



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-2-L45-940-HIA-(L30)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 17259.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 08-DEC-2020
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] DIRECT/INDIRECT STAIRWELL LIGHT
[MORE] WHITE REFLECTOR w/FROSTED POLYCARBONATE LENS
[LUMCAT] SLF-2-L45-940-HIA-(L30)-DIM-UNV
[LAMPCAT] HLM 90 CRI 4000K CCT
[_SEARCH_SOURCETYPE]LED
[_SEARCH_APPLICATION]INDOOR,COMMERCIAL,DIRECT,LINEAR
[_SEARCH_MOUNTING]CEILING,SURFACE,WALL

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2692
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	25
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	2.06 ft
Luminous Width (90-270)	0.50 ft
Luminous Height	0.24 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6170	5577	6046
55	5150	4696	5414
65	3989	3867	4700
75	2837	3198	4001
85	1209	2685	3530

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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	848.466	848.466	848.466	848.466	848.466
5	850.745	845.428	841.630	842.389	837.832
10	835.553	833.274	830.996	835.553	833.274
15	808.967	808.208	811.246	818.082	818.842
20	775.545	778.584	784.660	797.573	802.131
25	723.893	730.729	746.681	764.151	772.507
30	667.683	680.596	707.941	731.489	740.604
35	607.675	621.348	658.568	691.990	704.903
40	537.792	556.023	600.079	644.895	658.568
45	467.150	489.178	537.792	590.964	606.915
50	392.710	423.853	472.467	533.994	551.465
55	330.423	360.807	413.979	482.342	502.091
60	262.819	296.242	354.730	421.575	445.122
65	202.052	234.714	298.520	362.326	386.633
70	149.640	182.302	251.426	311.433	331.183
75	101.026	132.169	204.331	262.819	277.252
80	59.248	95.709	165.591	218.003	232.436
85	23.547	66.085	130.650	182.302	191.418
90	0.000	40.258	101.786	147.361	154.957
95	0.000	28.105	81.277	121.535	128.371
100	0.000	18.230	60.008	97.228	102.545
105	0.000	15.951	51.652	78.998	87.353
110	0.000	9.875	37.220	62.287	69.123
115	0.000	9.115	32.663	52.412	59.248
120	0.000	8.356	25.826	43.297	50.133
125	0.000	6.077	19.749	34.941	40.258
130	0.000	0.000	18.990	31.143	34.182
135	0.000	0.000	12.913	22.788	28.105
140	0.000	0.000	11.394	19.749	22.028
145	0.000	0.000	0.000	15.192	18.230
150	0.000	0.000	0.000	12.913	15.192
155	0.000	0.000	0.000	10.634	10.634
160	0.000	0.000	0.000	9.115	0.000
165	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	6.077	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	309.77	N.A.	11.50
0-30	654.68	N.A.	24.30
0-40	1065.1	N.A.	39.60
0-60	1854.38	N.A.	68.90
0-80	2361.59	N.A.	87.70
0-90	2495.53	N.A.	92.70
10-90	2415.31	N.A.	89.70
20-40	755.34	N.A.	28.10
20-50	1171.11	N.A.	43.50
40-70	1086.00	N.A.	40.30
60-80	507.21	N.A.	18.80
70-80	210.49	N.A.	7.80
80-90	133.93	N.A.	5.00
90-110	130.50	N.A.	4.80
90-120	161.21	N.A.	6.00
90-130	179.86	N.A.	6.70
90-150	194.44	N.A.	7.20
90-180	196.51	N.A.	7.30
110-180	66.02	N.A.	2.50
0-180	2692.04	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	80.22
10-20	229.55
20-30	344.92
30-40	410.42
40-50	415.77
50-60	373.51
60-70	296.73
70-80	210.49
80-90	133.93
90-100	80.76
100-110	49.74
110-120	30.71
120-130	18.65
130-140	10.16
140-150	4.42
150-160	1.81
160-170	0.19
170-180	0.07

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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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	93
1	106	100	96	91	102	97	93	89	92	88	85	86	84	81	82	79	77	75
2	96	87	80	74	92	84	78	72	80	74	69	75	71	67	71	67	64	61
3	87	76	68	61	84	74	66	60	70	63	58	66	61	56	63	58	54	52
4	80	67	58	51	77	66	57	51	62	55	49	59	53	48	56	51	46	44
5	73	60	51	44	71	59	50	44	56	48	43	53	46	41	50	45	40	38
6	68	54	45	39	65	53	44	38	50	43	37	48	41	36	46	40	35	33
7	63	49	40	34	61	48	40	34	46	38	33	44	37	32	42	36	31	29
8	58	45	36	30	56	44	36	30	42	35	29	40	34	29	38	33	28	26
9	55	41	33	27	53	40	32	27	39	31	26	37	31	26	35	30	25	24
10	51	38	30	25	50	37	30	24	36	29	24	34	28	24	33	27	23	21

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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	15.1	16.6	15.6	17.1	17.6	18.3	19.8	18.8	20.3	20.8
	3H	16.3	17.7	16.8	18.2	18.7	20.5	21.9	21.0	22.4	22.9
	4H	16.7	18.0	17.2	18.5	19.0	21.6	22.9	22.1	23.4	23.9
	6H	16.9	18.1	17.5	18.6	19.2	22.6	23.8	23.1	24.3	24.9
	8H	17.0	18.1	17.5	18.7	19.2	23.1	24.3	23.6	24.8	25.3
	12H	17.0	18.1	17.5	18.6	19.2	23.6	24.7	24.2	25.2	25.8

UGR Viewed Endwise

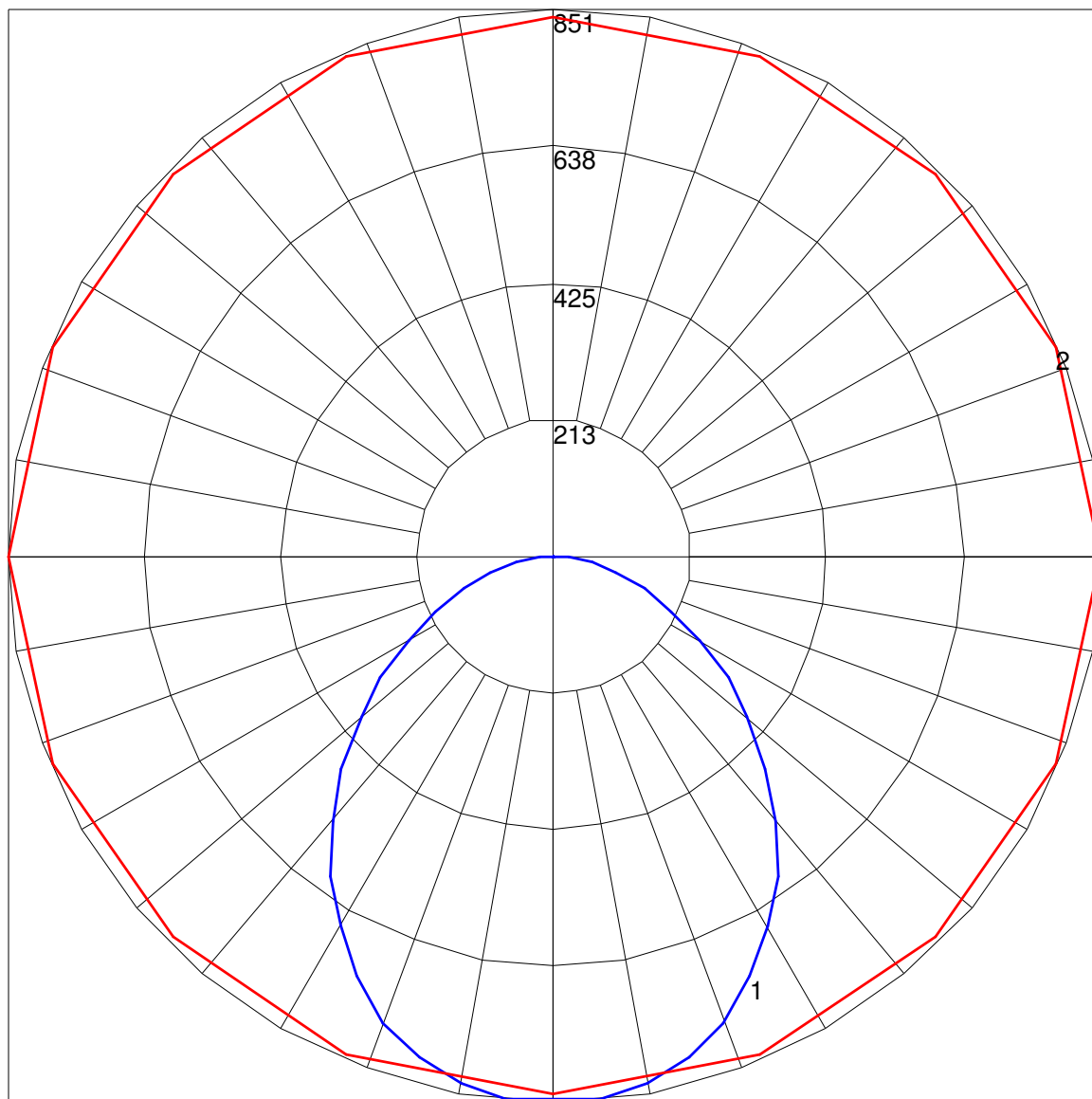
4H	2H	16.0	17.3	16.5	17.8	18.4	18.6	19.9	19.1	20.4	20.9
	3H	17.5	18.6	18.0	19.1	19.7	21.1	22.2	21.6	22.7	23.3
	4H	18.0	19.0	18.5	19.5	20.1	22.3	23.3	22.8	23.8	24.4
	6H	18.3	19.2	18.9	19.8	20.4	23.5	24.4	24.1	25.0	25.6
	8H	18.4	19.2	19.0	19.8	20.4	24.1	25.0	24.7	25.5	26.1
	12H	18.4	19.2	19.0	19.8	20.4	24.8	25.5	25.3	26.1	26.7

8H	4H	18.7	19.6	19.3	20.1	20.7	22.4	23.3	23.0	23.8	24.5
	6H	19.2	19.9	19.8	20.5	21.2	23.8	24.5	24.4	25.1	25.8
	8H	19.4	20.0	20.0	20.7	21.3	24.6	25.2	25.2	25.8	26.5
	12H	19.5	20.1	20.1	20.7	21.4	25.4	26.0	26.0	26.6	27.3

12H	4H	18.9	19.7	19.5	20.3	20.9	22.4	23.2	23.0	23.8	24.4
	6H	19.6	20.2	20.2	20.8	21.5	23.9	24.5	24.5	25.1	25.8
	8H	19.8	20.4	20.4	21.0	21.7	24.6	25.2	25.2	25.8	26.5

Maximum UGR = 27.3

POLAR GRAPH



Maximum Candela = 850.745 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.)