IES INDOOR REPORT
PHOTOMETRIC FILENAME : SL-4-L5-830-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-L5-830-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	1972
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	110
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	12187	9823	9343
55	11503	8788	8428
65	10238	7554	7500
75	8574	6218	6675
85	4642	5155	6011

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	620.783	620.783	620.783	620.783	620.783
5	622.815	619.767	615.703	614.687	615.703
10	613.671	610.623	606.559	606.559	608.591
15	600.463	597.415	593.351	594.367	594.367
20	580.143	577.095	572.015	576.079	577.095
25	554.743	551.694	550.678	553.727	555.759
30	523.246	523.246	523.246	527.310	526.294
35	489.718	489.718	489.718	493.782	496.830
40	449.077	450.093	451.109	458.221	462.285
45	405.389	408.437	411.485	419.613	422.661
50	357.636	360.684	367.796	379.988	386.085
55	311.916	312.932	326.140	336.300	345.444
60	259.083	264.163	282.451	301.756	307.852
65	206.250	214.379	235.715	257.051	266.195
70	157.482	165.610	192.026	218.443	226.571
75	107.697	121.921	151.386	180.850	193.042
80	62.993	78.233	117.857	147.322	160.530
85	21.336	49.785	86.361	115.825	129.034
90	0.000	27.432	64.009	90.425	100.585
95	0.000	14.224	43.689	70.105	79.249
100	0.000	7.112	30.480	51.817	60.961
105	0.000	4.064	21.336	37.592	45.721
110	0.000	3.048	14.224	27.432	32.512
115	0.000	2.032	9.144	19.304	24.384
120	0.000	0.000	5.080	12.192	15.240
125	0.000	0.000	4.064	8.128	10.160
130	0.000	0.000	0.000	5.080	6.096
135	0.000	0.000	0.000	0.000	4.064
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	226.66	N.A.	11.50
0-30	481.40	N.A.	24.40
0-40	788.79	N.A.	40.00
0-60	1399.78	N.A.	71.00
0-80	1794.82	N.A.	91.00
0-90	1886.25	N.A.	95.70
10-90	1827.59	N.A.	92.70
20-40	562.13	N.A.	28.50
20-50	881.01	N.A.	44.70
40-70	845.45	N.A.	42.90
60-80	395.04	N.A.	20.00
70-80	160.58	N.A.	8.10
80-90	91.43	N.A.	4.60
90-110	70.26	N.A.	3.60
90-120	80.92	N.A.	4.10
90-130	84.74	N.A.	4.30
90-150	85.35	N.A.	4.30
90-180	85.35	N.A.	4.30
110-180	15.09	N.A.	0.80
0-180	1971.6	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	58.66
10-20	168.00
20-30	254.75
30-40	307.39
40-50	318.87
50-60	292.12
60-70	234.46
70-80	160.58
80-90	91.43
90-100	46.90
100-110	23.36
110-120	10.67
120-130	3.82
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	23.2	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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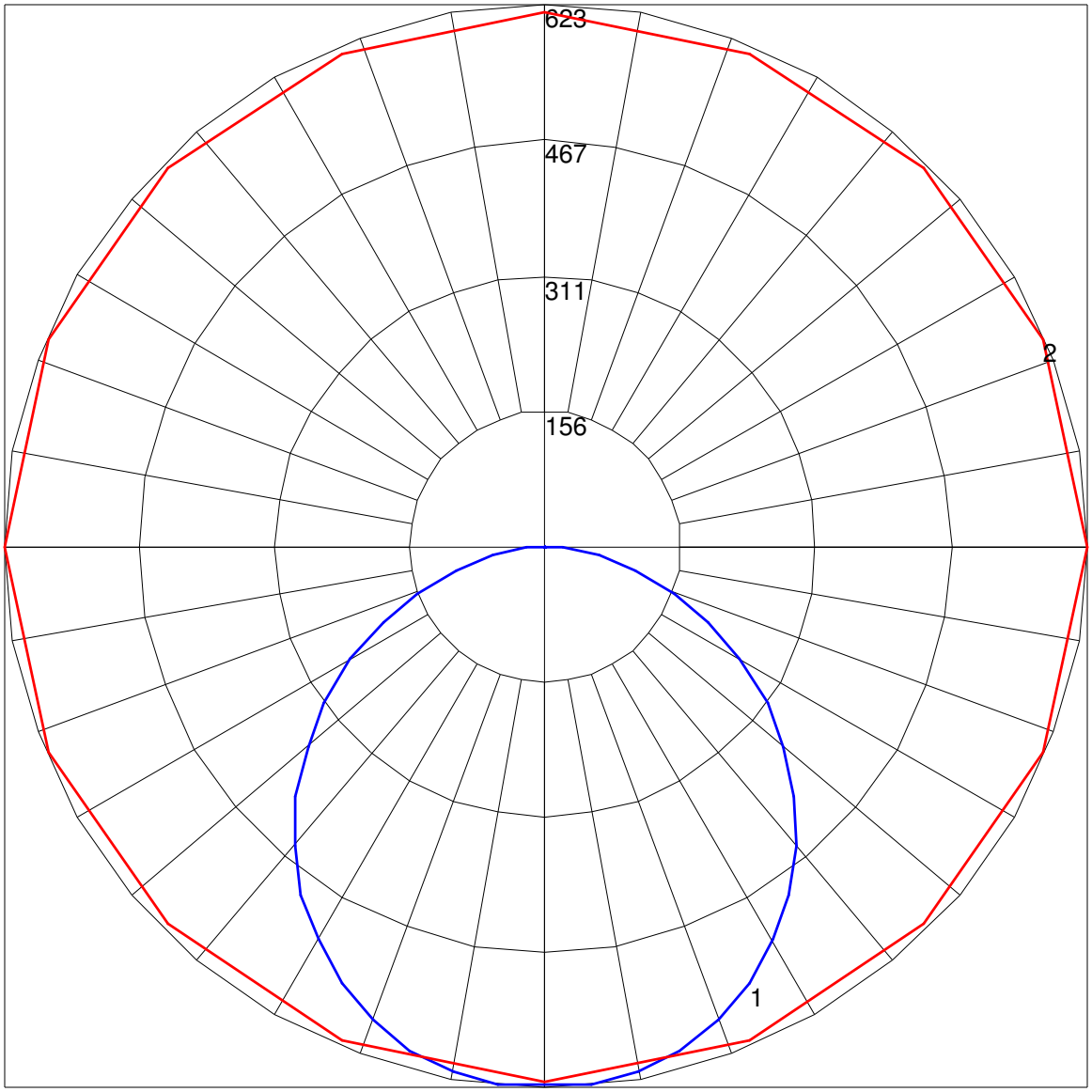
POLAR GRAPH



Maximum Candela = 622.815 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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