IES INDOOR REPORT
PHOTOMETRIC FILENAME : SL-4-L5-930-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-L5-930-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	1633
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	91
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	10095	8136	7739
55	9528	7279	6981
65	8480	6257	6212
75	7101	5150	5529
85	3845	4270	4978

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	514.184	514.184	514.184	514.184	514.184
5	515.867	513.343	509.977	509.135	509.977
10	508.294	505.769	502.403	502.403	504.086
15	497.353	494.829	491.463	492.304	492.304
20	480.523	477.998	473.790	477.156	477.998
25	459.484	456.959	456.118	458.642	460.325
30	433.396	433.396	433.396	436.762	435.921
35	405.625	405.625	405.625	408.991	411.516
40	371.963	372.805	373.646	379.537	382.903
45	335.777	338.301	340.826	347.558	350.083
50	296.224	298.749	304.640	314.738	319.787
55	258.354	259.196	270.136	278.552	286.125
60	214.594	218.802	233.950	249.939	254.988
65	170.834	177.566	195.239	212.911	220.485
70	130.440	137.172	159.052	180.932	187.665
75	89.204	100.985	125.390	149.795	159.894
80	52.176	64.799	97.619	122.024	132.964
85	17.672	41.236	71.531	95.936	106.876
90	0.000	22.722	53.017	74.898	83.313
95	0.000	11.782	36.186	58.067	65.641
100	0.000	5.891	25.246	42.919	50.493
105	0.000	3.366	17.672	31.137	37.870
110	0.000	2.525	11.782	22.722	26.929
115	0.000	1.683	7.574	15.989	20.197
120	0.000	0.000	4.208	10.099	12.623
125	0.000	0.000	3.366	6.732	8.415
130	0.000	0.000	0.000	4.208	5.049
135	0.000	0.000	0.000	0.000	3.366
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	187.74	N.A.	11.50
0-30	398.74	N.A.	24.40
0-40	653.34	N.A.	40.00
0-60	1159.41	N.A.	71.00
0-80	1486.62	N.A.	91.00
0-90	1562.35	N.A.	95.70
10-90	1513.76	N.A.	92.70
20-40	465.60	N.A.	28.50
20-50	729.72	N.A.	44.70
40-70	700.27	N.A.	42.90
60-80	327.21	N.A.	20.00
70-80	133.01	N.A.	8.10
80-90	75.73	N.A.	4.60
90-110	58.19	N.A.	3.60
90-120	67.03	N.A.	4.10
90-130	70.19	N.A.	4.30
90-150	70.69	N.A.	4.30
90-180	70.69	N.A.	4.30
110-180	12.50	N.A.	0.80
0-180	1633.04	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	48.59
10-20	139.15
20-30	211.00
30-40	254.60
40-50	264.12
50-60	241.96
60-70	194.20
70-80	133.01
80-90	75.73
90-100	38.85
100-110	19.35
110-120	8.83
120-130	3.16
130-140	0.50
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	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	20.0	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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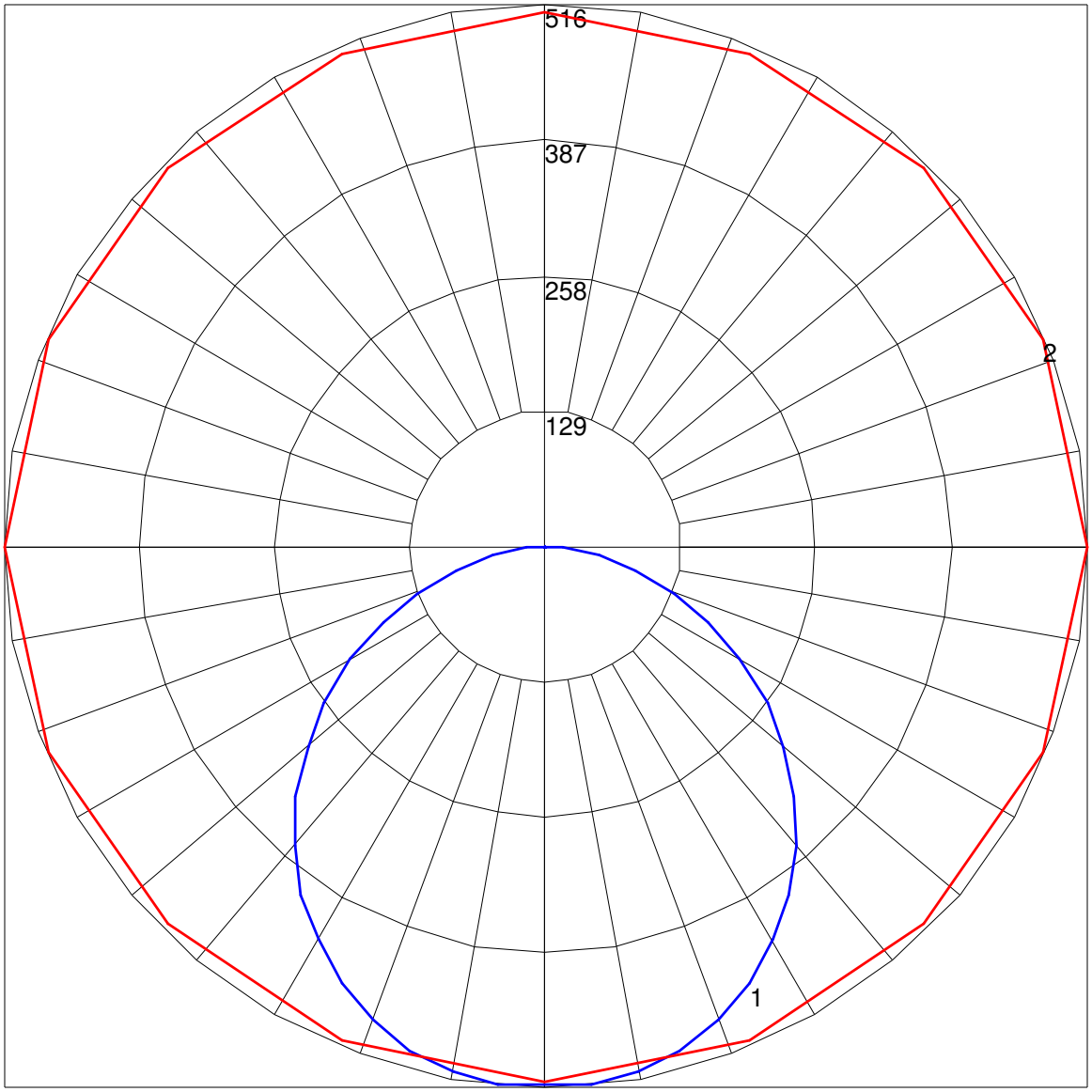
POLAR GRAPH



Maximum Candela = 515.867 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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