



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L26-840-HIA-(L20)-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] 24 NOV 2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-56 LED 22"ARRAYS 54"SURFACE MOUNT LUMINAIRE

[LUMCAT] SLF-4-L26-840-HIA-(L20)-DIM-UNV

[MORE] WHITE FLAT REFLECTOR w/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	2143
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	134
Total Luminaire Watts	16
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	3034	2510	2576
55	2568	2152	2285
65	2065	1818	1959
75	1451	1456	1649
85	443	1172	1443

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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	691.948	691.948	691.948	691.948	691.948
5	699.332	689.135	686.323	685.619	685.268
10	684.565	676.829	675.071	676.829	675.071
15	663.469	657.491	660.304	663.469	662.765
20	632.176	627.605	637.450	643.076	645.185
25	597.719	591.742	605.806	618.815	619.870
30	555.879	552.363	570.646	589.633	590.336
35	508.765	507.007	529.861	554.473	557.637
40	458.838	454.267	483.801	513.687	520.368
45	401.527	396.604	435.632	469.737	480.285
50	339.997	341.403	387.814	423.678	438.796
55	281.983	290.773	338.942	377.266	394.143
60	226.079	241.901	291.828	332.965	347.732
65	173.339	193.028	248.581	287.257	300.266
70	124.115	147.320	205.686	245.065	255.613
75	80.516	105.128	162.791	206.037	213.421
80	42.544	72.078	127.982	170.877	176.855
85	11.251	46.411	97.745	139.937	146.617
90	1.406	29.183	75.946	113.918	122.357
95	0.352	17.228	57.311	90.361	100.206
100	0.000	10.196	41.489	69.968	79.813
105	0.000	7.032	30.589	53.092	63.640
110	0.000	5.274	24.260	43.247	52.037
115	0.000	4.571	18.283	34.808	41.489
120	0.000	4.219	15.470	28.480	33.402
125	0.000	2.813	11.251	22.502	26.722
130	0.000	2.461	9.142	17.228	20.393
135	0.000	1.758	7.032	13.712	15.822
140	0.000	1.758	5.274	10.548	12.658
145	0.000	0.703	4.571	8.438	9.493
150	0.000	0.000	4.219	7.384	8.438
155	0.000	0.000	2.813	5.274	6.680
160	0.000	0.000	2.461	3.516	4.571
165	0.000	0.000	0.000	2.461	2.813
170	0.000	0.000	0.000	0.000	1.758
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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	251.69	N.A.	11.70
0-30	531.10	N.A.	24.80
0-40	863.05	N.A.	40.30
0-60	1500.89	N.A.	70.00
0-80	1906.44	N.A.	89.00
0-90	2007.83	N.A.	93.70
10-90	1942.48	N.A.	90.60
20-40	611.36	N.A.	28.50
20-50	947.86	N.A.	44.20
40-70	877.64	N.A.	41.00
60-80	405.56	N.A.	18.90
70-80	165.75	N.A.	7.70
80-90	101.39	N.A.	4.70
90-110	93.02	N.A.	4.30
90-120	112.94	N.A.	5.30
90-130	124.41	N.A.	5.80
90-150	133.46	N.A.	6.20
90-180	135.17	N.A.	6.30
110-180	42.15	N.A.	2.00
0-180	2143.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	65.35
10-20	186.34
20-30	279.41
30-40	331.95
40-50	336.50
50-60	301.34
60-70	239.81
70-80	165.75
80-90	101.39
90-100	59.55
100-110	33.47
110-120	19.93
120-130	11.47
130-140	6.02
140-150	3.03
150-160	1.38
160-170	0.32
170-180	0.01

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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

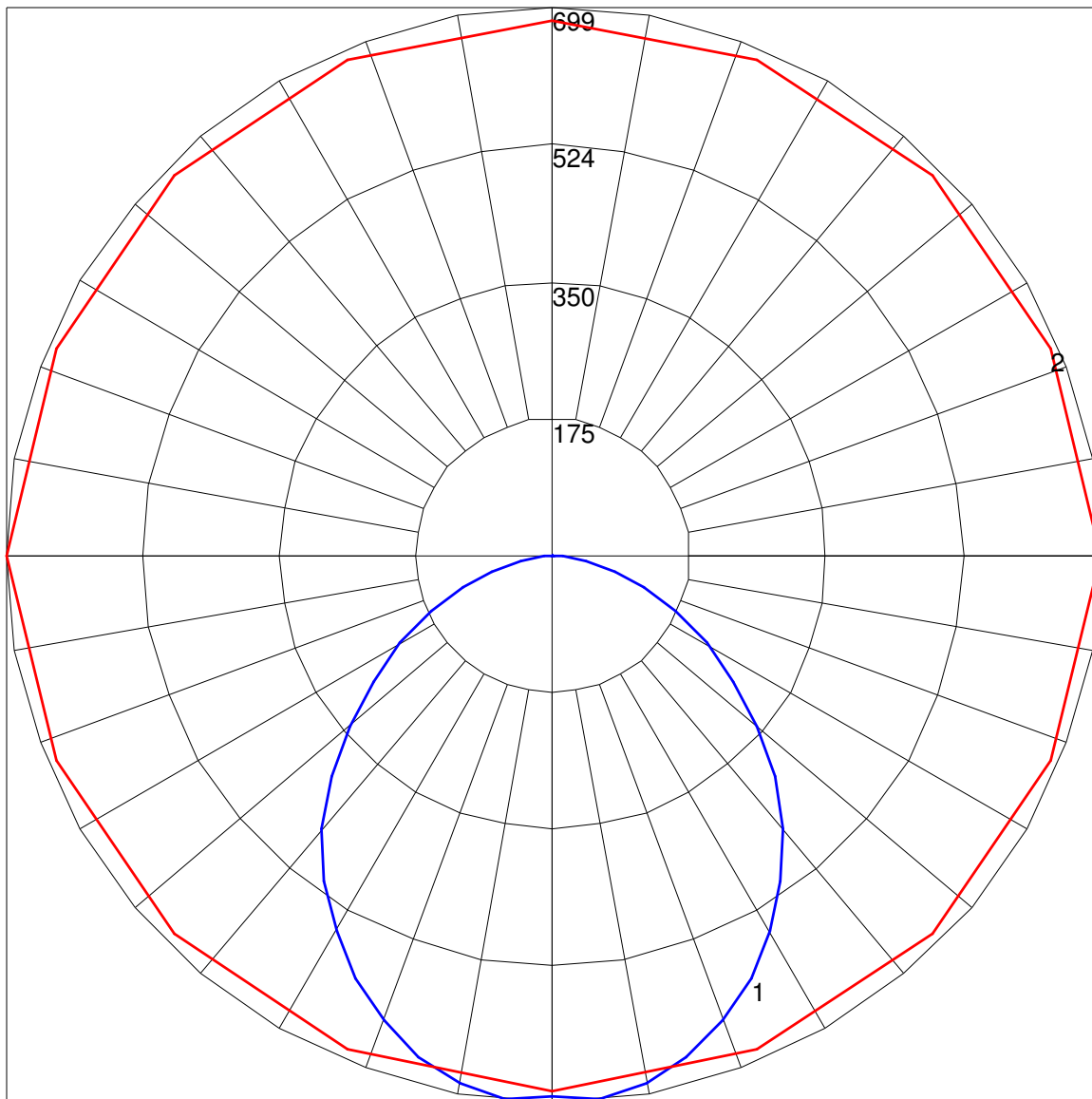
Reflectances

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	12.4	14.0	12.9	14.4	14.9	15.6	17.1	16.0	17.5	18.0
	3H	13.7	15.1	14.1	15.5	16.0	17.8	19.2	18.3	19.7	20.2
	4H	14.0	15.3	14.5	15.8	16.3	18.9	20.2	19.4	20.7	21.2
	6H	14.2	15.4	14.7	15.9	16.5	19.9	21.2	20.4	21.7	22.2
	8H	14.2	15.4	14.8	15.9	16.5	20.5	21.7	21.0	22.2	22.7
	12H	14.2	15.4	14.8	15.9	16.4	21.1	22.2	21.6	22.7	23.3
4H	2H	13.4	14.8	13.9	15.2	15.7	15.9	17.2	16.4	17.7	18.2
	3H	14.9	16.0	15.4	16.5	17.1	18.4	19.5	18.9	20.0	20.5
	4H	15.3	16.4	15.9	16.9	17.4	19.6	20.6	20.1	21.1	21.7
	6H	15.6	16.5	16.2	17.1	17.6	20.9	21.8	21.4	22.3	22.9
	8H	15.7	16.5	16.2	17.1	17.7	21.5	22.4	22.1	22.9	23.5
	12H	15.7	16.5	16.3	17.0	17.6	22.2	23.0	22.8	23.6	24.2
8H	4H	16.1	16.9	16.6	17.5	18.1	19.8	20.6	20.3	21.1	21.7
	6H	16.5	17.2	17.1	17.8	18.4	21.2	21.9	21.8	22.5	23.1
	8H	16.6	17.3	17.2	17.9	18.5	22.0	22.6	22.6	23.2	23.8
	12H	16.7	17.3	17.3	17.9	18.5	22.8	23.4	23.4	24.0	24.7
12H	4H	16.3	17.0	16.8	17.6	18.2	19.8	20.5	20.3	21.1	21.7
	6H	16.8	17.5	17.4	18.0	18.7	21.2	21.9	21.8	22.4	23.1
	8H	17.0	17.6	17.6	18.2	18.9	22.0	22.6	22.6	23.2	23.9

Maximum UGR = 24.7

POLAR GRAPH



Maximum Candela = 699.332 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.)