



IES INDOOR REPORT

PHOTOMETRIC FILENAME : COPY_SLF-4-L52-840-HIA-(L40)- 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] 12-08-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 4' LED SURFACE MOUNT LUMINAIRE
 [LUMCAT] SLF-4-L52-840-HIA-(L40)- EM10W-DIM-UNV (EM MODE)
 [MORE] WITH FROSTED ACRYLIC LENS
 [LAMPCAT] HLM 80 CRI 4000K 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	1360
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	136
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	1925	1593	1635
55	1630	1365	1450
65	1311	1154	1243
75	921	924	1046
85	281	744	916

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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	439.127	439.127	439.127	439.127	439.127
5	443.813	437.342	435.557	435.111	434.888
10	434.441	429.532	428.417	429.532	428.417
15	421.053	417.260	419.045	421.053	420.607
20	401.194	398.294	404.541	408.112	409.450
25	379.327	375.534	384.459	392.715	393.385
30	352.774	350.543	362.146	374.195	374.641
35	322.874	321.759	336.262	351.882	353.890
40	291.189	288.289	307.032	325.998	330.238
45	254.819	251.695	276.463	298.107	304.801
50	215.770	216.663	246.116	268.876	278.471
55	178.953	184.532	215.101	239.422	250.133
60	143.475	153.516	185.201	211.308	220.679
65	110.005	122.500	157.756	182.300	190.556
70	78.766	93.493	130.533	155.524	162.218
75	51.098	66.717	103.311	130.756	135.442
80	26.999	45.742	81.221	108.443	112.236
85	7.140	29.454	62.031	88.807	93.047
90	0.893	18.520	48.197	72.295	77.651
95	0.223	10.934	36.371	57.345	63.593
100	0.000	6.471	26.330	44.404	50.651
105	0.000	4.463	19.413	33.693	40.387
110	0.000	3.347	15.396	27.445	33.024
115	0.000	2.901	11.603	22.090	26.330
120	0.000	2.678	9.818	18.074	21.198
125	0.000	1.785	7.140	14.281	16.958
130	0.000	1.562	5.801	10.934	12.942
135	0.000	1.116	4.463	8.702	10.041
140	0.000	1.116	3.347	6.694	8.033
145	0.000	0.446	2.901	5.355	6.025
150	0.000	0.000	2.678	4.686	5.355
155	0.000	0.000	1.785	3.347	4.240
160	0.000	0.000	1.562	2.231	2.901
165	0.000	0.000	0.000	1.562	1.785
170	0.000	0.000	0.000	0.000	1.116
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	159.73	N.A.	11.70
0-30	337.05	N.A.	24.80
0-40	547.71	N.A.	40.30
0-60	952.50	N.A.	70.00
0-80	1209.87	N.A.	89.00
0-90	1274.22	N.A.	93.70
10-90	1232.75	N.A.	90.60
20-40	387.99	N.A.	28.50
20-50	601.53	N.A.	44.20
40-70	556.97	N.A.	41.00
60-80	257.38	N.A.	18.90
70-80	105.19	N.A.	7.70
80-90	64.35	N.A.	4.70
90-110	59.03	N.A.	4.30
90-120	71.68	N.A.	5.30
90-130	78.96	N.A.	5.80
90-150	84.70	N.A.	6.20
90-180	85.78	N.A.	6.30
110-180	26.75	N.A.	2.00
0-180	1360.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	41.47
10-20	118.26
20-30	177.32
30-40	210.67
40-50	213.55
50-60	191.24
60-70	152.19
70-80	105.19
80-90	64.35
90-100	37.79
100-110	21.24
110-120	12.65
120-130	7.28
130-140	3.82
140-150	1.92
150-160	0.87
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	10.9	12.5	11.4	12.9	13.4	14.1	15.6	14.5	16.0	16.5
	3H	12.2	13.6	12.6	14.0	14.5	16.3	17.7	16.8	18.2	18.7
	4H	12.5	13.8	13.0	14.3	14.8	17.4	18.7	17.9	19.2	19.7
	6H	12.7	13.9	13.2	14.4	15.0	18.4	19.7	18.9	20.2	20.7
	8H	12.7	13.9	13.3	14.4	15.0	19.0	20.2	19.5	20.7	21.2
	12H	12.7	13.9	13.3	14.4	14.9	19.6	20.7	20.1	21.2	21.8

UGR Viewed Endwise

4H	2H	11.9	13.3	12.4	13.7	14.2	14.4	15.7	14.9	16.2	16.7
	3H	13.4	14.5	13.9	15.0	15.6	16.9	18.0	17.4	18.5	19.0
	4H	13.8	14.9	14.4	15.4	15.9	18.1	19.1	18.6	19.6	20.2
	6H	14.1	15.0	14.7	15.6	16.1	19.4	20.3	19.9	20.8	21.4
	8H	14.2	15.0	14.7	15.6	16.2	20.0	20.9	20.6	21.4	22.0
	12H	14.2	15.0	14.8	15.5	16.1	20.7	21.5	21.3	22.1	22.7

8H	4H	14.6	15.4	15.1	16.0	16.6	18.3	19.1	18.8	19.6	20.2
	6H	15.0	15.7	15.6	16.3	16.9	19.7	20.4	20.3	21.0	21.6
	8H	15.1	15.8	15.7	16.4	17.0	20.5	21.1	21.1	21.7	22.3
	12H	15.2	15.8	15.8	16.4	17.0	21.3	21.9	21.9	22.5	23.2

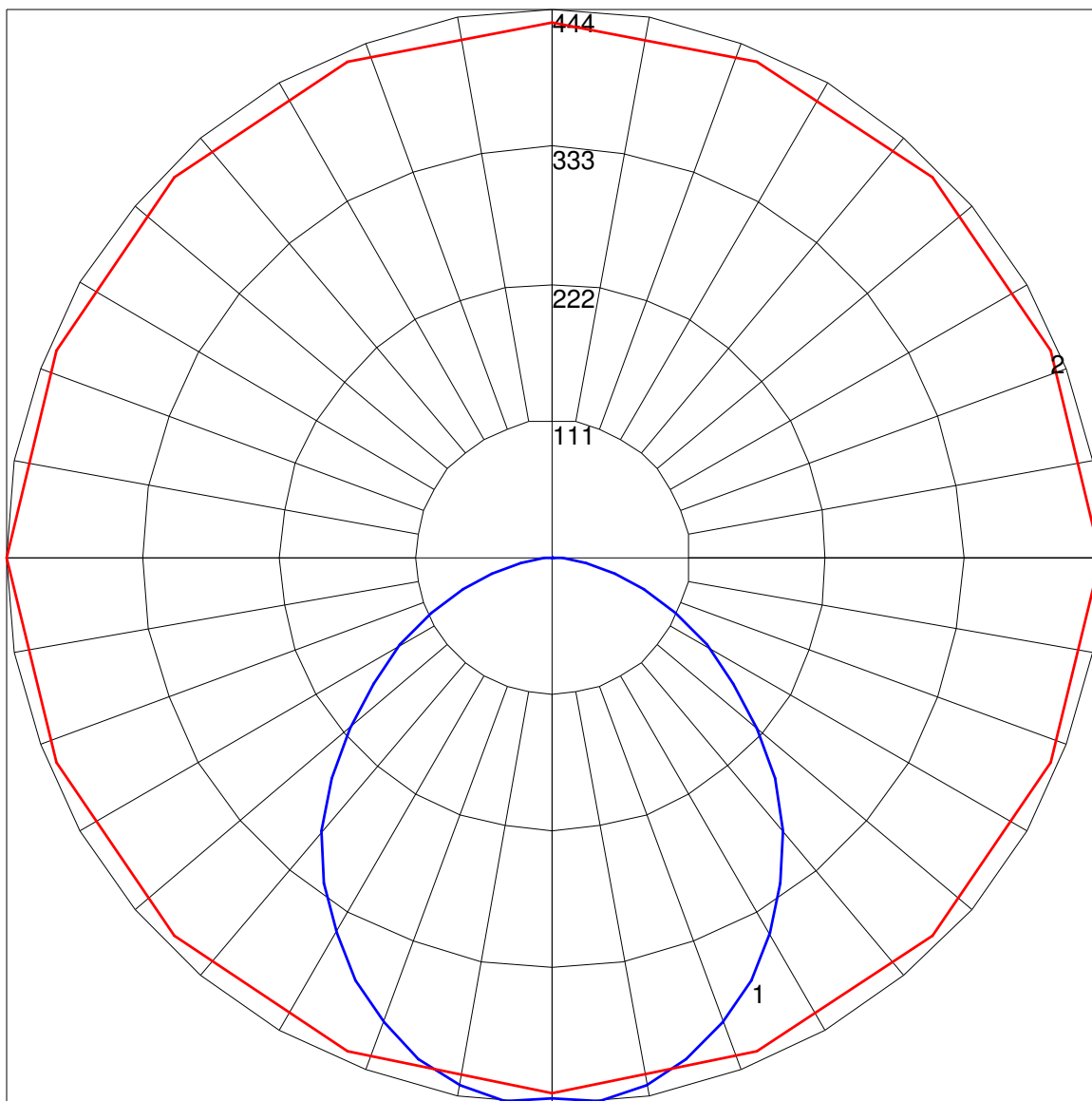
12H	4H	14.8	15.5	15.3	16.1	16.7	18.3	19.0	18.8	19.6	20.2
	6H	15.3	16.0	15.9	16.5	17.2	19.7	20.4	20.3	20.9	21.6
	8H	15.5	16.1	16.1	16.7	17.4	20.5	21.1	21.1	21.7	22.4

Maximum UGR = 23.2

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POLAR GRAPH



Maximum Candela = 443.813 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.)