



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L98-835-HIA-(L60)-OCXXX-EM-10W-SD50-UNV_EM MODE ONLY.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] 06-02-2023

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 48" SURFACE MOUNT LED LUMINAIRE

[LUMCAT] SLF-4-L98-835-HIA-(L60)-OCxxx-EM-10W-SD50 EM MODE ONLY

[MORE] WHITE FLAT REFLECTOR w/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	1333
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
Total Luminaire Watts	10
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	1887	1561	1602
55	1597	1338	1421
65	1285	1131	1218
75	902	906	1026
85	276	729	897

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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	430.409	430.409	430.409	430.409	430.409
5	435.002	428.659	426.910	426.472	426.254
10	425.816	421.005	419.911	421.005	419.911
15	412.694	408.976	410.726	412.694	412.257
20	393.229	390.386	396.510	400.009	401.321
25	371.796	368.079	376.827	384.919	385.575
30	345.771	343.584	354.956	366.766	367.204
35	316.464	315.371	329.587	344.896	346.864
40	285.408	282.565	300.936	319.526	323.682
45	249.760	246.698	270.974	292.188	298.749
50	211.487	212.361	241.230	263.538	272.942
55	175.400	180.868	210.830	234.669	245.167
60	140.627	150.468	181.524	207.113	216.298
65	107.821	120.068	154.624	178.681	186.773
70	77.202	91.637	127.942	152.437	158.998
75	50.083	65.392	101.260	128.160	132.753
80	26.463	44.834	79.608	106.290	110.008
85	6.999	28.869	60.800	87.044	91.199
90	0.875	18.152	47.240	70.860	76.109
95	0.219	10.716	35.649	56.207	62.331
100	0.000	6.342	25.807	43.522	49.646
105	0.000	4.374	19.027	33.024	39.585
110	0.000	3.281	15.091	26.901	32.368
115	0.000	2.843	11.373	21.652	25.807
120	0.000	2.624	9.623	17.715	20.777
125	0.000	1.750	6.999	13.997	16.621
130	0.000	1.531	5.686	10.716	12.685
135	0.000	1.094	4.374	8.529	9.842
140	0.000	1.094	3.281	6.561	7.873
145	0.000	0.437	2.843	5.249	5.905
150	0.000	0.000	2.624	4.593	5.249
155	0.000	0.000	1.750	3.281	4.155
160	0.000	0.000	1.531	2.187	2.843
165	0.000	0.000	0.000	1.531	1.750
170	0.000	0.000	0.000	0.000	1.094
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : SLF-4-L98-835-HIA-(L60)-OCXXX-EM-10W-SD50-UNV_EM MODE ONLY.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	156.56	N.A.	11.70
0-30	330.36	N.A.	24.80
0-40	536.84	N.A.	40.30
0-60	933.59	N.A.	70.00
0-80	1185.85	N.A.	89.00
0-90	1248.92	N.A.	93.70
10-90	1208.27	N.A.	90.60
20-40	380.28	N.A.	28.50
20-50	589.59	N.A.	44.20
40-70	545.91	N.A.	41.00
60-80	252.27	N.A.	18.90
70-80	103.10	N.A.	7.70
80-90	63.07	N.A.	4.70
90-110	57.86	N.A.	4.30
90-120	70.25	N.A.	5.30
90-130	77.39	N.A.	5.80
90-150	83.02	N.A.	6.20
90-180	84.08	N.A.	6.30
110-180	26.22	N.A.	2.00
0-180	1333.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	40.65
10-20	115.91
20-30	173.80
30-40	206.48
40-50	209.31
50-60	187.44
60-70	149.17
70-80	103.10
80-90	63.07
90-100	37.04
100-110	20.82
110-120	12.39
120-130	7.13
130-140	3.75
140-150	1.88
150-160	0.86
160-170	0.20
170-180	0.00

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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

X=2H	Y=2H	10.8	12.4	11.3	12.8	13.3	14.0	15.5	14.4	15.9	16.4
	3H	12.1	13.5	12.5	13.9	14.4	16.2	17.6	16.7	18.1	18.6
	4H	12.4	13.7	12.9	14.2	14.7	17.3	18.6	17.8	19.1	19.6
	6H	12.6	13.8	13.1	14.3	14.9	18.3	19.6	18.8	20.1	20.6
	8H	12.6	13.8	13.2	14.3	14.9	18.9	20.1	19.4	20.6	21.1
	12H	12.6	13.8	13.2	14.3	14.8	19.5	20.6	20.0	21.1	21.7

UGR Viewed Endwise

4H	2H	11.8	13.2	12.3	13.6	14.1	14.3	15.6	14.8	16.1	16.6
	3H	13.3	14.4	13.8	14.9	15.5	16.8	17.9	17.3	18.4	18.9
	4H	13.7	14.8	14.3	15.3	15.8	18.0	19.0	18.5	19.5	20.1
	6H	14.0	14.9	14.6	15.5	16.0	19.3	20.2	19.8	20.7	21.3
	8H	14.1	14.9	14.6	15.5	16.1	19.9	20.8	20.5	21.3	21.9
	12H	14.1	14.9	14.7	15.4	16.0	20.6	21.4	21.2	22.0	22.6

8H	4H	14.5	15.3	15.0	15.9	16.5	18.2	19.0	18.7	19.5	20.1
	6H	14.9	15.6	15.5	16.2	16.8	19.6	20.3	20.2	20.9	21.5
	8H	15.0	15.7	15.6	16.3	16.9	20.4	21.0	21.0	21.6	22.2
	12H	15.1	15.7	15.7	16.3	16.9	21.2	21.8	21.8	22.4	23.1

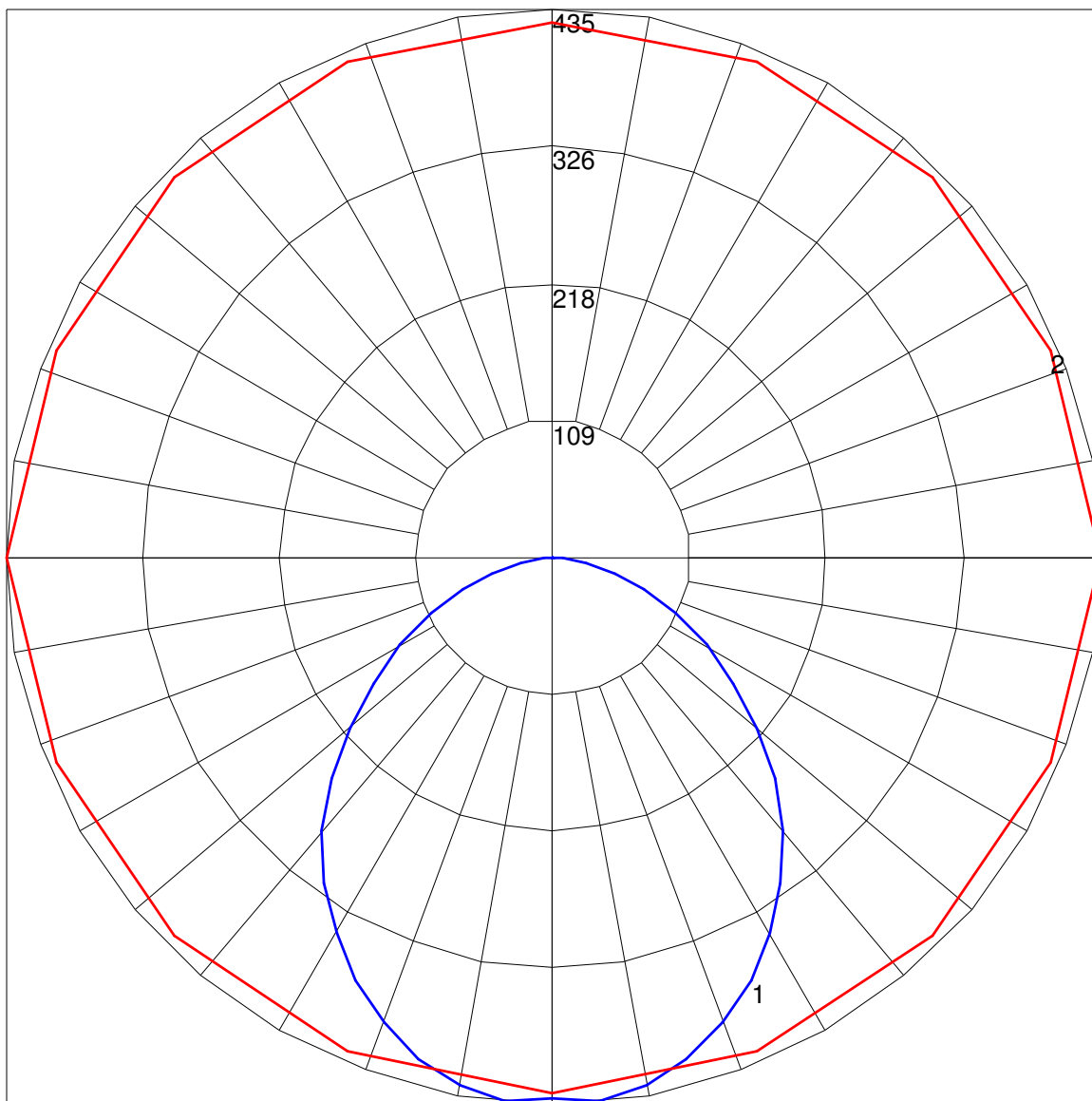
12H	4H	14.7	15.4	15.2	16.0	16.6	18.2	18.9	18.7	19.5	20.1
	6H	15.2	15.9	15.8	16.4	17.1	19.6	20.3	20.2	20.8	21.5
	8H	15.4	16.0	16.0	16.6	17.3	20.4	21.0	21.0	21.6	22.3

Maximum UGR = 23.1

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POLAR GRAPH



Maximum Candela = 435.002 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.)