



IES INDOOR REPORT
PHOTOMETRIC FILENAME : AST-04-04L-840.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] RKS200302004-10
[TESTLAB] BACL
[ISSUE DATE] 12/29/2021
[MANUFACTURER] LSI INDUSTRIES, INC.
[LUMEN CATEGORY] AST-04-04L-840
[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] 4000

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4634
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	136
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	9546	6266	6061
55	8659	5286	5311
65	7379	4418	4641
75	5405	3624	4072
85	1886	2971	3597

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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	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7
5	1218.8	1216.8	1216.8	1216.6	1217.2	1217.2	1217.1	1217.9	1217.4	1219.5
10	1198.5	1196.8	1197.8	1200.4	1201.8	1201.8	1197.9	1198.8	1195.7	1201.4
15	1165.3	1164.7	1167.6	1174.0	1178.5	1176.3	1168.2	1167.1	1160.6	1171.8
20	1119.8	1120.1	1127.8	1140.3	1148.4	1144.9	1129.6	1123.8	1113.7	1129.0
25	1061.5	1066.1	1080.0	1100.1	1112.4	1103.8	1080.7	1067.9	1054.4	1077.3
30	995.6	1001.3	1023.6	1052.2	1068.9	1056.9	1024.8	1005.2	988.1	1014.8
35	921.6	928.9	960.4	997.8	1020.0	1003.9	963.7	934.5	914.8	944.4
40	839.3	850.7	891.9	938.6	966.7	946.9	895.7	857.7	833.5	868.2
45	754.0	769.4	823.1	877.3	908.7	886.3	825.9	774.8	747.4	786.3
50	663.8	685.7	744.4	813.2	851.1	822.3	754.2	691.4	657.9	703.7
55	570.8	599.2	669.2	746.8	786.6	755.7	680.7	605.4	563.4	617.5
60	474.5	510.4	593.8	680.0	722.6	689.2	606.0	518.6	468.6	530.1
65	375.3	422.3	521.3	614.4	658.0	623.5	533.5	432.1	372.3	442.7
70	278.8	339.0	449.0	549.8	595.2	557.8	462.6	350.8	277.0	357.1
75	185.1	262.5	383.4	484.6	534.1	495.0	396.2	274.8	184.4	278.3
80	99.0	193.9	322.5	425.0	475.2	433.3	335.3	204.8	99.0	207.7
85	31.3	135.9	268.5	370.3	419.2	376.7	279.7	146.5	33.3	148.0
90	0.0	93.4	221.8	319.7	366.7	324.3	230.6	103.0	0.0	103.0
95	0.0	65.1	184.1	276.4	318.0	278.6	190.5	72.9	0.0	73.8
100	0.0	46.9	150.9	237.4	274.2	239.5	157.4	53.0	0.0	53.6
105	0.0	34.8	124.3	202.1	234.1	202.8	128.4	38.7	0.0	40.4
110	0.7	27.0	101.8	169.9	198.2	171.6	105.4	29.8	0.0	32.0
115	1.4	22.1	82.3	142.1	165.7	142.9	85.3	23.6	1.1	26.3
120	2.4	18.5	67.2	117.6	137.8	118.8	69.6	19.7	2.0	22.5
125	3.8	16.0	54.5	95.5	113.0	96.7	56.0	16.9	3.1	19.1
130	4.1	14.0	44.3	77.8	91.4	77.9	45.6	14.7	3.3	17.2
135	5.3	13.1	36.5	62.7	73.2	62.3	36.8	13.2	4.6	15.8
140	6.0	12.9	30.9	50.4	58.2	48.9	28.9	11.9	5.2	14.2
145	6.4	13.0	26.7	39.6	45.1	37.7	23.4	10.8	5.7	12.6
150	7.5	13.3	23.0	32.3	34.4	28.0	17.0	9.5	6.4	11.9
155	8.5	13.2	20.2	26.0	27.0	21.8	13.3	9.2	6.9	11.6
160	9.4	12.6	17.5	20.3	20.6	14.9	10.8	9.5	8.3	11.3
165	10.1	11.5	15.0	16.2	15.2	10.9	10.1	9.9	8.8	10.1
170	10.6	11.8	12.0	12.3	10.6	10.6	10.8	10.8	10.0	11.1
175	11.1	11.8	11.2	11.7	10.6	11.5	12.6	12.8	10.9	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	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7
5	1222.5	1223.7	1225.3	1223.8	1221.5	1219.6	1218.8
10	1208.6	1214.3	1217.9	1214.2	1207.4	1201.3	1198.5
15	1183.9	1196.5	1203.0	1196.1	1181.9	1170.9	1165.3
20	1149.0	1169.6	1180.4	1169.8	1146.7	1128.3	1119.8
25	1105.0	1134.5	1149.2	1135.0	1102.6	1075.8	1061.5
30	1051.7	1093.4	1111.7	1093.7	1049.5	1013.0	995.6
35	992.6	1043.1	1068.7	1045.1	989.7	943.7	921.6
40	927.4	987.8	1018.9	990.7	924.6	867.1	839.3
45	856.5	928.3	963.5	931.4	855.7	786.3	754.0
50	783.9	865.9	904.9	868.4	784.9	701.7	663.8
55	709.1	800.6	845.5	804.5	711.4	613.3	570.8
60	634.0	732.3	780.3	738.5	637.2	526.2	474.5

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CANDELA TABULATION - (Cont.)

65	559.4	663.9	716.3	671.3	566.3	440.8	375.3
70	485.7	598.4	651.6	603.3	492.7	358.5	278.8
75	416.5	533.5	586.7	536.4	425.8	281.3	185.1
80	354.1	469.8	525.7	474.5	362.9	211.9	99.0
85	296.3	412.0	466.7	416.5	305.5	154.0	31.3
90	247.2	357.6	411.5	364.3	255.9	111.9	0.0
95	206.5	310.3	359.6	317.6	215.1	83.1	0.0
100	172.2	267.8	312.4	274.1	180.4	63.1	0.0
105	142.9	230.9	268.6	235.8	150.7	48.6	0.0
110	118.0	196.7	229.2	201.2	125.8	38.6	0.7
115	96.9	165.2	194.1	169.5	104.5	32.4	1.4
120	79.7	137.6	162.6	141.6	86.0	26.5	2.4
125	65.6	114.2	135.2	117.8	71.5	23.2	3.8
130	54.2	93.4	111.2	96.8	59.4	20.5	4.1
135	44.3	76.5	90.3	78.8	48.8	18.8	5.3
140	36.5	61.2	72.8	63.3	40.3	17.3	6.0
145	30.1	48.5	57.5	50.6	33.5	16.9	6.4
150	24.4	38.5	44.6	39.4	28.3	15.7	7.5
155	19.1	30.0	35.0	32.0	23.7	15.2	8.5
160	16.4	23.5	27.3	25.3	20.5	15.2	9.4
165	14.2	17.2	21.1	20.4	17.3	13.7	10.1
170	12.3	13.1	17.2	16.9	15.2	12.5	10.6
175	11.8	10.0	13.9	13.1	12.6	12.4	11.1
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	448.01	N.A.	9.70
0-30	952.45	N.A.	20.60
0-40	1565.62	N.A.	33.80
0-60	2836.00	N.A.	61.20
0-80	3784.73	N.A.	81.70
0-90	4078.29	N.A.	88.00
10-90	3962.4	N.A.	85.50
20-40	1117.61	N.A.	24.10
20-50	1768.05	N.A.	38.20
40-70	1804.33	N.A.	38.90
60-80	948.74	N.A.	20.50
70-80	414.79	N.A.	9.00
80-90	293.56	N.A.	6.30
90-110	341.80	N.A.	7.40
90-120	432.96	N.A.	9.30
90-130	489.76	N.A.	10.60
90-150	541.40	N.A.	11.70
90-180	555.67	N.A.	12.00
110-180	213.88	N.A.	4.60
0-180	4633.96	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	115.89
10-20	332.11
20-30	504.44
30-40	613.17
40-50	650.44
50-60	619.94
60-70	533.95
70-80	414.79
80-90	293.56
90-100	202.89
100-110	138.91
110-120	91.16
120-130	56.80
130-140	33.38
140-150	18.27
150-160	9.21
160-170	4.05
170-180	1.01

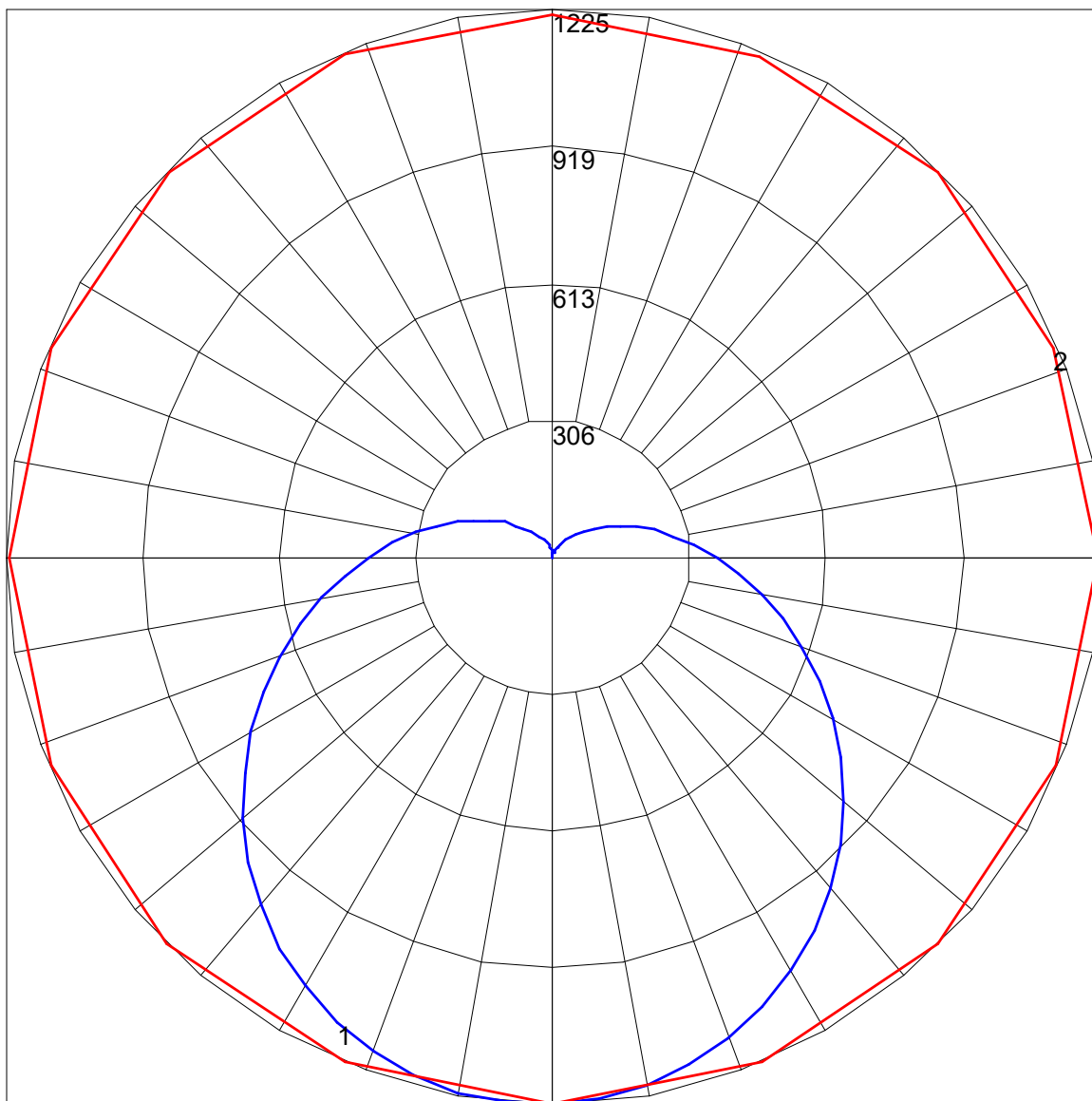
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	41	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 = 1225.3 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.)