IES INDOOR REPORT
PHOTOMETRIC FILENAME : SL-4-L5-940-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-L5-940-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	1713
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	96
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	10587	8533	8116
55	9993	7634	7321
65	8894	6562	6515
75	7448	5401	5798
85	4032	4478	5221

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	539.267	539.267	539.267	539.267	539.267
5	541.032	538.384	534.854	533.971	534.854
10	533.088	530.441	526.910	526.910	528.675
15	521.615	518.967	515.436	516.319	516.319
20	503.963	501.315	496.902	500.432	501.315
25	481.898	479.250	478.367	481.015	482.780
30	454.537	454.537	454.537	458.068	457.185
35	425.412	425.412	425.412	428.942	431.590
40	390.108	390.990	391.873	398.051	401.581
45	352.156	354.804	357.452	364.512	367.160
50	310.674	313.322	319.500	330.091	335.387
55	270.957	271.840	283.314	292.139	300.083
60	225.062	229.475	245.362	262.131	267.427
65	179.167	186.228	204.762	223.297	231.240
70	136.802	143.863	166.811	189.758	196.819
75	93.555	105.912	131.507	157.102	167.693
80	54.721	67.960	102.381	127.977	139.450
85	18.535	43.247	75.021	100.616	112.090
90	0.000	23.830	55.604	78.551	87.377
95	0.000	12.356	37.952	60.899	68.843
100	0.000	6.178	26.478	45.012	52.956
105	0.000	3.530	18.535	32.656	39.717
110	0.000	2.648	12.356	23.830	28.243
115	0.000	1.765	7.943	16.769	21.182
120	0.000	0.000	4.413	10.591	13.239
125	0.000	0.000	3.530	7.061	8.826
130	0.000	0.000	0.000	4.413	5.296
135	0.000	0.000	0.000	0.000	3.530
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	196.90	N.A.	11.50
0-30	418.19	N.A.	24.40
0-40	685.21	N.A.	40.00
0-60	1215.97	N.A.	71.00
0-80	1559.14	N.A.	91.00
0-90	1638.56	N.A.	95.70
10-90	1587.61	N.A.	92.70
20-40	488.32	N.A.	28.50
20-50	765.32	N.A.	44.70
40-70	734.43	N.A.	42.90
60-80	343.17	N.A.	20.00
70-80	139.50	N.A.	8.10
80-90	79.42	N.A.	4.60
90-110	61.03	N.A.	3.60
90-120	70.30	N.A.	4.10
90-130	73.61	N.A.	4.30
90-150	74.14	N.A.	4.30
90-180	74.14	N.A.	4.30
110-180	13.11	N.A.	0.80
0-180	1712.7	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	50.96
10-20	145.94
20-30	221.29
30-40	267.02
40-50	277.00
50-60	253.76
60-70	203.67
70-80	139.50
80-90	79.42
90-100	40.74
100-110	20.29
110-120	9.27
120-130	3.32
130-140	0.53
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	88	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	67	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	29	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	18.0	19.6	18.4	20.0	20.4	19.7	21.3	20.1	21.7	22.1
	3H	19.5	20.9	19.9	21.3	21.8	22.0	23.4	22.4	23.8	24.3
	4H	19.9	21.3	20.4	21.7	22.2	23.1	24.5	23.6	24.9	25.4
	6H	20.2	21.5	20.7	21.9	22.4	24.3	25.5	24.7	26.0	26.5
	8H	20.3	21.5	20.8	22.0	22.5	24.8	26.1	25.3	26.5	27.0
	12H	20.3	21.5	20.8	21.9	22.5	25.5	26.7	26.0	27.1	27.7
4H	2H	18.8	20.1	19.2	20.6	21.0	20.1	21.5	20.6	21.9	22.4
	3H	20.5	21.6	20.9	22.1	22.6	22.6	23.8	23.1	24.3	24.8
	4H	21.0	22.1	21.5	22.6	23.1	23.9	25.0	24.4	25.4	26.0
	6H	21.4	22.4	22.0	22.9	23.4	25.2	26.2	25.8	26.7	27.2
	8H	21.5	22.4	22.1	22.9	23.5	25.9	26.8	26.4	27.3	27.9
	12H	21.6	22.4	22.1	22.9	23.5	26.7	27.5	27.2	28.0	28.6
8H	4H	21.6	22.5	22.1	23.0	23.5	24.1	25.0	24.6	25.5	26.0
	6H	22.1	22.9	22.7	23.4	24.0	25.6	26.3	26.1	26.9	27.4
	8H	22.3	23.0	22.8	23.5	24.1	26.4	27.1	26.9	27.6	28.2
	12H	22.4	23.0	23.0	23.5	24.2	27.3	27.9	27.9	28.5	29.1
12H	4H	21.7	22.5	22.3	23.1	23.6	24.1	24.9	24.6	25.4	26.0
	6H	22.3	23.0	22.9	23.6	24.2	25.6	26.3	26.2	26.8	27.4
	8H	22.6	23.2	23.1	23.7	24.4	26.5	27.1	27.0	27.6	28.3

Maximum UGR = 29.1

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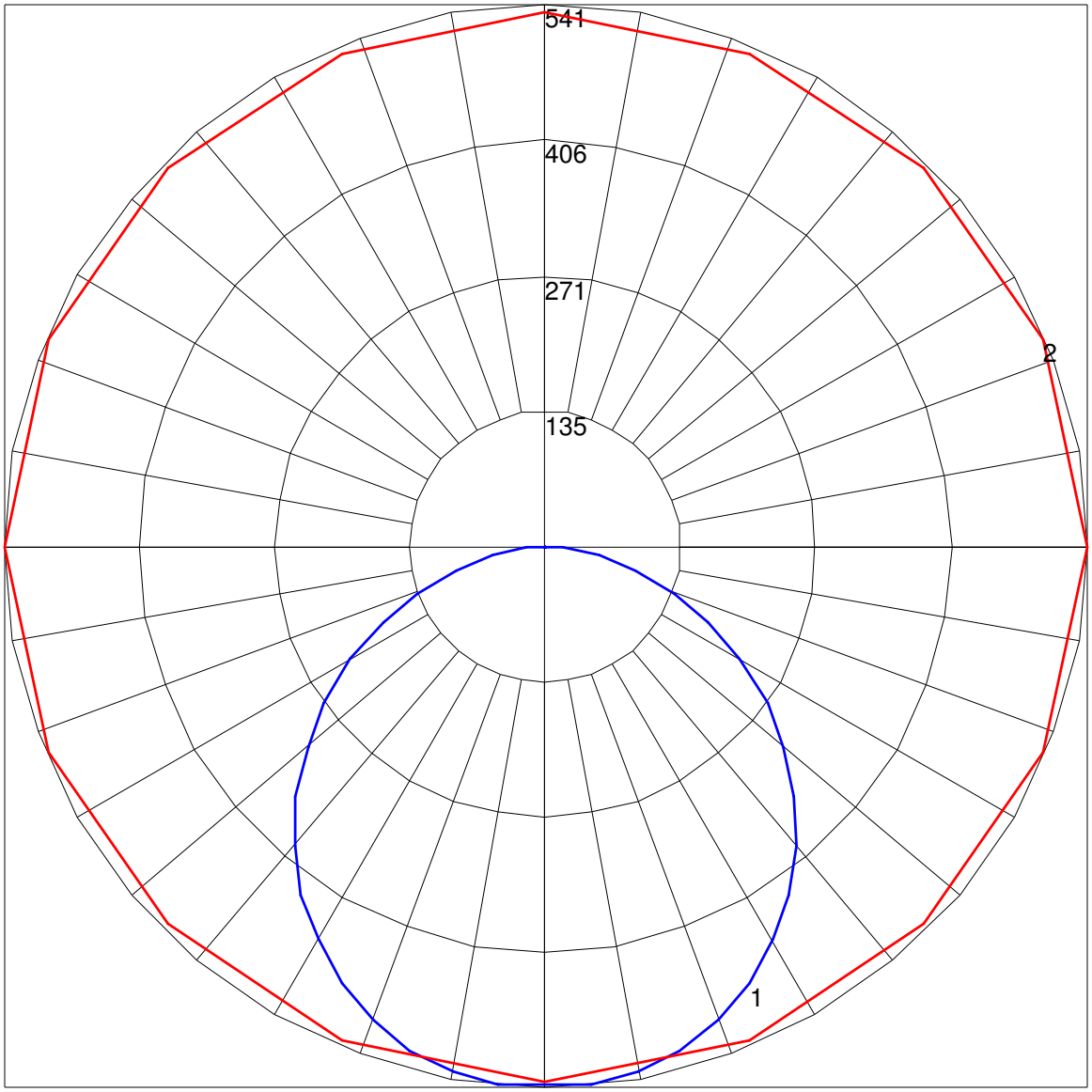
POLAR GRAPH



Maximum Candela = 541.032 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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