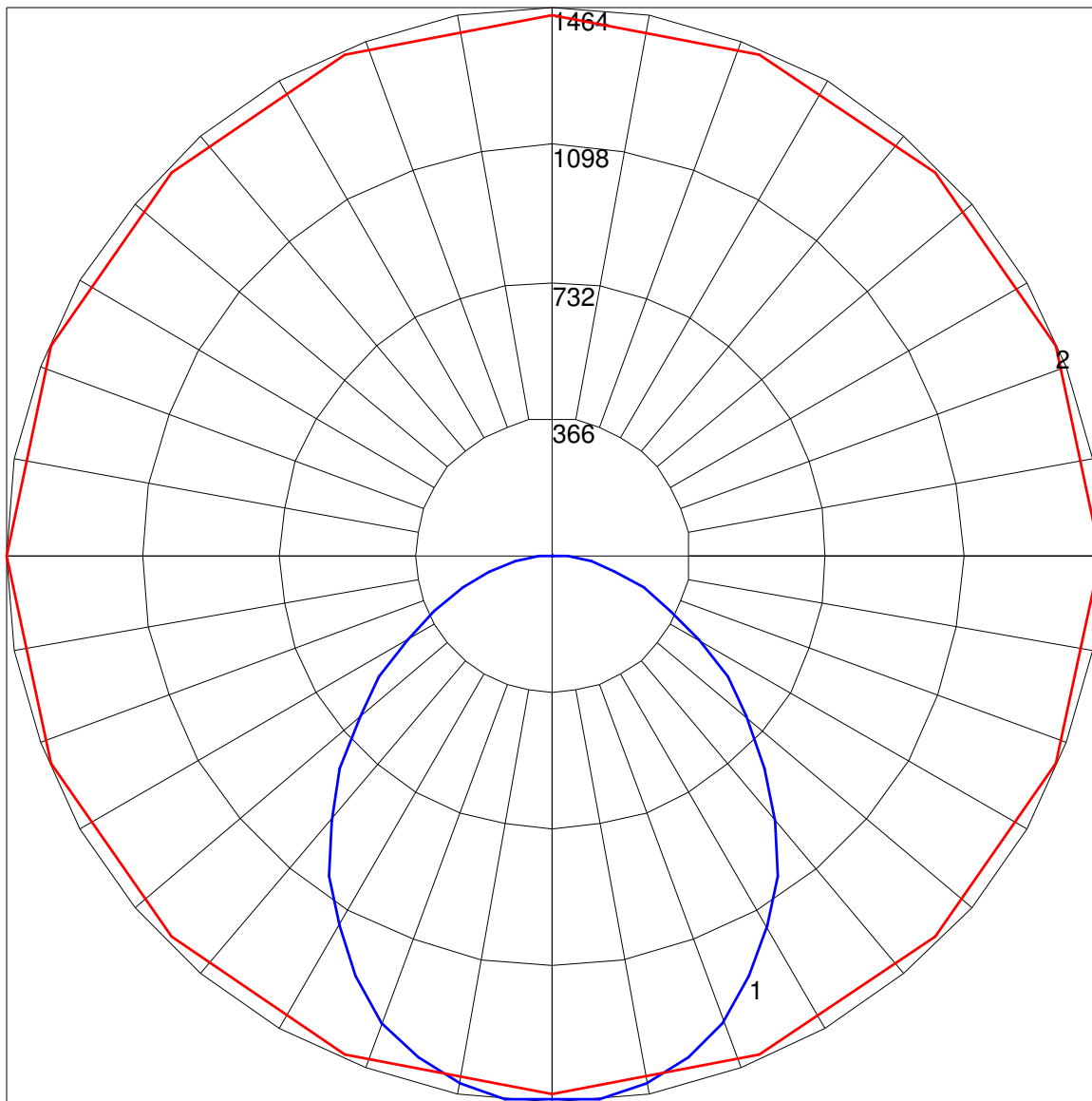
Reflectances

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	17.8	19.3	18.3	19.8	20.3	20.2	21.7	20.7	22.2	22.7
	3H	19.2	20.6	19.7	21.1	21.6	22.4	23.8	22.9	24.3	24.8
	4H	19.7	21.0	20.2	21.5	22.0	23.5	24.8	24.0	25.3	25.8
	6H	20.0	21.2	20.6	21.7	22.3	24.5	25.7	25.0	26.2	26.8
	8H	20.1	21.3	20.6	21.8	22.4	25.0	26.2	25.5	26.7	27.2
	12H	20.2	21.3	20.7	21.8	22.4	25.5	26.6	26.1	27.1	27.7
4H	2H	18.5	19.8	19.0	20.3	20.9	20.5	21.8	21.0	22.3	22.8
	3H	20.2	21.3	20.7	21.8	22.4	23.0	24.1	23.5	24.6	25.2
	4H	20.8	21.8	21.3	22.3	22.9	24.2	25.2	24.7	25.7	26.3
	6H	21.2	22.1	21.8	22.7	23.3	25.4	26.3	26.0	26.9	27.5
	8H	21.4	22.2	21.9	22.8	23.4	26.0	26.9	26.6	27.4	28.0
	12H	21.4	22.2	22.0	22.8	23.4	26.7	27.4	27.2	28.0	28.6
8H	4H	21.3	22.1	21.9	22.7	23.3	24.3	25.2	24.9	25.7	26.4
	6H	21.9	22.6	22.5	23.2	23.9	25.7	26.4	26.3	27.0	27.7
	8H	22.2	22.8	22.8	23.4	24.0	26.5	27.1	27.1	27.7	28.4
	12H	22.3	22.9	22.9	23.5	24.2	27.3	27.9	27.9	28.5	29.2
12H	4H	21.4	22.2	22.0	22.8	23.4	24.3	25.1	24.9	25.7	26.3
	6H	22.1	22.8	22.8	23.4	24.1	25.8	26.4	26.4	27.0	27.7
	8H	22.4	23.0	23.0	23.6	24.3	26.5	27.1	27.1	27.7	28.4

Maximum UGR = 29.2

POLAR GRAPH



Maximum Candela = 1464.469 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.)