

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P334649

Luminaire Tested: **S123IP-S1195U940-4F0-1E-UDD-4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334649  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123IP-S1195U940-4F0-1E-UDD-4  
Description: DEFINE 3 INDIRECT LED LUMINAIRE, BATWING OPTIC  
PENDANT MOUNT, 1195 LUMENS PER FOOT  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3852.6 lumens  
Efficiency: N/A  
Efficacy: 91.9 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Indirect

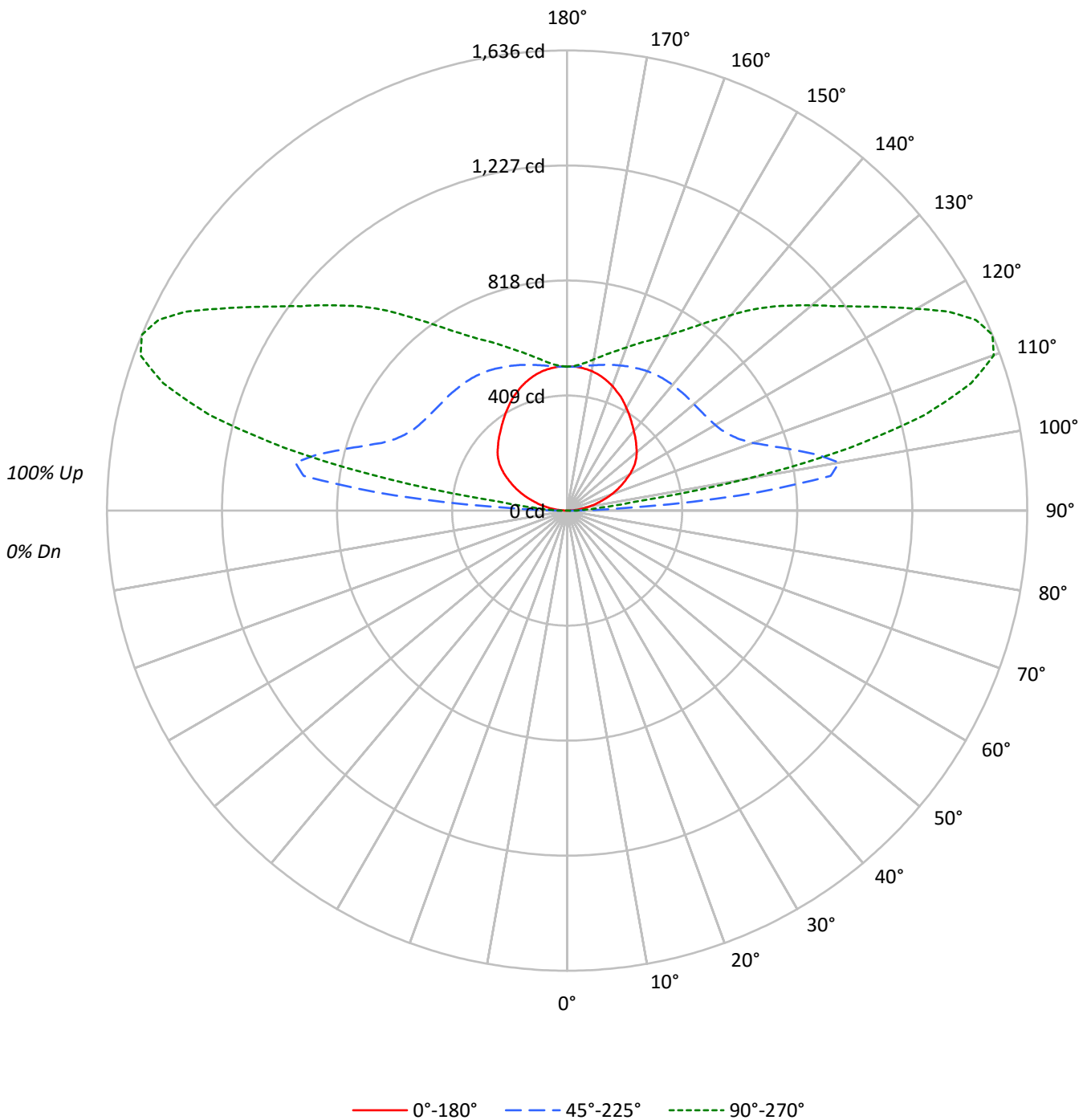
Input Watts (W): 41.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P334649

CATALOG NUMBER: S123IP-S1195U940-4F0-1E-UDD-4

### Luminous Intensity Polar Plot





TEST NUMBER: P334649

CATALOG NUMBER: S123IP-S1195U940-4F0-1E-UDD-4

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				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
RCR																		
0	95	95	95	95	81	81	81	81	56	56	56	32	32	32	10	10	10	0
1	87	83	79	76	74	71	68	65	48	47	45	28	27	26	9	9	8	0
2	79	72	66	62	67	62	57	53	42	40	37	24	23	22	8	7	7	0
3	72	63	56	51	61	54	49	44	37	34	31	21	20	18	7	6	6	0
4	65	56	48	43	56	48	42	37	33	29	26	19	17	16	6	6	5	0
5	60	49	42	36	51	42	36	32	29	25	22	17	15	13	5	5	4	0
6	55	44	36	31	47	38	32	27	26	22	19	15	13	11	5	4	4	0
7	50	39	32	27	43	34	28	23	23	19	17	14	11	10	4	4	3	0
8	47	35	28	23	40	30	24	20	21	17	14	12	10	9	4	3	3	0
9	43	32	25	20	37	27	22	18	19	15	13	11	9	8	4	3	3	0
10	40	29	22	18	34	25	19	16	17	14	11	10	8	7	3	3	2	0

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	0	0	0
5°	0	0	0
10°	0	0	0
15°	0	0	0
20°	0	0	0
25°	0	0	0
30°	0	0	0
35°	0	0	0
40°	0	0	0
45°	0	0	0
50°	0	0	0
55°	0	0	0
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



TEST NUMBER: P334649

CATALOG NUMBER: S123IP-S1195U940-4F0-1E-UDD-4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	0.0	0.0
10°-20°	0.0	0.0
20°-30°	0.0	0.0
30°-40°	0.0	0.0
40°-50°	0.0	0.0
50°-60°	0.0	0.0
60°-70°	0.0	0.0
70°-80°	0.0	0.0
80°-90°	2.8	0.1
90°-100°	277.7	7.2
100°-110°	813.1	21.1
110°-120°	794.0	20.6
120°-130°	632.3	16.4
130°-140°	498.9	12.9
140°-150°	372.2	9.7
150°-160°	259.5	6.7
160°-170°	152.4	4.0
170°-180°	49.6	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	2.8	0.1
90°-120°	1884.8	48.9
90°-150°	3388.3	87.9
90°-180°	3850.0	99.9
0°-180°	3852.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	0	0	0	0	0	
5°	0	0	0	0	0	0
15°	0	0	0	0	0	0
25°	0	0	0	0	0	0
35°	0	0	0	0	0	0
45°	0	0	0	0	0	0
55°	0	0	0	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	2	12	26	29	30	3
95°	35	114	614	179	120	37
105°	120	178	833	1457	1318	128
115°	212	265	637	1397	1603	210
125°	295	349	595	1077	1264	262
135°	346	413	586	887	1025	267
145°	395	452	579	728	801	247
155°	449	484	560	637	664	206
165°	490	504	537	569	579	138
175°	511	511	515	522	521	49
180°	512	512	512	512	512	



TEST NUMBER: P334649

CATALOG NUMBER: S123IP-S1195U940-4F0-1E-UDD-4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	2.1	4.1	6.2	9.3	11.4	13.5	16.6	19.7	22.8	25.9	24.9
92.5°	15.5	22.8	33.2	42.5	52.8	71.5	104.6	159.5	213.4	192.7	144.0
95°	35.2	38.3	49.7	67.3	94.3	134.7	222.7	377.1	547.0	614.4	498.3
97.5°	55.9	57.0	66.3	81.8	108.8	153.3	240.4	419.6	705.5	944.9	977.0
100°	76.7	77.7	85.0	99.5	124.3	164.7	237.3	390.6	663.1	981.1	1185.2
102.5°	98.4	100.5	106.7	120.2	141.9	178.2	241.4	365.7	600.9	913.8	1195.6
105°	120.2	123.3	129.5	141.9	161.6	193.7	249.7	356.4	552.2	833.0	1130.3
107.5°	143.0	146.1	152.3	164.7	183.4	213.4	263.2	354.3	517.0	761.5	1037.1
110°	167.8	170.9	176.1	187.5	205.1	234.1	280.8	359.5	498.3	702.4	950.0



TEST NUMBER: P334649

CATALOG NUMBER: S123IP-S1195U940-4F0-1E-UDD-4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	190.6	193.7	198.9	210.3	227.9	255.9	298.4	369.9	488.0	663.1	874.4
115°	212.4	216.5	222.7	233.1	250.7	278.7	318.1	381.3	486.9	637.2	816.4
117.5°	234.1	239.3	244.5	253.8	273.5	299.4	338.8	395.8	488.0	619.5	778.1
120°	256.9	260.0	265.2	275.6	295.3	321.2	358.5	412.3	492.1	608.2	749.1
122.5°	276.6	279.7	284.9	296.3	315.0	342.9	379.2	427.9	499.4	600.9	725.2
125°	295.3	297.3	303.6	315.0	334.6	362.6	398.9	444.5	506.6	594.7	705.5
127.5°	309.8	312.9	320.1	331.5	353.3	381.3	416.5	457.9	514.9	591.6	686.9
130°	323.2	326.4	335.7	348.1	369.9	397.8	432.0	471.4	523.2	588.5	672.4
132.5°	333.6	337.7	348.1	363.6	385.4	412.3	445.5	483.8	529.4	587.4	658.9
135°	346.0	350.2	361.6	377.1	398.9	426.8	459.0	494.2	535.6	586.4	647.5
137.5°	357.4	361.6	373.0	389.5	411.3	437.2	468.3	502.5	539.8	584.3	637.2
140°	368.8	374.0	384.4	400.9	421.7	447.6	477.6	508.7	543.9	583.3	627.8
142.5°	381.3	385.4	396.8	411.3	432.0	455.9	484.9	514.9	547.0	581.2	619.5
145°	394.7	397.8	407.2	422.7	440.3	464.1	491.1	519.1	548.1	579.1	612.3
147.5°	408.2	410.3	419.6	433.1	450.7	471.4	496.3	522.2	548.1	576.0	605.0
150°	421.7	422.7	431.0	444.5	459.0	477.6	501.4	523.2	548.1	571.9	597.8
152.5°	435.1	435.1	443.4	454.8	467.3	484.9	504.5	525.3	545.0	566.7	589.5
155°	448.6	448.6	454.8	465.2	476.6	491.1	508.7	525.3	542.9	560.5	581.2
157.5°	459.0	460.0	465.2	474.5	484.9	496.3	510.8	526.3	539.8	555.3	571.9
160°	471.4	471.4	475.5	483.8	491.1	501.4	513.9	526.3	537.7	549.1	562.6
162.5°	480.7	480.7	483.8	490.0	496.3	504.5	514.9	525.3	533.6	542.9	553.2
165°	490.0	489.0	491.1	496.3	500.4	507.7	515.9	523.2	529.4	536.7	545.0
167.5°	497.3	496.3	497.3	501.4	504.5	509.7	515.9	522.2	525.3	530.4	536.7
170°	503.5	501.4	502.5	505.6	507.7	509.7	514.9	519.1	521.1	524.2	529.4
172.5°	507.7	506.6	506.6	508.7	509.7	510.8	514.9	518.0	518.0	519.1	522.2
175°	510.8	509.7	508.7	510.8	510.8	511.8	513.9	515.9	514.9	514.9	517.0
177.5°	512.8	511.8	510.8	511.8	511.8	511.8	512.8	514.9	512.8	511.8	512.8
180°	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8



TEST NUMBER: P334649

CATALOG NUMBER: S123IP-S1195U940-4F0-1E-UDD-4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	25.9	26.9	28.0	30.0	29.0	30.0	31.1	30.0
92.5°	102.6	79.8	69.4	62.2	60.1	55.9	57.0	54.9
95°	373.0	252.8	197.9	160.6	140.9	131.6	124.3	120.2
97.5°	856.8	646.5	509.7	391.6	322.2	282.8	258.0	246.6
100°	1221.5	1137.6	1016.3	869.2	764.6	689.0	648.6	649.6
102.5°	1342.7	1360.3	1302.3	1222.5	1146.9	1090.9	1058.8	1028.8
105°	1346.8	1450.4	1470.1	1443.2	1395.5	1356.2	1323.0	1317.8
107.5°	1284.7	1447.3	1528.1	1556.1	1549.9	1531.3	1517.8	1506.4
110°	1187.3	1377.9	1508.5	1581.0	1610.0	1618.3	1616.2	1614.1





TEST NUMBER: P334649

CATALOG NUMBER: S123IP-S1195U940-4F0-1E-UDD-4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1090.9	1286.8	1437.0	1535.4	1594.5	1624.5	1634.9	1635.9
115°	1008.1	1188.3	1340.6	1453.6	1531.3	1576.8	1597.6	1602.7
117.5°	943.8	1103.4	1243.2	1360.3	1441.1	1491.9	1523.0	1530.2
120°	895.1	1035.0	1159.3	1264.0	1345.8	1403.8	1428.7	1434.9
122.5°	856.8	980.1	1093.0	1188.3	1258.8	1309.5	1337.5	1345.8
125°	823.6	936.6	1036.0	1118.9	1185.2	1230.8	1256.7	1264.0
127.5°	793.6	896.2	987.3	1064.0	1124.1	1163.5	1187.3	1193.5
130°	765.6	858.9	942.8	1013.2	1068.1	1105.4	1127.2	1135.5
132.5°	739.7	823.6	900.3	966.6	1017.4	1054.7	1073.3	1078.5
135°	716.9	790.5	857.8	916.9	967.7	998.7	1017.4	1024.6
137.5°	695.2	757.3	817.4	870.3	913.8	945.9	961.4	967.7
140°	676.5	729.4	779.1	823.6	863.0	892.0	908.6	907.6
142.5°	658.9	702.4	743.9	781.2	813.3	838.1	852.7	851.6
145°	645.4	679.6	712.8	742.8	768.7	790.5	798.8	800.9
147.5°	634.1	662.0	690.0	711.8	732.5	748.0	756.3	757.3
150°	621.6	645.4	667.2	686.9	702.4	713.8	720.0	720.0
152.5°	610.2	629.9	648.6	664.1	675.5	685.9	689.0	689.0
155°	598.8	615.4	630.9	643.4	652.7	661.0	663.1	664.1
157.5°	586.4	600.9	613.3	623.7	632.0	638.2	640.3	640.3
160°	576.0	587.4	597.8	605.0	612.3	618.5	618.5	617.5
162.5°	563.6	572.9	582.3	588.5	592.6	597.8	597.8	596.8
165°	553.2	559.5	566.7	571.9	576.0	580.2	579.1	579.1
167.5°	543.9	549.1	553.2	557.4	559.5	562.6	561.5	561.5
170°	534.6	537.7	541.8	543.9	545.0	547.0	546.0	546.0
172.5°	526.3	528.4	531.5	532.5	532.5	534.6	532.5	531.5
175°	519.1	520.1	522.2	522.2	522.2	523.2	522.2	521.1
177.5°	513.9	514.9	515.9	515.9	514.9	515.9	513.9	513.9
180°	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8

(END OF REPORT)