

IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L52-835-HIA-EM10W-DIM-UNV (EM MODE)_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] 08-31-2023

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836

[LUMINAIRE] 4' LED SURFACE MOUNT LUMINAIRE

[LUMCAT] SLF-4-L52-835-HIA-EM10W-DIM-UNV (EM MODE)

[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	1309
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	131
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	1854	1534	1574
55	1569	1315	1396
65	1262	1111	1197
75	886	890	1007
85	271	716	881

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	422.772	422.772	422.772	422.772	422.772
5	427.284	421.054	419.335	418.906	418.691
10	418.261	413.535	412.461	413.535	412.461
15	405.372	401.720	403.438	405.372	404.942
20	386.252	383.460	389.475	392.912	394.201
25	365.200	361.548	370.141	378.089	378.734
30	339.636	337.488	348.658	360.259	360.688
35	310.849	309.775	323.739	338.776	340.710
40	280.345	277.552	295.597	313.857	317.939
45	245.328	242.321	266.166	287.004	293.449
50	207.734	208.594	236.950	258.862	268.100
55	172.288	177.659	207.090	230.506	240.817
60	138.131	147.798	178.303	203.438	212.460
65	105.908	117.938	151.880	175.511	183.459
70	75.833	90.011	125.672	149.732	156.177
75	49.195	64.232	99.463	125.887	130.398
80	25.994	44.039	78.196	104.404	108.056
85	6.874	28.357	59.721	85.500	89.581
90	0.859	17.830	46.402	69.603	74.759
95	0.215	10.526	35.016	55.210	61.225
100	0.000	6.230	25.349	42.750	48.765
105	0.000	4.296	18.690	32.438	38.883
110	0.000	3.222	14.823	26.423	31.794
115	0.000	2.793	11.171	21.268	25.349
120	0.000	2.578	9.452	17.401	20.408
125	0.000	1.719	6.874	13.749	16.327
130	0.000	1.504	5.585	10.526	12.460
135	0.000	1.074	4.296	8.378	9.667
140	0.000	1.074	3.222	6.445	7.734
145	0.000	0.430	2.793	5.156	5.800
150	0.000	0.000	2.578	4.511	5.156
155	0.000	0.000	1.719	3.222	4.082
160	0.000	0.000	1.504	2.148	2.793
165	0.000	0.000	0.000	1.504	1.719
170	0.000	0.000	0.000	0.000	1.074
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	153.78	N.A.	11.70
0-30	324.49	N.A.	24.80
0-40	527.31	N.A.	40.30
0-60	917.02	N.A.	70.00
0-80	1164.81	N.A.	89.00
0-90	1226.76	N.A.	93.70
10-90	1186.84	N.A.	90.60
20-40	373.54	N.A.	28.50
20-50	579.13	N.A.	44.20
40-70	536.23	N.A.	41.00
60-80	247.79	N.A.	18.90
70-80	101.27	N.A.	7.70
80-90	61.95	N.A.	4.70
90-110	56.83	N.A.	4.30
90-120	69.01	N.A.	5.30
90-130	76.02	N.A.	5.80
90-150	81.55	N.A.	6.20
90-180	82.59	N.A.	6.30
110-180	25.75	N.A.	2.00
0-180	1309.35	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	39.93
10-20	113.85
20-30	170.72
30-40	202.82
40-50	205.60
50-60	184.11
60-70	146.52
70-80	101.27
80-90	61.95
90-100	36.39
100-110	20.45
110-120	12.17
120-130	7.01
130-140	3.68
140-150	1.85
150-160	0.84
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	85	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	88	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	41	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	41	34	29	39	33	29	27
9	55	41	33	28	53	41	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	10.7	12.3	11.2	12.7	13.2	13.8	15.4	14.3	15.8	16.3
	3H	12.0	13.4	12.4	13.8	14.3	16.1	17.5	16.6	18.0	18.5
	4H	12.3	13.6	12.8	14.1	14.6	17.2	18.5	17.7	19.0	19.5
	6H	12.5	13.7	13.0	14.2	14.7	18.2	19.5	18.7	19.9	20.5
	8H	12.5	13.7	13.0	14.2	14.8	18.8	20.0	19.3	20.5	21.0
	12H	12.5	13.7	13.1	14.2	14.7	19.4	20.5	19.9	21.0	21.6

UGR Viewed Endwise

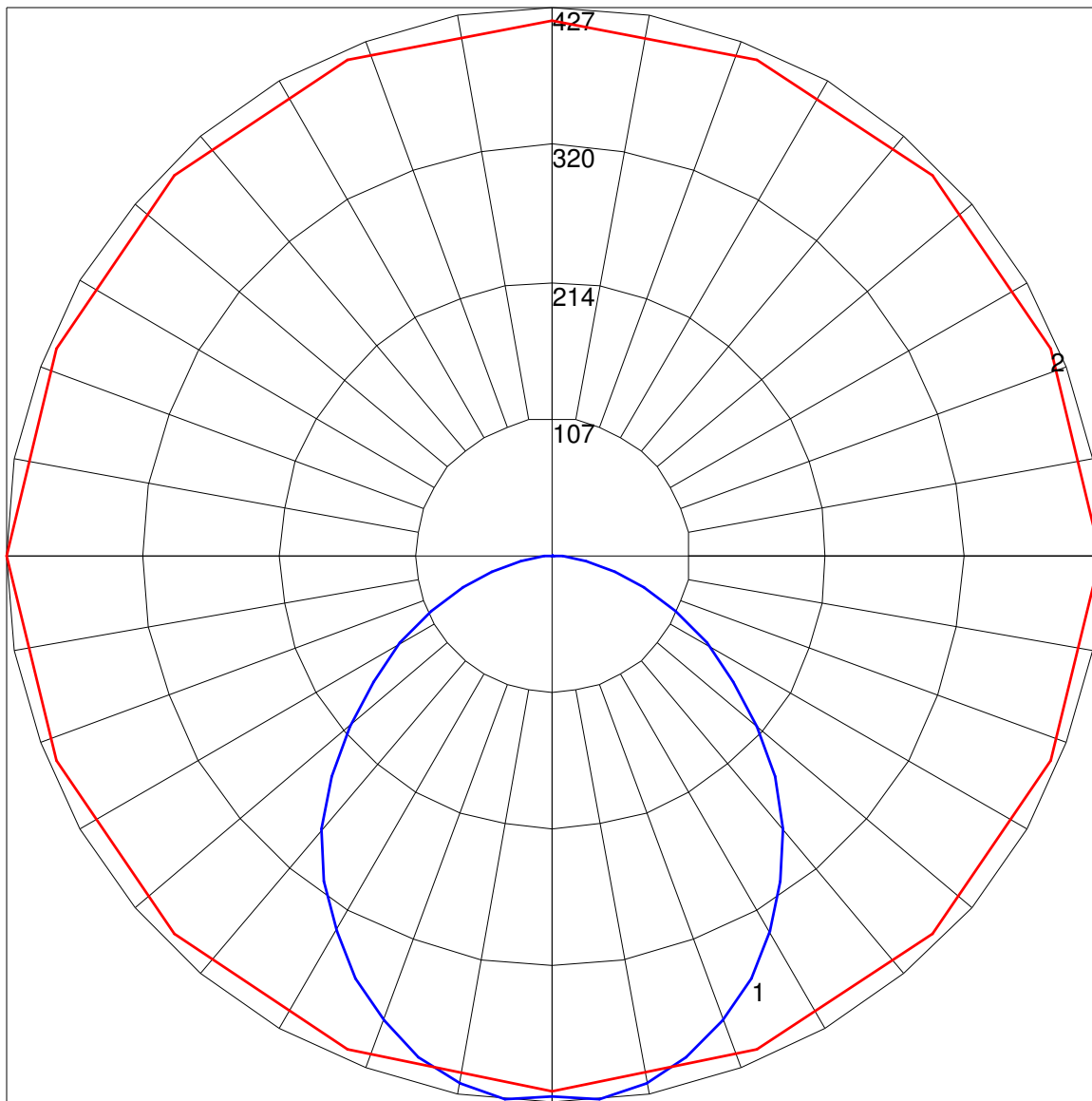
4H	2H	11.7	13.0	12.2	13.5	14.0	14.2	15.5	14.7	16.0	16.5
	3H	13.2	14.3	13.7	14.8	15.4	16.7	17.8	17.2	18.3	18.8
	4H	13.6	14.7	14.2	15.2	15.7	17.9	18.9	18.4	19.4	20.0
	6H	13.9	14.8	14.5	15.4	15.9	19.2	20.1	19.7	20.6	21.2
	8H	14.0	14.8	14.5	15.4	16.0	19.8	20.7	20.4	21.2	21.8
	12H	14.0	14.7	14.6	15.3	15.9	20.5	21.3	21.1	21.9	22.5
8H	4H	14.4	15.2	14.9	15.8	16.4	18.1	18.9	18.6	19.4	20.0
	6H	14.8	15.5	15.4	16.1	16.7	19.5	20.2	20.0	20.8	21.4
	8H	14.9	15.6	15.5	16.2	16.8	20.3	20.9	20.9	21.5	22.1
	12H	15.0	15.6	15.6	16.2	16.8	21.1	21.7	21.7	22.3	23.0
12H	4H	14.6	15.3	15.1	15.9	16.5	18.0	18.8	18.6	19.4	20.0
	6H	15.1	15.8	15.7	16.3	17.0	19.5	20.2	20.1	20.7	21.4
	8H	15.3	15.9	15.9	16.5	17.2	20.3	20.9	20.9	21.5	22.2

Maximum UGR = 23.0

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POLAR GRAPH



Maximum Candela = 427.284 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.)