IES INDOOR REPORT
PHOTOMETRIC FILENAME : SL-4-L5-835-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-L5-835-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	1992
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	111
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	12310	9922	9437
55	11619	8877	8513
65	10342	7630	7576
75	8660	6281	6742
85	4689	5207	6071

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	627.054	627.054	627.054	627.054	627.054
5	629.107	626.028	621.923	620.896	621.923
10	619.870	616.791	612.686	612.686	614.739
15	606.529	603.450	599.345	600.371	600.371
20	586.003	582.924	577.793	581.898	582.924
25	560.346	557.267	556.241	559.320	561.372
30	528.532	528.532	528.532	532.637	531.610
35	494.665	494.665	494.665	498.770	501.848
40	453.614	454.640	455.666	462.850	466.955
45	409.484	412.563	415.641	423.852	426.930
50	361.249	364.328	371.512	383.827	389.985
55	315.066	316.093	329.434	339.697	348.934
60	261.700	266.832	285.304	304.804	310.961
65	208.334	216.544	238.096	259.648	268.884
70	159.073	167.283	193.966	220.649	228.859
75	108.785	123.153	152.915	182.677	194.992
80	63.629	79.023	119.048	148.810	162.151
85	21.552	50.287	87.233	116.995	130.337
90	0.000	27.709	64.655	91.338	101.601
95	0.000	14.368	44.130	70.813	80.049
100	0.000	7.184	30.788	52.340	61.577
105	0.000	4.105	21.552	37.972	46.182
110	0.000	3.079	14.368	27.709	32.841
115	0.000	2.053	9.236	19.499	24.631
120	0.000	0.000	5.131	12.315	15.394
125	0.000	0.000	4.105	8.210	10.263
130	0.000	0.000	0.000	5.131	6.158
135	0.000	0.000	0.000	0.000	4.105
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	228.95	N.A.	11.50
0-30	486.27	N.A.	24.40
0-40	796.76	N.A.	40.00
0-60	1413.92	N.A.	71.00
0-80	1812.95	N.A.	91.00
0-90	1905.31	N.A.	95.70
10-90	1846.05	N.A.	92.70
20-40	567.81	N.A.	28.50
20-50	889.90	N.A.	44.70
40-70	853.99	N.A.	42.90
60-80	399.03	N.A.	20.00
70-80	162.20	N.A.	8.10
80-90	92.35	N.A.	4.60
90-110	70.97	N.A.	3.60
90-120	81.74	N.A.	4.10
90-130	85.60	N.A.	4.30
90-150	86.21	N.A.	4.30
90-180	86.21	N.A.	4.30
110-180	15.24	N.A.	0.80
0-180	1991.52	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	59.25
10-20	169.69
20-30	257.32
30-40	310.49
40-50	322.10
50-60	295.07
60-70	236.83
70-80	162.20
80-90	92.35
90-100	47.37
100-110	23.59
110-120	10.77
120-130	3.86
130-140	0.61
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	18.5	20.1	18.9	20.5	20.9	20.2	21.8	20.6	22.2	22.6
	3H	20.0	21.4	20.4	21.8	22.3	22.5	23.9	22.9	24.3	24.8
	4H	20.4	21.8	20.9	22.2	22.7	23.6	25.0	24.1	25.4	25.9
	6H	20.7	22.0	21.2	22.4	22.9	24.8	26.0	25.2	26.5	27.0
	8H	20.8	22.0	21.3	22.5	23.0	25.3	26.6	25.8	27.0	27.5
	12H	20.8	22.0	21.3	22.4	23.0	26.0	27.2	26.5	27.6	28.2
4H	2H	19.3	20.6	19.7	21.1	21.5	20.6	22.0	21.1	22.4	22.9
	3H	21.0	22.1	21.4	22.6	23.1	23.1	24.3	23.6	24.8	25.3
	4H	21.5	22.6	22.0	23.1	23.6	24.4	25.5	24.9	25.9	26.5
	6H	21.9	22.9	22.5	23.4	23.9	25.7	26.7	26.2	27.2	27.7
	8H	22.0	22.9	22.6	23.4	24.0	26.4	27.3	26.9	27.8	28.4
	12H	22.1	22.9	22.6	23.4	24.0	27.2	28.0	27.7	28.5	29.1
8H	4H	22.1	23.0	22.6	23.5	24.0	24.6	25.5	25.1	26.0	26.5
	6H	22.6	23.4	23.1	23.9	24.5	26.1	26.8	26.6	27.4	27.9
	8H	22.8	23.5	23.3	24.0	24.6	26.9	27.6	27.4	28.1	28.7
	12H	22.9	23.5	23.5	24.0	24.7	27.8	28.4	28.4	29.0	29.6
12H	4H	22.2	23.0	22.8	23.6	24.1	24.6	25.4	25.1	25.9	26.5
	6H	22.8	23.5	23.4	24.1	24.7	26.1	26.8	26.7	27.3	27.9
	8H	23.1	23.7	23.6	24.2	24.9	27.0	27.6	27.5	28.1	28.8

Maximum UGR = 29.6

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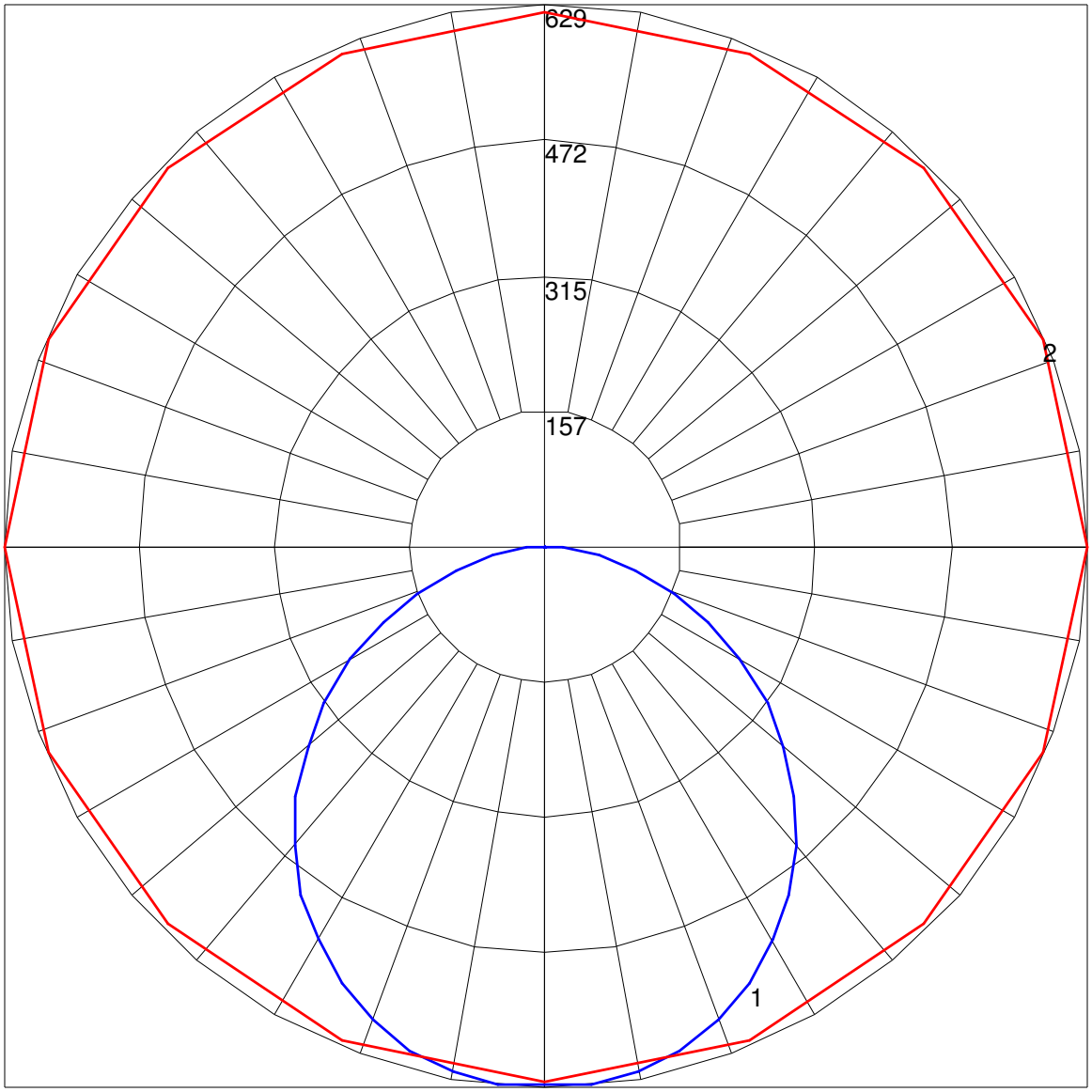
POLAR GRAPH



Maximum Candela = 629.107 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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