



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-4-L26-835-HIA-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] 03-20-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4' LED SURFACE MOUNT LUMINAIRE

[LUMCAT] SLF-4-L26-835-HIA-DIM-UNV

[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	2862
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
Total Luminaire Watts	20.13
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	4051	3352	3440
55	3429	2873	3051
65	2758	2428	2616
75	1937	1945	2202
85	592	1565	1927

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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	924.104	924.104	924.104	924.104	924.104
5	933.965	920.348	916.591	915.652	915.183
10	914.243	903.913	901.565	903.913	901.565
15	886.070	878.087	881.843	886.070	885.130
20	844.278	838.174	851.322	858.835	861.652
25	798.261	790.278	809.061	826.435	827.843
30	742.383	737.687	762.104	787.461	788.400
35	679.461	677.113	707.635	740.504	744.730
40	612.783	606.678	646.122	686.035	694.957
45	536.243	529.670	581.791	627.339	641.426
50	454.070	455.948	517.930	565.826	586.017
55	376.591	388.330	452.661	503.843	526.383
60	301.930	323.061	389.739	444.678	464.400
65	231.496	257.791	331.983	383.635	401.009
70	165.757	196.748	274.696	327.287	341.374
75	107.530	140.400	217.409	275.165	285.026
80	56.817	96.261	170.922	228.209	236.191
85	15.026	61.983	130.539	186.887	195.809
90	1.878	38.974	101.426	152.139	163.409
95	0.470	23.009	76.539	120.678	133.826
100	0.000	13.617	55.409	93.443	106.591
105	0.000	9.391	40.852	70.904	84.991
110	0.000	7.043	32.400	57.757	69.496
115	0.000	6.104	24.417	46.487	55.409
120	0.000	5.635	20.661	38.035	44.609
125	0.000	3.757	15.026	30.052	35.687
130	0.000	3.287	12.209	23.009	27.235
135	0.000	2.348	9.391	18.313	21.130
140	0.000	2.348	7.043	14.087	16.904
145	0.000	0.939	6.104	11.270	12.678
150	0.000	0.000	5.635	9.861	11.270
155	0.000	0.000	3.757	7.043	8.922
160	0.000	0.000	3.287	4.696	6.104
165	0.000	0.000	0.000	3.287	3.757
170	0.000	0.000	0.000	0.000	2.348
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	336.13	N.A.	11.70
0-30	709.29	N.A.	24.80
0-40	1152.61	N.A.	40.30
0-60	2004.45	N.A.	70.00
0-80	2546.07	N.A.	89.00
0-90	2681.48	N.A.	93.70
10-90	2594.21	N.A.	90.60
20-40	816.48	N.A.	28.50
20-50	1265.87	N.A.	44.20
40-70	1172.1	N.A.	41.00
60-80	541.62	N.A.	18.90
70-80	221.36	N.A.	7.70
80-90	135.41	N.A.	4.70
90-110	124.23	N.A.	4.30
90-120	150.84	N.A.	5.30
90-130	166.15	N.A.	5.80
90-150	178.24	N.A.	6.20
90-180	180.52	N.A.	6.30
110-180	56.30	N.A.	2.00
0-180	2862.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	87.27
10-20	248.86
20-30	373.15
30-40	443.33
40-50	449.39
50-60	402.44
60-70	320.26
70-80	221.36
80-90	135.41
90-100	79.53
100-110	44.70
110-120	26.61
120-130	15.32
130-140	8.04
140-150	4.05
150-160	1.84
160-170	0.43
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**

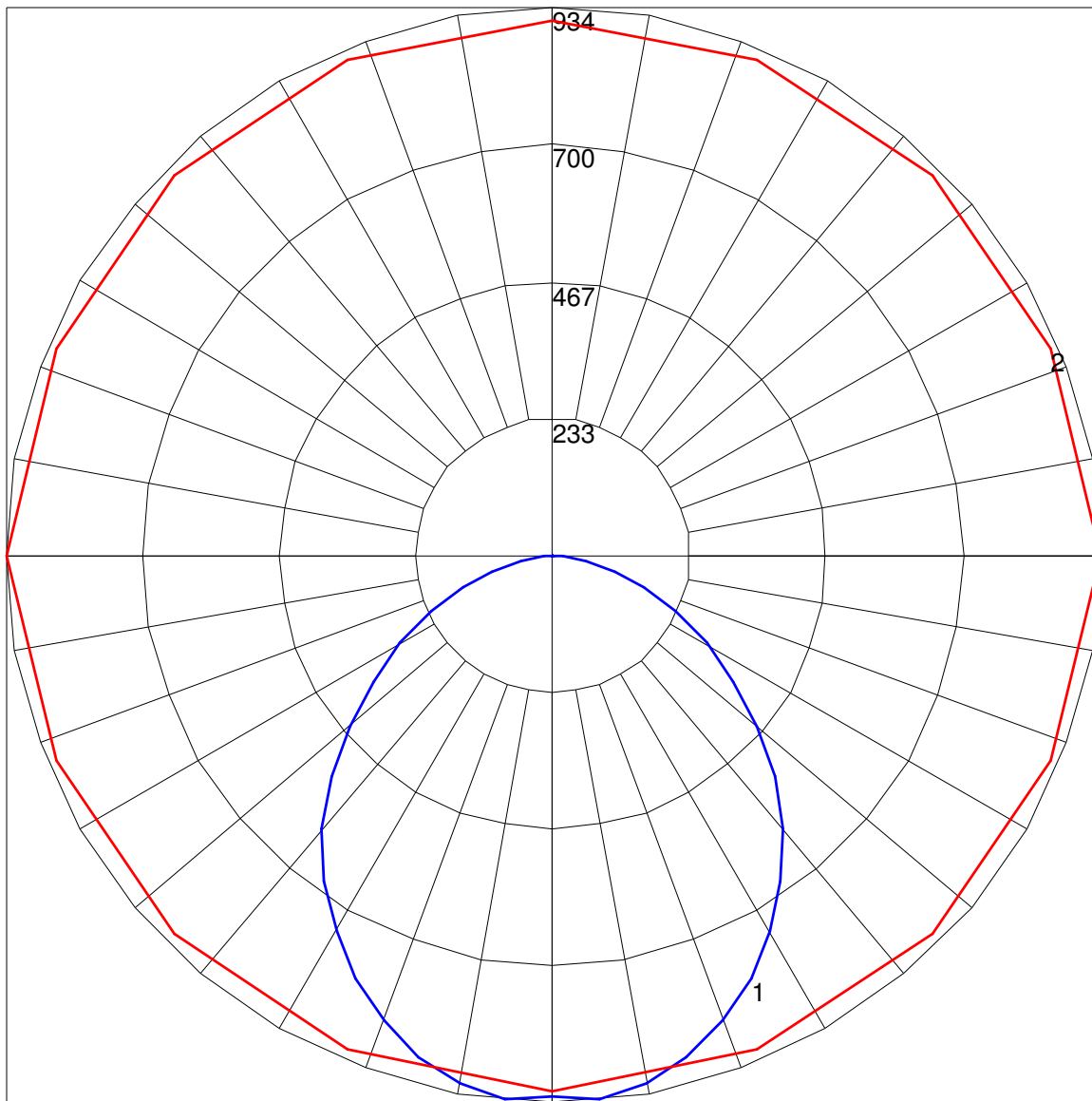
Reflectances

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	13.5	15.1	14.0	15.5	16.0	16.6	18.2	17.1	18.6	19.1
	3H	14.8	16.2	15.2	16.6	17.1	18.9	20.3	19.4	20.8	21.3
	4H	15.1	16.4	15.6	16.9	17.4	20.0	21.3	20.5	21.8	22.3
	6H	15.3	16.5	15.8	17.0	17.5	21.0	22.3	21.5	22.7	23.3
	8H	15.3	16.5	15.9	17.0	17.6	21.6	22.8	22.1	23.3	23.8
	12H	15.3	16.5	15.9	17.0	17.5	22.2	23.3	22.7	23.8	24.4
4H	2H	14.5	15.8	15.0	16.3	16.8	17.0	18.3	17.5	18.8	19.3
	3H	16.0	17.1	16.5	17.6	18.2	19.5	20.6	20.0	21.1	21.6
	4H	16.4	17.5	17.0	18.0	18.5	20.7	21.7	21.2	22.2	22.8
	6H	16.7	17.6	17.3	18.2	18.7	22.0	22.9	22.5	23.4	24.0
	8H	16.8	17.6	17.3	18.2	18.8	22.6	23.5	23.2	24.0	24.6
	12H	16.8	17.5	17.4	18.1	18.7	23.3	24.1	23.9	24.7	25.3
8H	4H	17.2	18.0	17.7	18.6	19.2	20.9	21.7	21.4	22.2	22.8
	6H	17.6	18.3	18.2	18.9	19.5	22.3	23.0	22.8	23.6	24.2
	8H	17.7	18.4	18.3	19.0	19.6	23.1	23.7	23.7	24.3	24.9
	12H	17.8	18.4	18.4	19.0	19.6	23.9	24.5	24.5	25.1	25.8
12H	4H	17.4	18.1	17.9	18.7	19.3	20.8	21.6	21.4	22.2	22.8
	6H	17.9	18.6	18.5	19.1	19.8	22.3	23.0	22.9	23.5	24.2
	8H	18.1	18.7	18.7	19.3	20.0	23.1	23.7	23.7	24.3	25.0

Maximum UGR = 25.8

POLAR GRAPH



Maximum Candela = 933.965 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.)