



IES INDOOR REPORT
PHOTOMETRIC FILENAME : AST-04-04L-835.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] RKS200302004-10
[TESTLAB] BACL
[ISSUEDATE] 12/29/2021
[MANUFAC] LSI INDUSTRIES, INC.
[LUMCAT] AST-04-04L-835
[OTHER] TEST PROCEDURE: IESNA LM-79-08
[ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED
[OTHER] SCALED FROM PRELIMINARY TEST DATA
[SEARCH_SOURCETYPE] LED
[SEARCH_APPLICATION] Indoor
[SEARCH_COLORTEMP] 3500

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4598
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	135
Total Luminaire Watts	34
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.32
Spacing Criterion (Diagonal)	1.40
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	0.28 ft
Luminous Height	0.29 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	9479	6199	6023
55	8586	5252	5268
65	7348	4367	4609
75	5337	3591	4034
85	1904	2946	3565

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0	1216.2	1216.2	1216.2	1216.2	1216.2	1216.2	1216.2	1216.2	1216.2	1216.2
5	1209.3	1208.8	1207.6	1208.3	1208.3	1209.8	1208.6	1210.1	1208.6	1211.1
10	1190.3	1188.9	1189.5	1192.2	1192.9	1193.5	1190.3	1190.2	1187.5	1193.4
15	1156.4	1156.4	1159.3	1166.1	1170.2	1168.8	1160.9	1159.7	1152.7	1163.5
20	1110.9	1112.5	1119.5	1133.2	1140.3	1136.5	1121.9	1117.5	1106.2	1122.2
25	1054.4	1058.6	1070.3	1092.3	1103.4	1096.8	1075.2	1062.1	1049.0	1069.4
30	988.0	994.6	1015.6	1044.5	1060.9	1049.8	1018.6	998.9	982.9	1008.3
35	916.0	923.2	953.0	990.5	1013.1	998.2	957.5	927.5	909.4	938.6
40	833.7	845.0	884.6	932.8	959.6	940.4	890.1	851.8	828.1	860.9
45	748.7	765.5	814.3	870.1	903.0	880.0	823.9	771.5	741.5	781.3
50	657.8	682.0	739.5	807.4	842.9	817.9	749.0	687.2	652.8	699.6
55	566.0	594.8	664.8	741.4	780.2	752.4	676.1	601.7	560.8	613.5
60	470.1	506.6	589.7	675.2	716.7	684.3	603.0	515.3	466.9	526.6
65	373.7	420.3	515.2	609.9	653.4	619.1	530.0	430.8	370.8	439.4
70	275.7	337.5	446.0	543.9	591.2	554.6	461.3	348.8	274.3	354.3
75	182.8	260.0	379.9	480.3	529.0	492.1	395.1	273.1	182.2	275.4
80	98.8	191.9	320.2	420.6	471.0	429.6	334.4	205.3	99.4	205.7
85	31.6	133.8	266.3	366.1	415.5	372.8	278.7	147.4	33.1	145.8
90	0.0	92.0	219.5	316.5	363.4	322.1	229.6	102.6	0.0	100.4
95	0.0	64.0	181.5	273.0	315.6	276.5	189.7	72.9	0.0	71.6
100	0.0	46.0	149.6	234.8	271.5	237.2	156.2	52.9	0.0	53.3
105	0.0	34.5	122.6	200.2	231.8	201.4	128.3	38.5	0.0	40.0
110	0.0	26.6	100.5	168.5	196.0	170.3	105.0	29.2	0.0	31.3
115	1.0	21.2	81.1	140.1	164.1	142.0	85.0	23.3	0.7	25.9
120	2.0	17.9	65.9	115.9	136.6	117.6	68.9	19.1	1.9	22.3
125	3.4	15.3	53.1	95.3	112.4	95.9	55.5	16.5	2.9	18.9
130	4.3	14.1	42.7	76.7	90.4	77.4	44.8	14.2	3.4	17.2
135	4.8	13.1	35.7	61.6	72.5	61.6	36.4	13.2	4.7	15.7
140	5.8	12.6	29.9	49.4	57.7	48.2	28.6	11.8	5.2	14.0
145	6.2	12.8	26.0	39.7	44.7	37.3	22.9	10.3	5.1	12.6
150	7.2	13.0	22.7	31.4	34.0	28.4	16.8	10.0	6.2	11.8
155	8.7	12.9	19.4	25.4	26.9	21.3	13.3	9.2	7.0	11.6
160	10.1	12.6	16.7	19.7	20.8	14.8	10.8	9.9	8.1	11.1
165	10.5	11.7	14.5	15.6	16.0	11.5	10.3	9.9	8.9	10.1
170	10.7	11.5	12.1	12.0	10.6	10.8	11.2	11.2	10.4	10.5
175	11.3	11.8	11.1	12.1	10.7	12.1	12.6	12.5	11.3	11.7
180	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Vert. Angles **Horizontal Angles**

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0	1216.2	1216.2	1216.2	1216.2	1216.2	1216.2	1216.2
5	1213.2	1215.4	1216.7	1215.0	1212.8	1211.9	1209.3
10	1200.3	1205.2	1209.7	1205.8	1198.4	1193.7	1190.3
15	1175.8	1186.8	1194.8	1187.4	1173.9	1162.4	1156.4
20	1141.1	1160.3	1170.8	1160.9	1139.0	1121.3	1110.9
25	1098.5	1125.0	1141.2	1127.5	1094.5	1068.8	1054.4
30	1043.9	1083.1	1103.9	1085.3	1042.0	1006.9	988.0
35	984.7	1034.4	1061.0	1036.9	982.9	937.2	916.0
40	918.7	979.5	1011.4	983.0	918.5	861.3	833.7
45	848.7	921.7	956.9	924.9	849.9	779.5	748.7
50	777.0	859.8	899.1	862.5	779.1	696.1	657.8
55	702.6	793.5	838.9	799.0	705.3	609.6	566.0
60	626.0	725.6	776.2	732.1	632.3	523.9	470.1

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65	552.8	658.6	710.8	665.2	560.9	438.6	373.7
70	480.8	591.6	646.2	598.1	489.9	355.3	275.7
75	413.0	527.2	582.8	531.8	423.3	279.3	182.8
80	349.3	465.3	521.7	469.4	359.6	211.6	98.8
85	292.2	406.4	463.2	413.4	302.1	153.3	31.6
90	243.4	353.3	408.3	360.7	254.2	111.1	0.0
95	203.0	306.6	355.9	313.7	213.2	82.7	0.0
100	169.4	264.4	308.5	271.5	178.9	62.7	0.0
105	140.9	227.2	265.4	233.7	149.0	48.0	0.0
110	115.8	193.7	226.6	199.6	124.8	38.7	0.0
115	95.4	163.2	191.6	167.5	103.3	31.6	1.0
120	78.2	135.9	160.5	140.8	85.7	26.9	2.0
125	64.3	112.8	133.0	116.6	71.0	23.4	3.4
130	53.0	92.4	110.0	95.9	58.6	21.0	4.3
135	43.2	75.1	89.2	78.2	49.4	18.8	4.8
140	36.1	60.4	71.9	62.6	40.7	17.4	5.8
145	30.1	47.7	56.6	50.7	33.7	16.4	6.2
150	23.6	38.0	44.6	40.5	28.0	15.1	7.2
155	18.6	29.4	34.9	31.6	23.2	14.7	8.7
160	16.1	22.9	26.3	24.9	20.0	14.4	10.1
165	13.6	17.2	20.6	19.8	17.2	13.1	10.5
170	12.0	13.1	16.4	16.5	14.4	12.2	10.7
175	11.7	10.1	13.3	12.8	12.2	12.3	11.3
180	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	444.89	N.A.	9.70
0-30	945.85	N.A.	20.60
0-40	1554.69	N.A.	33.80
0-60	2816.02	N.A.	61.20
0-80	3757.45	N.A.	81.70
0-90	4048.42	N.A.	88.00
10-90	3933.33	N.A.	85.50
20-40	1109.8	N.A.	24.10
20-50	1755.64	N.A.	38.20
40-70	1791.29	N.A.	39.00
60-80	941.43	N.A.	20.50
70-80	411.47	N.A.	8.90
80-90	290.97	N.A.	6.30
90-110	338.23	N.A.	7.40
90-120	428.30	N.A.	9.30
90-130	484.44	N.A.	10.50
90-150	535.49	N.A.	11.60
90-180	549.60	N.A.	12.00
110-180	211.37	N.A.	4.60
0-180	4598.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	115.09
10-20	329.80
20-30	500.96
30-40	608.85
40-50	645.84
50-60	615.49
60-70	529.96
70-80	411.47
80-90	290.97
90-100	200.78
100-110	137.45
110-120	90.07
120-130	56.13
130-140	32.99
140-150	18.07
150-160	9.09
160-170	4.01
170-180	1.00

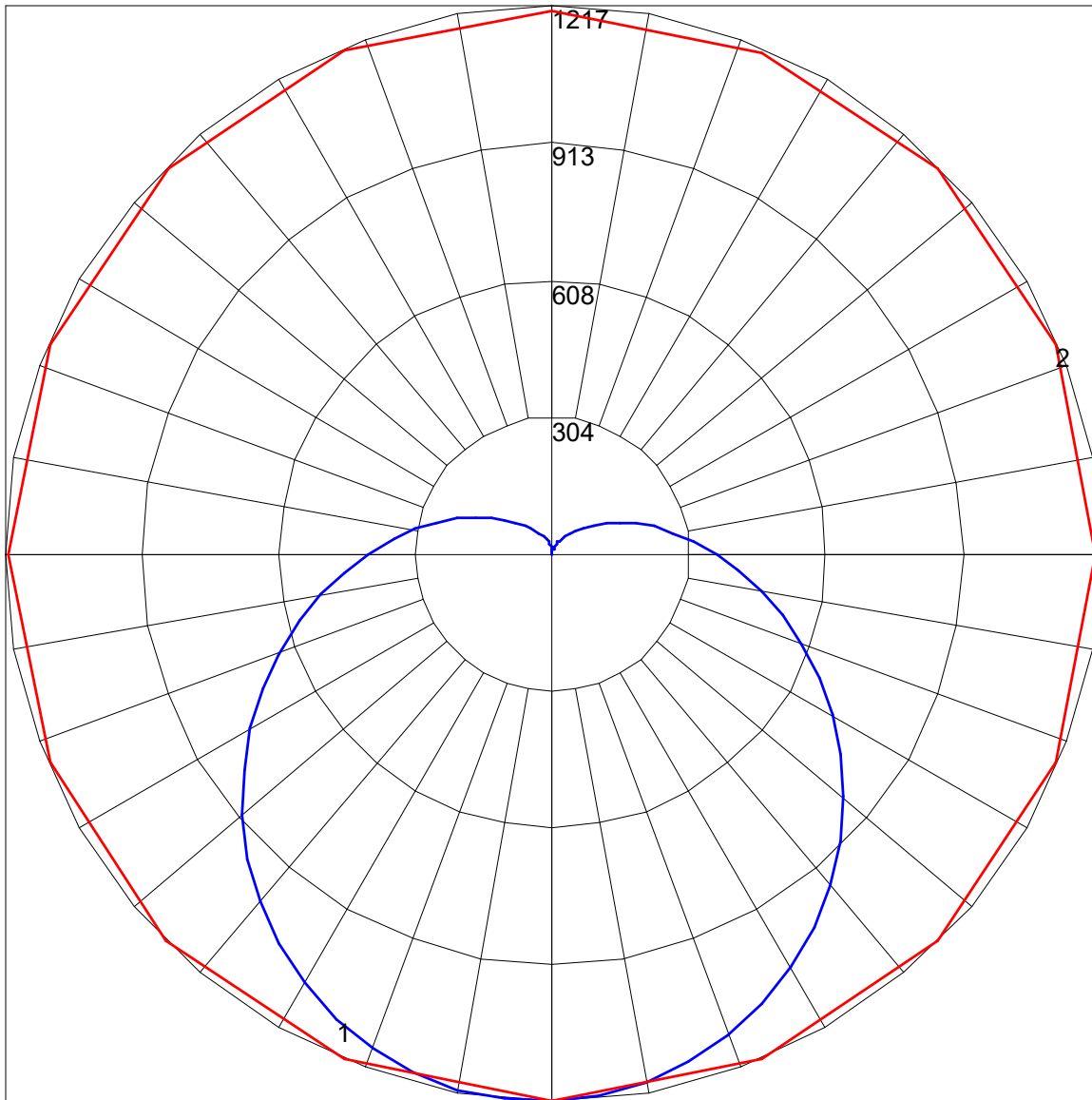
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	116	116	116	116	112	112	112	112	104	104	104	97	97	97	91	91	91	88
1	104	98	93	88	100	94	90	86	88	84	81	82	79	76	76	74	72	69
2	93	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59	56
3	85	73	65	57	81	71	63	56	66	59	54	62	56	51	58	53	49	46
4	77	65	55	48	74	62	54	47	58	51	45	55	48	43	51	46	42	39
5	71	57	48	41	68	56	47	40	52	45	39	49	42	37	46	40	36	33
6	65	52	42	36	63	50	41	35	47	39	34	44	38	33	41	36	31	29
7	61	47	38	31	58	45	37	31	43	35	30	40	34	29	38	32	28	25
8	56	42	34	28	54	41	33	27	39	32	26	37	30	26	35	29	25	23
9	53	39	31	25	50	38	30	24	36	29	24	34	28	23	32	26	22	20
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20	18

POLAR GRAPH



Maximum Candela = 1216.7 Located At Horizontal Angle = 270, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (270 - 90) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)