IES INDOOR REPORT
PHOTOMETRIC FILENAME : SL-4-L10-935-RD-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] BALLABS TEST NO. 21002.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-04-25
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] SL LED SLIMLINE ARCHITECTURAL LUMINAIRE
[MORE] 1.375 WIDE ALUM CHANNEL w/1"WIDE WHITE RADIAL ACRYLIC LENS
[LUMCAT] SL-4-L10-935-RD-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] INDOOR, COVE, CLASSROOM
[_SEARCH_MOUNTING] SURFACE, WALL

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3221
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
Total Luminaire Watts	36
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	0.13 ft
Luminous Height	0.05 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	19912	16049	15265
55	18794	14359	13770
65	16728	12342	12253
75	14008	10159	10906
85	7584	8423	9820

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1014.26	1014.26	1014.26	1014.26	1014.26
5	1017.58	1012.60	1005.96	1004.30	1005.96
10	1002.64	997.66	991.02	991.02	994.34
15	981.06	976.08	969.44	971.10	971.10
20	947.86	942.88	934.58	941.22	942.88
25	906.36	901.38	899.72	904.70	908.02
30	854.90	854.90	854.90	861.54	859.88
35	800.12	800.12	800.12	806.76	811.74
40	733.72	735.38	737.04	748.66	755.30
45	662.34	667.32	672.30	685.58	690.56
50	584.32	589.30	600.92	620.84	630.80
55	509.62	511.28	532.86	549.46	564.40
60	423.30	431.60	461.48	493.02	502.98
65	336.98	350.26	385.12	419.98	434.92
70	257.30	270.58	313.74	356.90	370.18
75	175.96	199.20	247.34	295.48	315.40
80	102.92	127.82	192.56	240.70	262.28
85	34.86	81.34	141.10	189.24	210.82
90	0.00	44.82	104.58	147.74	164.34
95	0.00	23.24	71.38	114.54	129.48
100	0.00	11.62	49.80	84.66	99.60
105	0.00	6.64	34.86	61.42	74.70
110	0.00	4.98	23.24	44.82	53.12
115	0.00	3.32	14.94	31.54	39.84
120	0.00	0.00	8.30	19.92	24.90
125	0.00	0.00	6.64	13.28	16.60
130	0.00	0.00	0.00	8.30	9.96
135	0.00	0.00	0.00	0.00	6.64
140	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.00	0.00	0.00
150	0.00	0.00	0.00	0.00	0.00
155	0.00	0.00	0.00	0.00	0.00
160	0.00	0.00	0.00	0.00	0.00
165	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	370.32	N.A.	11.50
0-30	786.54	N.A.	24.40
0-40	1288.75	N.A.	40.00
0-60	2287.02	N.A.	71.00
0-80	2932.45	N.A.	91.00
0-90	3081.84	N.A.	95.70
10-90	2985.99	N.A.	92.70
20-40	918.43	N.A.	28.50
20-50	1439.42	N.A.	44.70
40-70	1381.33	N.A.	42.90
60-80	645.44	N.A.	20.00
70-80	262.37	N.A.	8.10
80-90	149.38	N.A.	4.60
90-110	114.79	N.A.	3.60
90-120	132.21	N.A.	4.10
90-130	138.45	N.A.	4.30
90-150	139.44	N.A.	4.30
90-180	139.44	N.A.	4.30
110-180	24.66	N.A.	0.80
0-180	3221.28	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	95.84
10-20	274.48
20-30	416.21
30-40	502.22
40-50	520.99
50-60	477.27
60-70	383.07
70-80	262.37
80-90	149.38
90-100	76.63
100-110	38.16
110-120	17.43
120-130	6.24
130-140	0.99
140-150	0.00
150-160	0.00
160-170	0.00
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	115	115	115	115	109	109	109	103	103	103	98	98	98	96
1	106	101	96	92	103	98	94	90	93	90	86	89	86	83	84	82	80	77
2	96	87	80	74	93	85	78	73	81	75	70	77	72	68	73	69	66	63
3	88	76	68	61	85	75	67	60	71	64	59	68	62	57	64	60	55	53
4	80	68	58	51	77	66	57	51	63	55	50	60	54	49	57	52	47	45
5	74	60	51	44	71	59	50	44	56	49	43	54	47	42	51	46	41	39
6	68	54	45	38	66	53	44	38	51	43	37	49	42	37	47	41	36	34
7	63	49	40	34	61	48	40	34	46	39	33	44	38	32	43	37	32	30
8	59	45	36	30	57	44	36	30	42	35	29	41	34	29	39	33	29	27
9	55	41	33	27	53	40	32	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	24	36	29	24	35	28	24	33	28	23	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	20.2	21.8	20.6	22.2	22.6	21.9	23.5	22.3	23.9	24.3
	3H	21.7	23.1	22.1	23.5	24.0	24.2	25.6	24.6	26.1	26.5
	4H	22.1	23.5	22.6	23.9	24.4	25.3	26.7	25.8	27.1	27.6
	6H	22.4	23.7	22.9	24.2	24.6	26.5	27.7	26.9	28.2	28.7
	8H	22.5	23.7	23.0	24.2	24.7	27.0	28.3	27.5	28.7	29.2
	12H	22.5	23.7	23.0	24.1	24.7	27.7	28.9	28.2	29.3	29.9
4H	2H	21.0	22.4	21.4	22.8	23.2	22.3	23.7	22.8	24.1	24.6
	3H	22.7	23.8	23.1	24.3	24.8	24.8	26.0	25.3	26.5	27.0
	4H	23.2	24.3	23.7	24.8	25.3	26.1	27.2	26.6	27.6	28.2
	6H	23.6	24.6	24.2	25.1	25.6	27.4	28.4	28.0	28.9	29.4
	8H	23.7	24.6	24.3	25.1	25.7	28.1	29.0	28.6	29.5	30.1
	12H	23.8	24.6	24.3	25.1	25.7	28.9	29.7	29.4	30.2	30.8
8H	4H	23.8	24.7	24.3	25.2	25.7	26.3	27.2	26.8	27.7	28.2
	6H	24.3	25.1	24.9	25.6	26.2	27.8	28.5	28.3	29.1	29.6
	8H	24.5	25.2	25.0	25.7	26.3	28.6	29.3	29.1	29.8	30.4
	12H	24.6	25.2	25.2	25.7	26.4	29.5	30.1	30.1	30.7	31.3
12H	4H	23.9	24.7	24.5	25.3	25.8	26.3	27.1	26.8	27.6	28.2
	6H	24.5	25.2	25.1	25.8	26.4	27.8	28.5	28.4	29.0	29.6
	8H	24.8	25.4	25.4	25.9	26.6	28.7	29.3	29.2	29.8	30.5

Maximum UGR = 31.3

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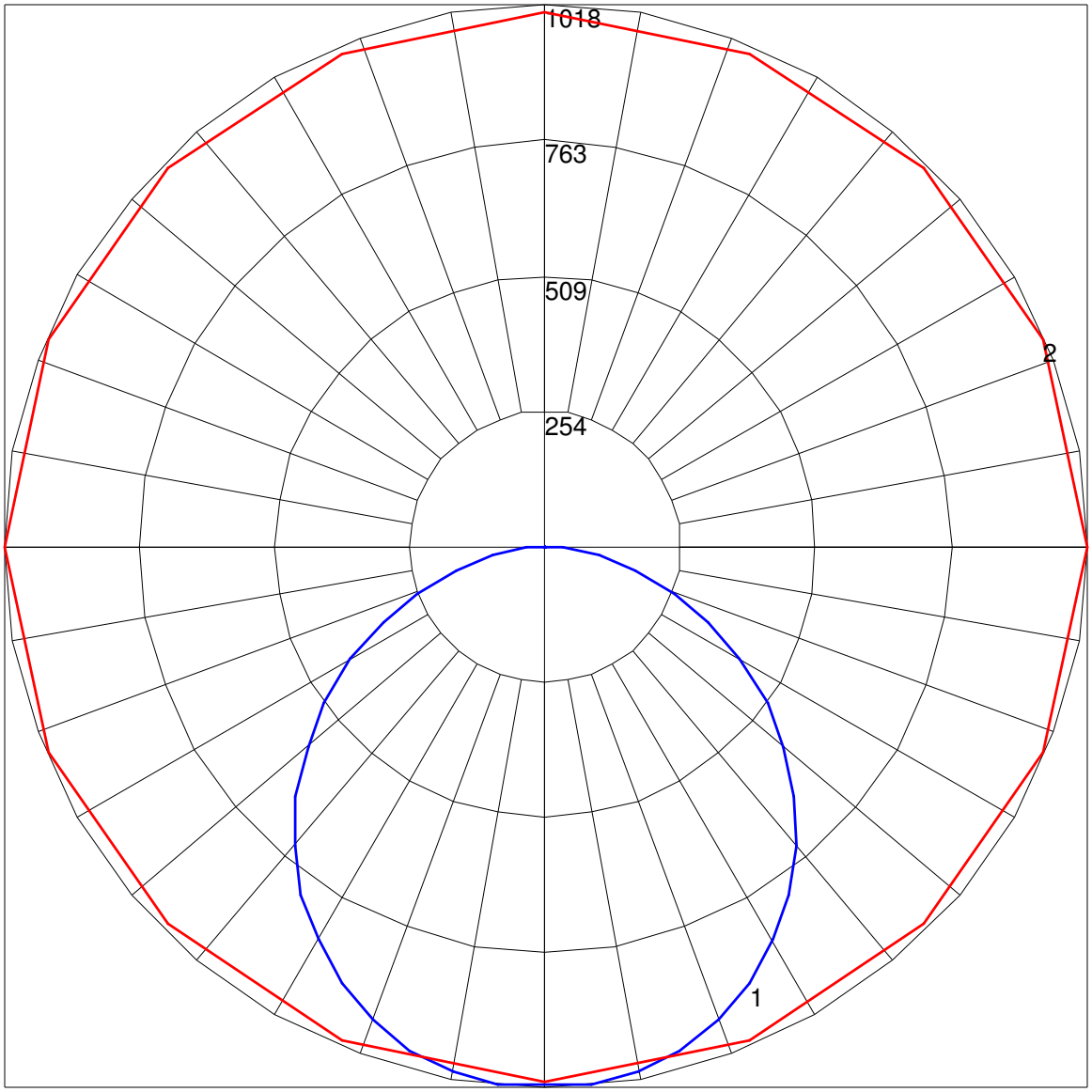
POLAR GRAPH



Maximum Candela = 1017.58 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.)

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