



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L98-835-HIA-(L59)-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 20114.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE]03-29-2023  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836  
 [LUMINAIRE] 4' LED SURFACE MOUNT LUMINAIRE  
 [LUMCAT] SLF-4-L98-835-HIA-(L59)-DIM-UNV  
 [MORE] WITH FROSTED ACRYLIC LENS  
 [LAMPCAT] HLM 80 CRI 3500K 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	6017
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	135
Total Luminaire Watts	44.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.06 ft
Luminous Width (90-270)	0.47 ft
Luminous Height	0.23 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	8518	7048	7232
55	7210	6041	6415
65	5798	5104	5499
75	4073	4089	4630
85	1244	3290	4050

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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	1942.815	1942.815	1942.815	1942.815	1942.815
5	1963.546	1934.917	1927.019	1925.045	1924.058
10	1922.083	1900.365	1895.429	1900.365	1895.429
15	1862.851	1846.069	1853.966	1862.851	1860.877
20	1774.990	1762.157	1789.798	1805.594	1811.517
25	1678.244	1661.462	1700.950	1737.477	1740.438
30	1560.767	1550.895	1602.230	1655.539	1657.513
35	1428.482	1423.546	1487.714	1556.818	1565.703
40	1288.299	1275.466	1358.391	1442.303	1461.060
45	1127.385	1113.565	1223.144	1318.903	1348.519
50	954.625	958.574	1088.884	1189.579	1232.029
55	791.736	816.417	951.663	1059.268	1106.654
60	634.771	679.195	819.378	934.881	976.343
65	486.691	541.974	697.952	806.545	843.071
70	348.483	413.638	577.514	688.080	717.696
75	226.069	295.174	457.075	578.501	599.232
80	119.452	202.377	359.342	479.780	496.563
85	31.590	130.311	274.442	392.907	411.663
90	3.949	81.938	213.236	319.854	343.546
95	0.987	48.373	160.914	253.711	281.353
100	0.000	28.629	116.490	196.453	224.095
105	0.000	19.744	85.887	149.068	178.684
110	0.000	14.808	68.117	121.426	146.106
115	0.000	12.834	51.335	97.733	116.490
120	0.000	11.846	43.437	79.963	93.784
125	0.000	7.898	31.590	63.181	75.027
130	0.000	6.910	25.667	48.373	57.258
135	0.000	4.936	19.744	38.501	44.424
140	0.000	4.936	14.808	29.616	35.539
145	0.000	1.974	12.834	23.693	26.654
150	0.000	0.000	11.846	20.731	23.693
155	0.000	0.000	7.898	14.808	18.757
160	0.000	0.000	6.910	9.872	12.834
165	0.000	0.000	0.000	6.910	7.898
170	0.000	0.000	0.000	0.000	4.936
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	706.68	N.A.	11.70
0-30	1491.19	N.A.	24.80
0-40	2423.23	N.A.	40.30
0-60	4214.11	N.A.	70.00
0-80	5352.8	N.A.	89.00
0-90	5637.48	N.A.	93.70
10-90	5454.00	N.A.	90.60
20-40	1716.55	N.A.	28.50
20-50	2661.34	N.A.	44.20
40-70	2464.19	N.A.	41.00
60-80	1138.7	N.A.	18.90
70-80	465.38	N.A.	7.70
80-90	284.68	N.A.	4.70
90-110	261.17	N.A.	4.30
90-120	317.12	N.A.	5.30
90-130	349.32	N.A.	5.80
90-150	374.74	N.A.	6.20
90-180	379.53	N.A.	6.30
110-180	118.35	N.A.	2.00
0-180	6017.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	183.48
10-20	523.19
20-30	784.51
30-40	932.04
40-50	944.80
50-60	846.08
60-70	673.31
70-80	465.38
80-90	284.68
90-100	167.21
100-110	93.97
110-120	55.94
120-130	32.20
130-140	16.91
140-150	8.51
150-160	3.87
160-170	0.90
170-180	0.02

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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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	106	101	96	92	103	98	94	90	92	89	86	87	84	82	83	80	78	76
2	96	87	80	74	93	85	78	73	80	75	70	76	71	67	72	68	65	62
3	87	77	68	61	84	74	67	60	71	64	58	67	61	57	64	59	55	52
4	80	68	59	52	77	66	58	51	63	55	50	60	53	48	57	51	47	45
5	74	61	51	45	71	59	50	44	56	49	43	53	47	42	51	45	41	39
6	68	54	45	39	66	53	45	38	51	43	38	48	42	37	46	40	36	34
7	63	49	41	34	61	48	40	34	46	39	33	44	38	33	42	36	32	30
8	59	45	36	31	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	28	53	40	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	24	22

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**UGR TABLE - CORRECTED**

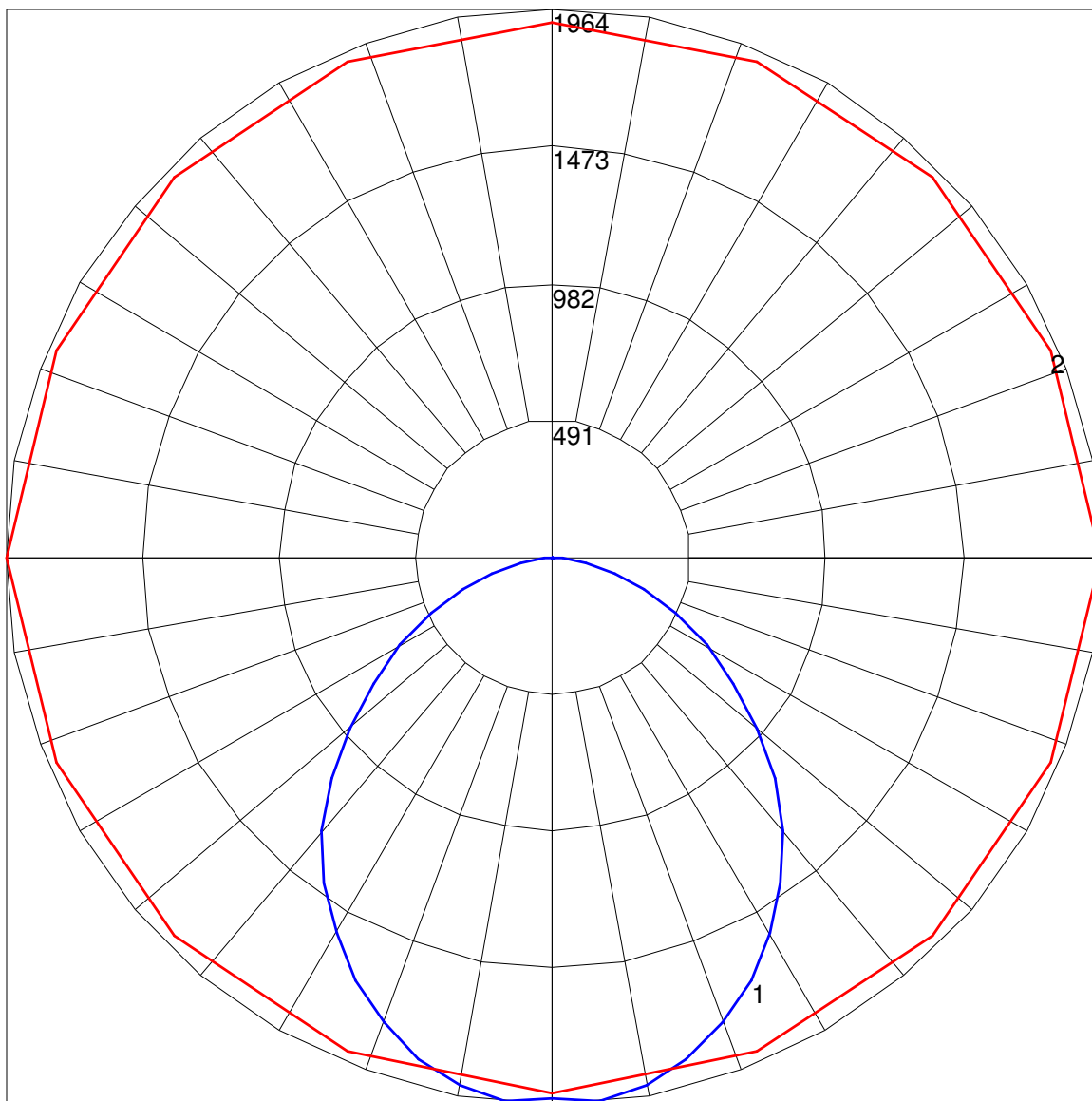
Reflectances

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	16.0	17.6	16.5	18.0	18.5	19.1	20.7	19.6	21.1	21.6
	3H	17.3	18.7	17.7	19.1	19.6	21.4	22.8	21.9	23.3	23.8
	4H	17.6	18.9	18.1	19.4	19.9	22.5	23.8	23.0	24.3	24.8
	6H	17.8	19.0	18.3	19.5	20.0	23.5	24.8	24.0	25.2	25.8
	8H	17.8	19.0	18.4	19.5	20.1	24.1	25.3	24.6	25.8	26.3
	12H	17.8	19.0	18.4	19.5	20.0	24.7	25.8	25.2	26.3	26.9
4H	2H	17.0	18.4	17.5	18.8	19.3	19.5	20.8	20.0	21.3	21.8
	3H	18.5	19.6	19.0	20.1	20.7	22.0	23.1	22.5	23.6	24.1
	4H	18.9	20.0	19.5	20.5	21.0	23.2	24.2	23.7	24.7	25.3
	6H	19.2	20.1	19.8	20.7	21.2	24.5	25.4	25.0	25.9	26.5
	8H	19.3	20.1	19.8	20.7	21.3	25.1	26.0	25.7	26.5	27.1
	12H	19.3	20.0	19.9	20.6	21.2	25.8	26.6	26.4	27.2	27.8
8H	4H	19.7	20.5	20.2	21.1	21.7	23.4	24.2	23.9	24.7	25.3
	6H	20.1	20.8	20.7	21.4	22.0	24.8	25.5	25.3	26.1	26.7
	8H	20.2	20.9	20.8	21.5	22.1	25.6	26.2	26.2	26.8	27.4
	12H	20.3	20.9	20.9	21.5	22.1	26.4	27.0	27.0	27.6	28.3
12H	4H	19.9	20.6	20.4	21.2	21.8	23.4	24.1	23.9	24.7	25.3
	6H	20.4	21.1	21.0	21.6	22.3	24.8	25.5	25.4	26.0	26.7
	8H	20.6	21.2	21.2	21.8	22.5	25.6	26.2	26.2	26.8	27.5

Maximum UGR = 28.3

POLAR GRAPH



Maximum Candela = 1963.546 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.)