IES INDOOR REPORT
PHOTOMETRIC FILENAME : SL-4-L5-840-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-L5-840-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	2051
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
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	12680	10220	9720
55	11968	9143	8768
65	10652	7859	7803
75	8920	6469	6945
85	4829	5364	6253

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	645.865	645.865	645.865	645.865	645.865
5	647.980	644.808	640.580	639.523	640.580
10	638.466	635.295	631.067	631.067	633.181
15	624.724	621.553	617.325	618.382	618.382
20	603.583	600.412	595.126	599.355	600.412
25	577.156	573.985	572.928	576.099	578.213
30	544.387	544.387	544.387	548.616	547.559
35	509.504	509.504	509.504	513.733	516.904
40	467.222	468.279	469.336	476.735	480.964
45	421.768	424.939	428.111	436.567	439.738
50	372.086	375.257	382.657	395.342	401.684
55	324.518	325.575	339.317	349.888	359.401
60	269.551	274.836	293.864	313.948	320.290
65	214.584	223.040	245.239	267.437	276.951
70	163.845	172.301	199.785	227.269	235.725
75	112.049	126.848	157.502	188.157	200.842
80	65.538	81.394	122.619	153.274	167.016
85	22.198	51.796	89.850	120.505	134.247
90	0.000	28.541	66.595	94.079	104.649
95	0.000	14.799	45.454	72.937	82.451
100	0.000	7.399	31.712	53.910	63.424
105	0.000	4.228	22.198	39.111	47.568
110	0.000	3.171	14.799	28.541	33.826
115	0.000	2.114	9.514	20.084	25.370
120	0.000	0.000	5.285	12.685	15.856
125	0.000	0.000	4.228	8.457	10.571
130	0.000	0.000	0.000	5.285	6.342
135	0.000	0.000	0.000	0.000	4.228
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	235.82	N.A.	11.50
0-30	500.85	N.A.	24.40
0-40	820.66	N.A.	40.00
0-60	1456.34	N.A.	71.00
0-80	1867.34	N.A.	91.00
0-90	1962.47	N.A.	95.70
10-90	1901.43	N.A.	92.70
20-40	584.84	N.A.	28.50
20-50	916.60	N.A.	44.70
40-70	879.61	N.A.	42.90
60-80	411.00	N.A.	20.00
70-80	167.07	N.A.	8.10
80-90	95.12	N.A.	4.60
90-110	73.09	N.A.	3.60
90-120	84.19	N.A.	4.10
90-130	88.16	N.A.	4.30
90-150	88.80	N.A.	4.30
90-180	88.80	N.A.	4.30
110-180	15.70	N.A.	0.80
0-180	2051.26	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	61.03
10-20	174.78
20-30	265.04
30-40	319.80
40-50	331.76
50-60	303.92
60-70	243.93
70-80	167.07
80-90	95.12
90-100	48.79
100-110	24.30
110-120	11.10
120-130	3.97
130-140	0.63
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	18.6	20.2	19.0	20.6	21.0	20.3	21.9	20.7	22.3	22.7
	3H	20.1	21.5	20.5	21.9	22.4	22.6	24.0	23.0	24.5	24.9
	4H	20.5	21.9	21.0	22.3	22.8	23.7	25.1	24.2	25.5	26.0
	6H	20.8	22.1	21.3	22.6	23.0	24.9	26.1	25.3	26.6	27.1
	8H	20.9	22.1	21.4	22.6	23.1	25.5	26.7	26.0	27.2	27.6
	12H	20.9	22.1	21.4	22.5	23.1	26.1	27.3	26.6	27.7	28.3
4H	2H	19.4	20.8	19.8	21.2	21.6	20.7	22.1	21.2	22.5	23.0
	3H	21.1	22.2	21.5	22.7	23.2	23.2	24.4	23.7	24.9	25.4
	4H	21.6	22.7	22.1	23.2	23.7	24.5	25.6	25.0	26.0	26.6
	6H	22.0	23.0	22.6	23.5	24.0	25.8	26.8	26.4	27.3	27.8
	8H	22.1	23.0	22.7	23.5	24.1	26.5	27.4	27.0	27.9	28.5
	12H	22.2	23.0	22.7	23.5	24.1	27.3	28.1	27.8	28.6	29.2
8H	4H	22.2	23.1	22.7	23.6	24.1	24.7	25.6	25.2	26.1	26.6
	6H	22.7	23.5	23.3	24.0	24.6	26.2	26.9	26.7	27.5	28.0
	8H	22.9	23.6	23.4	24.1	24.7	27.0	27.7	27.5	28.2	28.8
	12H	23.0	23.6	23.6	24.1	24.8	27.9	28.5	28.5	29.1	29.7
12H	4H	22.3	23.1	22.9	23.7	24.2	24.7	25.5	25.2	26.0	26.6
	6H	22.9	23.6	23.5	24.2	24.8	26.2	26.9	26.8	27.4	28.0
	8H	23.2	23.8	23.8	24.3	25.0	27.1	27.7	27.6	28.2	28.9

Maximum UGR = 29.7

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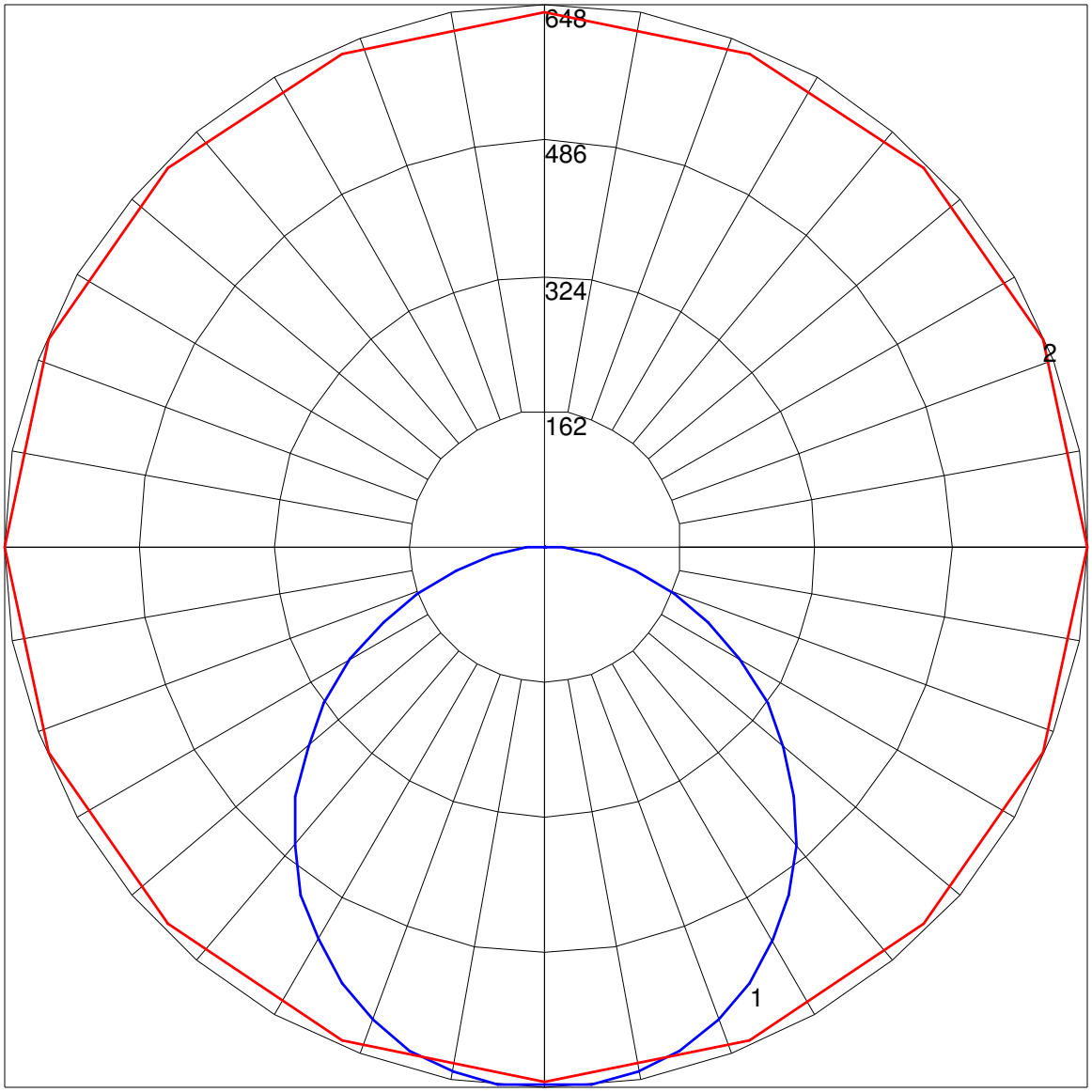
POLAR GRAPH



Maximum Candela = 647.98 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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