



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-2-L45-827-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-L45-827-HIA-DIM-UNV  
 [LAMPCAT] HLM 80 CRI 2700K 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	4494
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	131
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	10300	9311	10093
55	8598	7840	9039
65	6659	6456	7846
75	4737	5339	6679
85	2018	4483	5893

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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>
<b>0</b>	1416.422	1416.422	1416.422	1416.422	1416.422
<b>5</b>	1420.226	1411.350	1405.009	1406.277	1398.669
<b>10</b>	1394.865	1391.061	1387.257	1394.865	1391.061
<b>15</b>	1350.483	1349.215	1354.287	1365.700	1366.968
<b>20</b>	1294.688	1299.760	1309.905	1331.462	1339.070
<b>25</b>	1208.460	1219.873	1246.502	1275.667	1289.616
<b>30</b>	1114.624	1136.181	1181.831	1221.141	1236.358
<b>35</b>	1014.447	1037.272	1099.407	1155.202	1176.759
<b>40</b>	897.786	928.219	1001.767	1076.582	1099.407
<b>45</b>	779.856	816.630	897.786	986.550	1013.179
<b>50</b>	655.587	707.577	788.733	891.445	920.611
<b>55</b>	551.606	602.328	691.092	805.217	838.187
<b>60</b>	438.748	494.543	592.184	703.773	743.083
<b>65</b>	337.304	391.830	498.347	604.864	645.442
<b>70</b>	249.808	304.334	419.728	519.904	552.874
<b>75</b>	168.652	220.642	341.108	438.748	462.842
<b>80</b>	98.909	159.775	276.437	363.933	388.026
<b>85</b>	39.310	110.321	218.106	304.334	319.551
<b>90</b>	0.000	67.207	169.920	246.003	258.684
<b>95</b>	0.000	46.918	135.682	202.889	214.302
<b>100</b>	0.000	30.433	100.177	162.312	171.188
<b>105</b>	0.000	26.629	86.228	131.878	145.827
<b>110</b>	0.000	16.485	62.135	103.981	115.393
<b>115</b>	0.000	15.217	54.527	87.496	98.909
<b>120</b>	0.000	13.949	43.114	72.279	83.692
<b>125</b>	0.000	10.144	32.970	58.331	67.207
<b>130</b>	0.000	0.000	31.701	51.990	57.063
<b>135</b>	0.000	0.000	21.557	38.042	46.918
<b>140</b>	0.000	0.000	19.021	32.970	36.774
<b>145</b>	0.000	0.000	0.000	25.361	30.433
<b>150</b>	0.000	0.000	0.000	21.557	25.361
<b>155</b>	0.000	0.000	0.000	17.753	17.753
<b>160</b>	0.000	0.000	0.000	15.217	0.000
<b>165</b>	0.000	0.000	0.000	0.000	0.000
<b>170</b>	0.000	0.000	0.000	0.000	0.000
<b>175</b>	0.000	0.000	0.000	10.144	0.000
<b>180</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	517.12	N.A.	11.50
0-30	1092.92	N.A.	24.30
0-40	1778.07	N.A.	39.60
0-60	3095.69	N.A.	68.90
0-80	3942.42	N.A.	87.70
0-90	4166.01	N.A.	92.70
10-90	4032.1	N.A.	89.70
20-40	1260.95	N.A.	28.10
20-50	1955.04	N.A.	43.50
40-70	1812.97	N.A.	40.30
60-80	846.73	N.A.	18.80
70-80	351.38	N.A.	7.80
80-90	223.59	N.A.	5.00
90-110	217.85	N.A.	4.80
90-120	269.11	N.A.	6.00
90-130	300.25	N.A.	6.70
90-150	324.60	N.A.	7.20
90-180	328.06	N.A.	7.30
110-180	110.21	N.A.	2.50
0-180	4494.07	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	133.91
10-20	383.21
20-30	575.80
30-40	685.15
40-50	694.09
50-60	623.53
60-70	495.35
70-80	351.38
80-90	223.59
90-100	134.83
100-110	83.03
110-120	51.26
120-130	31.14
130-140	16.97
140-150	7.38
150-160	3.02
160-170	0.31
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

X=2H	Y=2H	17.7	19.2	18.2	19.7	20.2	20.1	21.6	20.6	22.1	22.6
	3H	19.1	20.5	19.6	21.0	21.5	22.3	23.7	22.8	24.2	24.7
	4H	19.6	20.9	20.1	21.4	21.9	23.4	24.7	23.9	25.2	25.7
	6H	19.9	21.1	20.5	21.6	22.2	24.4	25.6	24.9	26.1	26.7
	8H	20.0	21.2	20.5	21.7	22.3	24.9	26.1	25.4	26.6	27.1
	12H	20.1	21.2	20.6	21.7	22.3	25.4	26.5	26.0	27.0	27.6

UGR Viewed Endwise

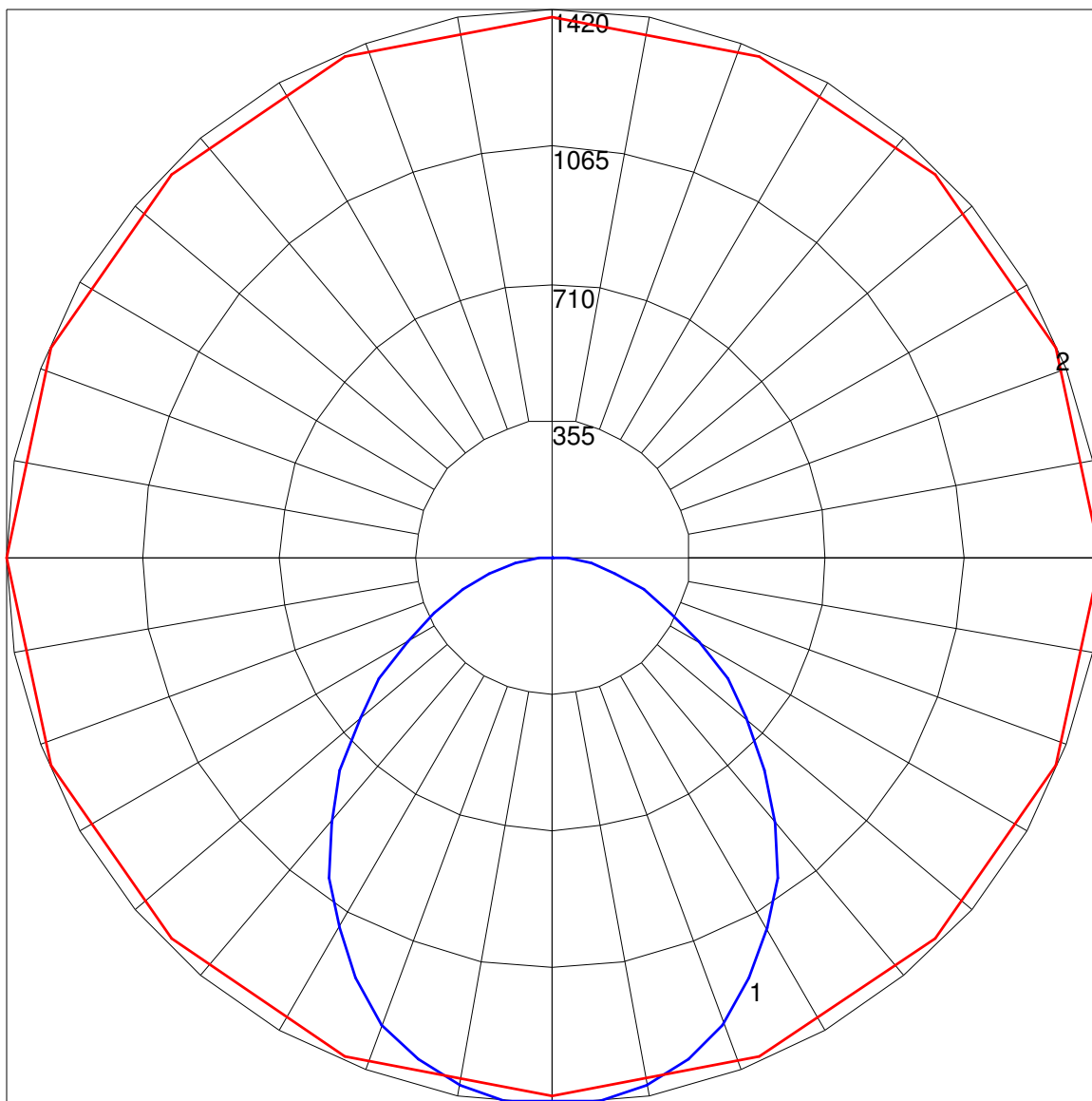
4H	2H	18.4	19.7	18.9	20.2	20.8	20.4	21.7	20.9	22.2	22.7
	3H	20.1	21.2	20.6	21.7	22.3	22.9	24.0	23.4	24.5	25.1
	4H	20.7	21.7	21.2	22.2	22.8	24.1	25.1	24.6	25.6	26.2
	6H	21.1	22.0	21.7	22.6	23.2	25.3	26.2	25.9	26.8	27.4
	8H	21.3	22.1	21.8	22.7	23.3	25.9	26.8	26.5	27.3	27.9
	12H	21.3	22.1	21.9	22.7	23.3	26.6	27.3	27.1	27.9	28.5

8H	4H	21.2	22.0	21.8	22.6	23.2	24.2	25.1	24.8	25.6	26.3
	6H	21.8	22.5	22.4	23.1	23.8	25.6	26.3	26.2	26.9	27.6
	8H	22.1	22.7	22.7	23.3	23.9	26.4	27.0	27.0	27.6	28.3
	12H	22.2	22.8	22.8	23.4	24.1	27.2	27.8	27.8	28.4	29.1

12H	4H	21.3	22.1	21.9	22.7	23.3	24.2	25.0	24.8	25.6	26.2
	6H	22.0	22.7	22.7	23.3	24.0	25.7	26.3	26.3	26.9	27.6
	8H	22.3	22.9	22.9	23.5	24.2	26.4	27.0	27.0	27.6	28.3

Maximum UGR = 29.1

POLAR GRAPH



Maximum Candela = 1420.226 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.)