IES INDOOR REPORT
PHOTOMETRIC FILENAME : SL-4-L5-935-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-L5-935-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	1653
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	92
Total Luminaire Watts	17.9
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	10218	8235	7833
55	9644	7368	7066
65	8584	6333	6288
75	7188	5213	5596
85	3892	4322	5039

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	520.455	520.455	520.455	520.455	520.455
5	522.159	519.603	516.196	515.344	516.196
10	514.492	511.937	508.530	508.530	510.233
15	503.419	500.863	497.456	498.308	498.308
20	486.383	483.827	479.568	482.975	483.827
25	465.087	462.532	461.680	464.236	465.939
30	438.681	438.681	438.681	442.089	441.237
35	410.572	410.572	410.572	413.979	416.534
40	376.499	377.351	378.203	384.166	387.573
45	339.872	342.427	344.982	351.797	354.352
50	299.837	302.392	308.355	318.576	323.687
55	261.505	262.357	273.431	281.949	289.615
60	217.211	221.470	236.803	252.987	258.098
65	172.917	179.732	197.620	215.508	223.174
70	132.030	138.845	160.992	183.139	189.953
75	90.292	102.217	126.919	151.622	161.844
80	52.812	65.589	98.810	123.512	134.586
85	17.888	41.739	72.404	97.106	108.180
90	0.000	22.999	53.664	75.811	84.329
95	0.000	11.925	36.628	58.775	66.441
100	0.000	5.963	25.554	43.442	51.109
105	0.000	3.407	17.888	31.517	38.331
110	0.000	2.555	11.925	22.999	27.258
115	0.000	1.704	7.666	16.184	20.443
120	0.000	0.000	4.259	10.222	12.777
125	0.000	0.000	3.407	6.814	8.518
130	0.000	0.000	0.000	4.259	5.111
135	0.000	0.000	0.000	0.000	3.407
140	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	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	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	190.03	N.A.	11.50
0-30	403.60	N.A.	24.40
0-40	661.31	N.A.	40.00
0-60	1173.55	N.A.	71.00
0-80	1504.75	N.A.	91.00
0-90	1581.41	N.A.	95.70
10-90	1532.22	N.A.	92.70
20-40	471.28	N.A.	28.50
20-50	738.62	N.A.	44.70
40-70	708.81	N.A.	42.90
60-80	331.20	N.A.	20.00
70-80	134.63	N.A.	8.10
80-90	76.65	N.A.	4.60
90-110	58.90	N.A.	3.60
90-120	67.84	N.A.	4.10
90-130	71.04	N.A.	4.30
90-150	71.55	N.A.	4.30
90-180	71.55	N.A.	4.30
110-180	12.65	N.A.	0.80
0-180	1652.96	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	49.18
10-20	140.85
20-30	213.57
30-40	257.71
40-50	267.34
50-60	244.91
60-70	196.57
70-80	134.63
80-90	76.65
90-100	39.32
100-110	19.58
110-120	8.94
120-130	3.20
130-140	0.51
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	58	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	17.8	19.4	18.2	19.8	20.2	19.5	21.1	19.9	21.5	21.9
	3H	19.3	20.7	19.7	21.1	21.6	21.8	23.2	22.2	23.7	24.1
	4H	19.7	21.1	20.2	21.5	22.0	22.9	24.3	23.4	24.7	25.2
	6H	20.0	21.3	20.5	21.8	22.2	24.1	25.3	24.5	25.8	26.3
	8H	20.1	21.3	20.6	21.8	22.3	24.6	25.9	25.1	26.3	26.8
	12H	20.1	21.3	20.6	21.7	22.3	25.3	26.5	25.8	26.9	27.5
4H	2H	18.6	19.9	19.0	20.4	20.8	19.9	21.3	20.4	21.7	22.2
	3H	20.3	21.4	20.7	21.9	22.4	22.4	23.6	22.9	24.1	24.6
	4H	20.8	21.9	21.3	22.4	22.9	23.7	24.8	24.2	25.2	25.8
	6H	21.2	22.2	21.8	22.7	23.2	25.0	26.0	25.6	26.5	27.0
	8H	21.3	22.2	21.9	22.7	23.3	25.7	26.6	26.2	27.1	27.7
	12H	21.4	22.2	21.9	22.7	23.3	26.5	27.3	27.0	27.8	28.4
8H	4H	21.4	22.3	21.9	22.8	23.3	23.9	24.8	24.4	25.3	25.8
	6H	21.9	22.7	22.5	23.2	23.8	25.4	26.1	25.9	26.7	27.2
	8H	22.1	22.8	22.6	23.3	23.9	26.2	26.9	26.7	27.4	28.0
	12H	22.2	22.8	22.8	23.3	24.0	27.1	27.7	27.7	28.3	28.9
12H	4H	21.5	22.3	22.1	22.9	23.4	23.9	24.7	24.4	25.2	25.8
	6H	22.1	22.8	22.7	23.4	24.0	25.4	26.1	26.0	26.6	27.2
	8H	22.4	23.0	22.9	23.5	24.2	26.3	26.9	26.8	27.4	28.1

Maximum UGR = 28.9

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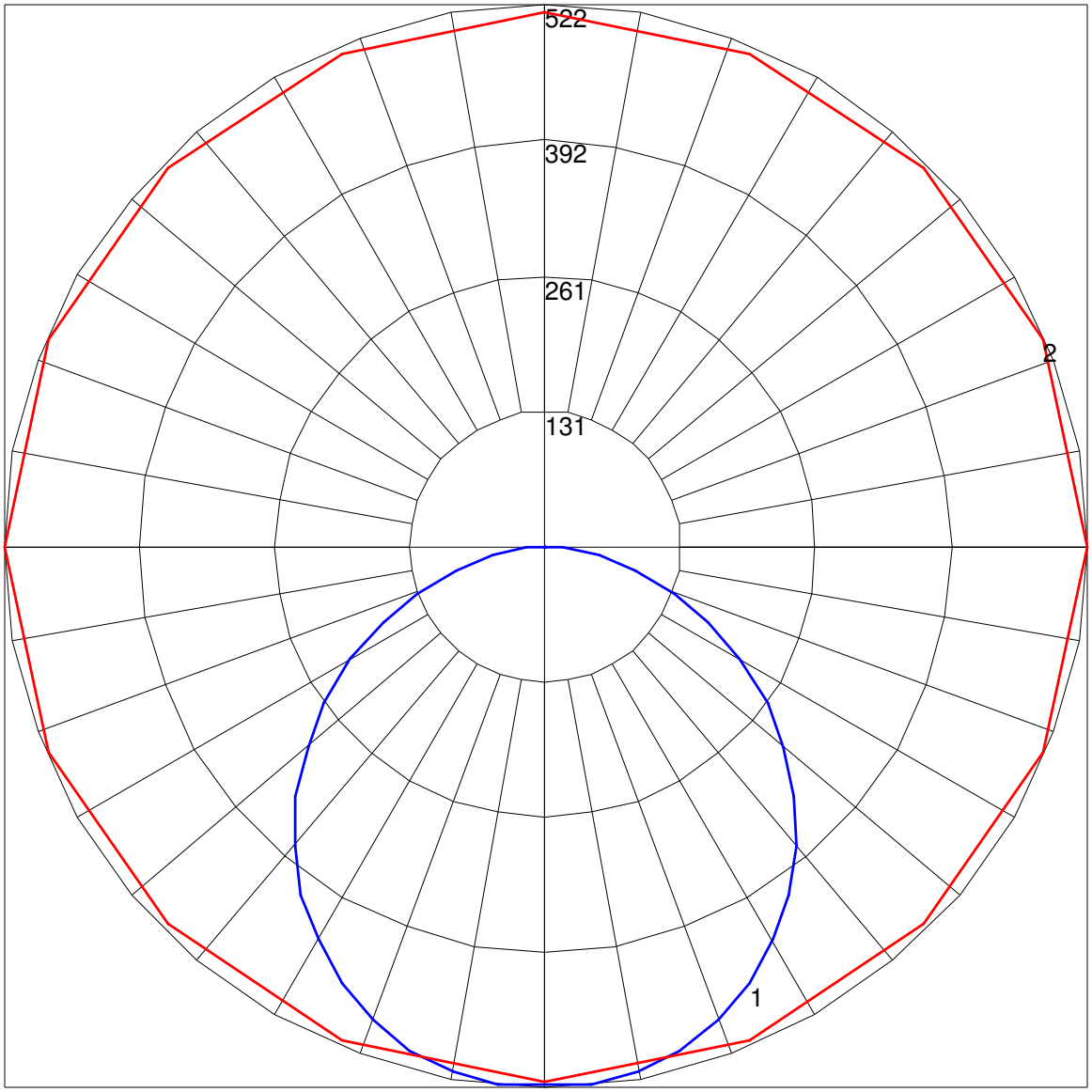
POLAR GRAPH



Maximum Candela = 522.159 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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