

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: P333014-940

Luminaire Tested: **SA4XXRDIP-C1195D1205U940-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P333014-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C1195D1205U940-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

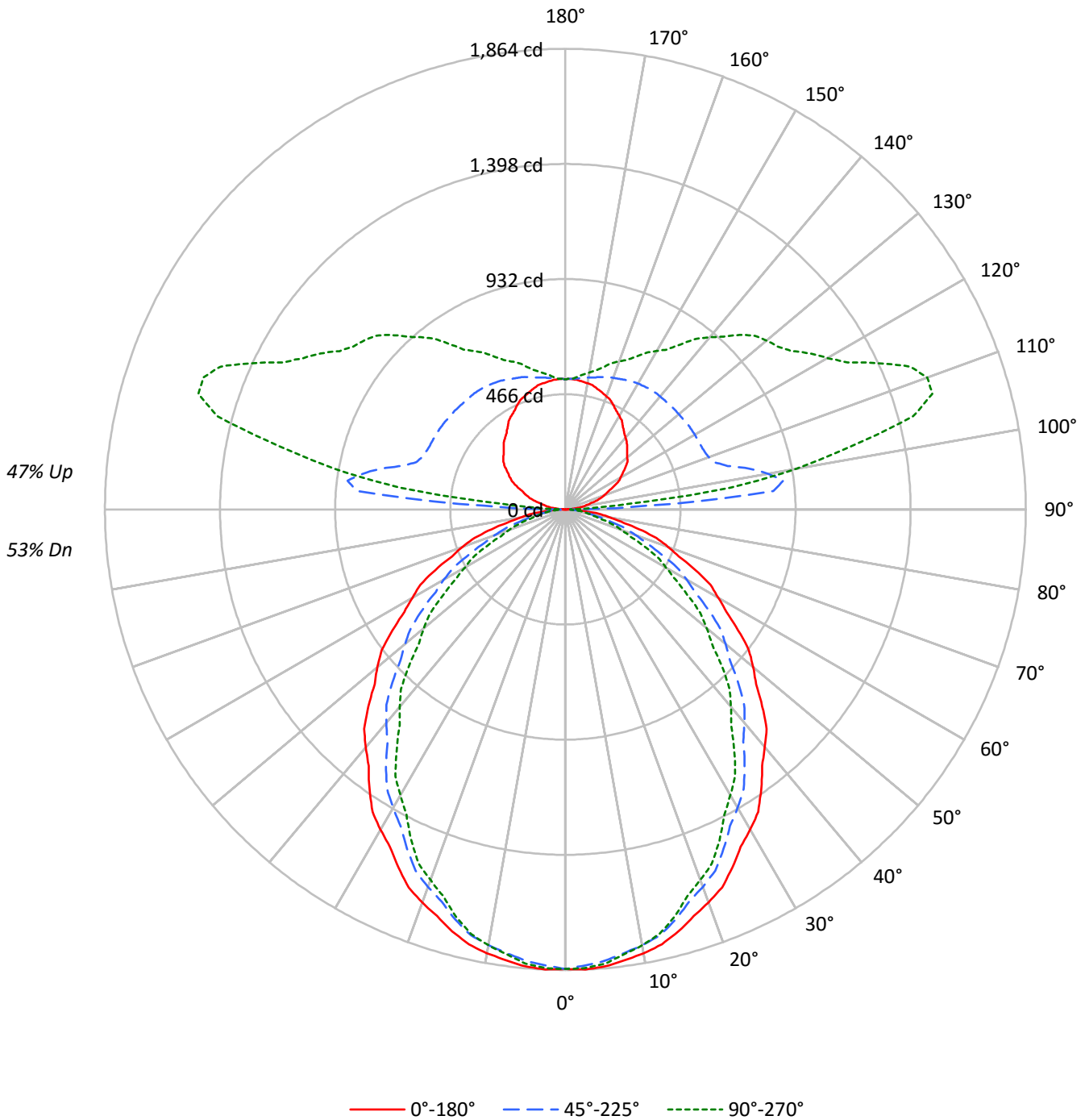
Lumens per Lamp: N/A
Luminaire Lumens: 8135.2 lumens
Efficiency: N/A
Efficacy: 113.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 71.7
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



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Luminous Intensity Polar Plot





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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	99	94	91	87	91	88	84	81	75	73	70	63	62	60	52	51	50	45
2	90	83	77	72	83	77	72	67	66	62	59	56	53	51	46	44	43	38
3	82	73	66	60	76	68	62	57	58	54	50	50	46	43	41	39	37	33
4	75	65	57	51	70	60	53	48	52	47	43	44	40	37	37	34	32	28
5	69	58	50	44	64	54	47	42	47	41	37	40	36	32	34	30	28	25
6	64	52	44	38	59	49	41	36	42	37	32	36	32	28	31	27	25	22
7	59	47	39	34	55	44	37	32	38	33	29	33	29	25	28	25	22	19
8	55	43	35	30	51	40	33	28	35	29	25	30	26	23	26	22	20	17
9	51	39	32	27	48	37	30	25	32	27	23	28	23	20	24	20	18	16
10	48	36	29	24	44	34	27	23	30	24	21	26	21	18	22	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15012	15012	15012
5°	15046	14862	14955
10°	14952	14684	14684
15°	14780	14375	14269
20°	14545	13970	13713
25°	14243	13495	13153
30°	13951	12995	12450
35°	13626	12476	11745
40°	13235	11884	10984
45°	12875	11298	10209
50°	12465	10623	9388
55°	12024	9920	8497
60°	11541	9150	7585
65°	11096	8187	6692
70°	10452	7124	5681
75°	9638	5908	4619
80°	8405	4500	4235
85°	7123	4085	3825



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.7	2.1
10°-20°	487.1	6.0
20°-30°	703.4	8.6
30°-40°	797.3	9.8
40°-50°	770.0	9.5
50°-60°	640.3	7.9
60°-70°	442.1	5.4
70°-80°	224.1	2.8
80°-90°	60.4	0.7
90°-100°	380.9	4.7
100°-110°	792.8	9.7
110°-120°	710.1	8.7
120°-130°	597.3	7.3
130°-140°	498.1	6.1
140°-150°	380.5	4.7
150°-160°	267.5	3.3
160°-170°	157.3	1.9
170°-180°	51.2	0.6
0°-30°	1365.2	16.8
0°-40°	2162.6	26.6
0°-60°	3572.8	43.9
0°-90°	4299.4	52.8
90°-120°	1883.9	23.2
90°-150°	3359.8	41.3
90°-180°	3836.0	47.2
0°-180°	8135.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1860	1860	1860	1860	1860	
5°	1857	1850	1834	1847	1845	176
15°	1768	1754	1720	1717	1707	498
25°	1599	1572	1515	1491	1477	736
35°	1383	1336	1266	1219	1192	864
45°	1128	1073	990	922	894	869
55°	854	795	705	633	604	764
65°	581	518	429	370	350	573
75°	309	256	189	158	148	326
85°	77	50	44	41	41	86
90°	1	8	19	21	22	6
95°	34	108	844	418	253	38
105°	121	176	680	1464	1458	129
115°	214	268	606	1165	1400	212
125°	297	353	603	991	1117	265
135°	353	421	598	880	999	273
145°	407	466	595	742	816	256
155°	463	500	578	655	683	213
165°	505	520	554	587	596	142
175°	526	527	532	539	537	50
180°	527	527	527	527	527	



TEST NUMBER: P333014-940

CATALOG NUMBER: SA4XXRDIP-C1195D1205U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6
2.5°	1864.1	1863.1	1862.2	1861.1	1860.1	1858.2	1855.5	1852.6	1849.9	1847.1	1849.9
5°	1856.7	1855.5	1854.2	1853.0	1851.7	1849.1	1845.4	1841.6	1837.8	1834.0	1837.1
7.5°	1840.0	1838.6	1837.3	1835.9	1834.6	1831.5	1826.6	1821.7	1816.7	1811.8	1813.8
10°	1824.0	1822.4	1820.9	1819.3	1817.7	1814.0	1808.4	1802.7	1797.0	1791.3	1792.5
12.5°	1803.5	1801.7	1799.8	1798.0	1796.2	1791.9	1785.2	1778.5	1771.7	1765.1	1765.9
15°	1768.4	1765.6	1762.8	1760.0	1757.1	1751.7	1743.8	1735.9	1728.0	1720.0	1719.4
17.5°	1726.1	1721.9	1717.8	1713.7	1709.6	1702.8	1693.3	1683.8	1674.3	1664.8	1663.0
20°	1693.0	1688.9	1684.8	1680.7	1676.6	1669.1	1658.4	1647.6	1636.8	1626.1	1623.5
22.5°	1656.5	1652.0	1647.3	1642.7	1638.1	1630.0	1618.5	1607.0	1595.4	1583.9	1580.1
25°	1599.0	1593.3	1587.6	1582.0	1576.3	1566.9	1554.0	1541.0	1528.0	1515.0	1509.7
27.5°	1538.6	1531.5	1524.4	1517.2	1510.0	1499.6	1485.7	1471.9	1457.9	1444.1	1437.4
30°	1496.6	1488.6	1480.7	1472.7	1464.9	1453.5	1438.6	1423.7	1408.9	1394.0	1386.1
32.5°	1452.1	1443.1	1434.2	1425.3	1416.4	1404.3	1388.8	1373.5	1358.1	1342.7	1333.6
35°	1382.6	1372.4	1362.4	1352.2	1342.1	1329.1	1313.3	1297.5	1281.7	1265.9	1255.1
37.5°	1308.3	1297.8	1287.4	1276.9	1266.5	1252.5	1235.0	1217.5	1200.0	1182.4	1170.4
40°	1255.9	1245.5	1235.0	1224.6	1214.1	1199.9	1181.9	1163.8	1145.8	1127.7	1114.5
42.5°	1205.8	1194.8	1183.8	1172.9	1162.0	1147.1	1128.3	1109.5	1090.7	1071.9	1058.4
45°	1127.7	1116.0	1104.3	1092.6	1080.9	1065.5	1046.6	1027.6	1008.6	989.6	974.1
47.5°	1047.1	1035.0	1023.0	1010.8	998.8	982.8	963.1	943.3	923.6	903.9	887.8
50°	992.5	980.1	967.8	955.5	943.1	926.8	906.5	886.3	866.0	845.8	830.0
52.5°	936.7	924.5	912.5	900.4	888.3	871.8	851.1	830.4	809.6	788.8	772.8
55°	854.3	841.7	829.0	816.4	803.7	787.1	766.5	746.0	725.4	704.8	688.4
57.5°	772.8	759.7	746.5	733.4	720.2	703.6	683.3	663.0	642.7	622.5	605.8
60°	714.8	702.1	689.5	676.8	664.1	647.7	627.5	607.3	586.9	566.7	550.3
62.5°	662.4	649.3	636.1	622.9	609.8	592.8	572.0	551.3	530.5	509.8	494.5
65°	580.9	567.3	553.8	540.1	526.6	509.6	489.4	469.1	448.9	428.6	415.0
67.5°	496.3	483.3	470.3	457.3	444.3	428.3	409.5	390.7	371.9	353.1	341.4
70°	442.8	429.5	416.3	403.0	389.7	374.0	356.0	338.0	319.9	301.8	291.4
72.5°	385.8	373.9	361.9	349.8	337.8	323.2	306.2	289.2	272.2	255.1	246.2
75°	309.0	297.3	285.5	273.8	262.2	248.9	234.0	219.1	204.3	189.4	182.1
77.5°	231.0	221.1	211.1	201.2	191.2	180.2	168.2	156.2	144.2	132.2	127.9
80°	180.8	171.7	162.5	153.3	144.1	134.8	125.3	115.8	106.3	96.8	95.9
82.5°	137.6	129.1	120.7	112.3	103.9	96.9	91.5	86.1	80.6	75.2	74.5
85°	76.9	70.5	64.2	57.9	51.5	48.0	47.0	46.0	45.1	44.1	43.5
87.5°	26.4	24.8	23.4	21.6	19.8	18.6	19.6	19.4	19.5	19.7	19.3
90°	1.1	3.1	6.2	7.2	8.3	8.3	14.5	14.5	16.6	18.6	17.7
92.5°	11.8	17.2	26.9	39.6	54.8	76.2	128.9	209.3	287.7	328.7	273.8
95°	34.2	37.3	47.7	61.2	86.0	129.6	219.6	389.6	637.2	844.5	868.3
97.5°	61.3	61.3	70.3	82.7	104.1	140.5	209.9	350.3	596.4	889.5	1090.9
100°	78.7	78.7	86.0	98.4	118.2	151.3	212.4	329.5	540.9	833.0	1098.3
102.5°	95.3	97.0	103.4	115.0	133.8	165.4	220.7	323.7	503.5	762.6	1036.2
105°	121.3	124.3	129.6	142.0	160.6	190.6	240.4	326.4	471.4	679.8	923.2
107.5°	149.8	151.9	157.1	170.3	188.2	217.8	263.4	341.7	465.7	633.3	832.1
110°	168.9	170.9	176.1	188.6	207.2	235.2	280.8	353.3	467.3	617.6	786.5



TEST NUMBER: P333014-940

CATALOG NUMBER: SA4XXRDIP-C1195D1205U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	187.2	189.2	195.2	206.8	225.5	253.4	297.4	365.8	472.3	610.1	760.7
115°	213.5	216.6	223.8	234.2	253.9	281.9	323.2	385.5	481.8	606.2	736.7
117.5°	240.8	243.7	250.1	261.5	280.0	309.0	348.4	405.6	492.0	605.1	725.9
120°	259.0	261.1	268.4	279.7	297.4	326.4	365.8	419.6	499.4	605.1	720.1
122.5°	275.6	277.7	285.0	295.5	314.8	343.0	382.4	432.9	506.9	604.3	713.5
125°	297.4	301.5	307.7	319.1	338.9	367.8	405.1	452.8	518.1	603.1	702.5
127.5°	316.6	319.9	327.4	340.5	361.0	390.2	426.2	470.0	527.0	600.7	687.8
130°	327.4	331.5	339.8	355.4	375.1	405.1	440.4	480.8	533.6	599.9	678.7
132.5°	338.2	341.5	352.3	367.0	388.3	416.8	452.0	491.6	539.4	599.1	670.4
135°	353.3	357.5	367.8	385.5	407.2	434.2	468.3	505.7	548.1	597.9	658.0
137.5°	368.5	372.4	383.8	400.6	423.2	448.9	480.8	515.6	553.3	597.6	647.2
140°	379.2	382.4	393.8	411.3	433.1	458.0	489.1	522.2	557.5	596.8	641.4
142.5°	390.8	394.0	404.5	421.3	442.2	466.3	496.5	527.2	560.8	596.8	636.4
145°	407.2	410.4	420.7	435.2	454.9	477.7	504.6	532.6	562.7	594.8	627.9
147.5°	425.6	426.7	435.8	450.8	467.1	487.6	512.9	537.3	563.7	591.0	620.3
150°	437.3	438.3	446.6	459.1	474.6	494.3	517.0	539.8	563.7	588.5	614.5
152.5°	448.0	448.3	456.6	468.1	482.1	500.1	520.4	541.5	562.0	584.4	607.8
155°	463.2	464.2	470.4	480.8	492.2	507.7	525.3	543.0	559.5	578.2	597.9
157.5°	477.9	477.9	483.7	491.8	501.7	514.0	528.9	543.0	556.9	571.8	587.7
160°	487.0	487.0	491.2	498.4	506.7	518.1	530.5	543.0	554.4	566.8	580.2
162.5°	495.3	494.5	497.8	504.2	511.7	520.6	532.2	543.0	551.9	561.8	573.6
165°	504.6	504.6	506.7	511.8	517.0	523.3	532.6	540.9	547.1	554.4	562.7
167.5°	514.0	512.9	514.0	517.9	520.8	525.6	532.4	538.4	542.2	546.9	552.7
170°	518.1	517.0	518.1	521.2	523.3	526.4	531.5	536.7	538.8	541.9	546.1
172.5°	522.2	521.2	521.4	523.7	525.0	527.2	530.7	535.1	535.5	536.9	540.3
175°	526.4	525.3	525.3	526.4	527.4	527.4	529.5	532.6	531.5	531.5	533.6
177.5°	528.2	527.4	526.6	527.4	527.4	527.4	528.2	529.9	528.2	528.2	529.1
180°	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4



TEST NUMBER: P333014-940

CATALOG NUMBER: SA4XXRDIP-C1195D1205U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6
2.5°	1852.6	1855.5	1858.2	1859.5	1859.2	1858.9	1858.7	1858.5
5°	1840.3	1843.4	1846.6	1847.9	1847.3	1846.6	1846.0	1845.4
7.5°	1815.8	1817.8	1819.9	1820.3	1819.4	1818.4	1817.3	1816.3
10°	1793.8	1795.0	1796.4	1796.4	1795.0	1793.8	1792.5	1791.3
12.5°	1766.6	1767.4	1768.1	1767.5	1765.9	1764.1	1762.3	1760.5
15°	1718.8	1718.1	1717.5	1716.1	1713.9	1711.6	1709.5	1707.3
17.5°	1661.3	1659.5	1657.7	1655.2	1651.8	1648.4	1645.1	1641.7
20°	1621.0	1618.5	1616.0	1612.7	1608.6	1604.5	1600.3	1596.2
22.5°	1576.4	1572.5	1568.8	1565.2	1561.8	1558.4	1555.1	1551.8
25°	1504.2	1498.9	1493.5	1489.2	1486.0	1482.9	1479.7	1476.6
27.5°	1430.8	1424.2	1417.6	1411.9	1407.4	1402.8	1398.3	1393.7
30°	1378.1	1370.3	1362.4	1355.8	1350.8	1345.8	1340.7	1335.6
32.5°	1324.4	1315.2	1306.0	1299.0	1294.2	1289.4	1284.6	1279.8
35°	1244.3	1233.6	1222.8	1214.6	1208.9	1203.2	1197.5	1191.8
37.5°	1158.3	1146.3	1134.3	1125.4	1119.7	1114.0	1108.4	1102.7
40°	1101.2	1087.9	1074.6	1065.1	1059.4	1053.6	1048.0	1042.3
42.5°	1044.8	1031.3	1017.7	1008.0	1002.0	996.1	990.2	984.2
45°	958.6	943.1	927.6	916.9	911.3	905.6	899.9	894.2
47.5°	871.7	855.7	839.6	828.4	822.2	815.9	809.6	803.3
50°	814.1	798.3	782.5	771.6	765.6	759.6	753.6	747.5
52.5°	756.7	740.7	724.5	713.4	707.1	700.9	694.6	688.3
55°	671.9	655.5	639.0	627.8	621.8	615.7	609.8	603.7
57.5°	589.2	572.4	555.7	545.1	540.6	535.9	531.4	526.8
60°	533.8	517.4	500.9	490.2	485.1	480.0	474.9	469.8
62.5°	479.4	464.2	449.0	439.3	435.3	431.3	427.2	423.2
65°	401.4	387.8	374.2	365.4	361.7	357.8	354.1	350.3
67.5°	329.8	318.0	306.3	298.4	294.2	290.0	285.8	281.6
70°	281.0	270.5	260.1	253.3	250.1	247.0	243.8	240.7
72.5°	237.3	228.4	219.5	213.6	210.6	207.8	204.8	201.9
75°	174.9	167.6	160.2	155.7	153.8	151.9	150.0	148.1
77.5°	123.7	119.4	115.2	112.8	112.2	111.6	111.1	110.5
80°	95.0	94.0	93.0	92.4	92.1	91.8	91.5	91.1
82.5°	73.8	73.1	72.4	71.9	71.6	71.2	71.0	70.6
85°	42.9	42.3	41.6	41.3	41.3	41.3	41.3	41.3
87.5°	19.2	19.1	19.1	19.1	19.5	20.0	20.1	20.3
90°	18.6	19.7	20.7	20.7	21.8	22.8	21.8	21.8
92.5°	203.5	153.1	121.9	101.1	88.9	83.3	79.8	79.8
95°	767.8	607.2	468.3	367.8	317.1	285.0	266.3	252.8
97.5°	1134.4	1074.7	973.4	865.2	790.8	728.4	697.3	675.8
100°	1249.6	1270.3	1219.6	1142.9	1052.8	989.5	958.5	950.2
102.5°	1243.8	1346.6	1361.3	1329.4	1274.1	1228.2	1195.5	1188.9
105°	1160.5	1339.8	1442.3	1484.8	1486.9	1478.6	1464.1	1457.9
107.5°	1042.1	1233.1	1377.5	1469.9	1521.1	1544.7	1555.1	1557.8
110°	970.9	1150.1	1300.4	1414.3	1487.9	1531.4	1550.2	1559.4



TEST NUMBER: P333014-940

CATALOG NUMBER: SA4XXRDIP-C1195D1205U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	918.6	1077.2	1219.1	1333.1	1416.7	1469.3	1495.4	1510.6
115°	866.2	993.7	1114.9	1214.4	1296.3	1358.4	1391.6	1399.9
117.5°	840.5	946.0	1041.3	1125.7	1195.5	1247.8	1281.3	1287.7
120°	828.9	925.3	1008.2	1081.7	1140.9	1186.4	1213.4	1224.8
122.5°	818.9	912.0	987.5	1052.0	1101.9	1140.9	1163.6	1175.0
125°	802.0	891.1	962.6	1019.6	1061.0	1091.1	1110.8	1117.0
127.5°	781.2	866.5	937.7	991.8	1033.5	1060.2	1076.8	1083.0
130°	764.7	846.6	917.0	972.0	1014.4	1040.3	1056.9	1063.1
132.5°	747.3	824.2	893.0	947.9	989.5	1018.8	1034.5	1040.7
135°	723.3	790.6	853.8	905.6	947.1	976.1	992.7	998.9
137.5°	701.5	758.5	811.7	858.5	897.3	926.0	939.6	947.1
140°	689.0	737.7	784.3	827.9	864.2	887.0	901.4	909.7
142.5°	677.4	720.3	760.4	798.1	830.2	851.3	864.2	870.0
145°	661.1	696.3	727.4	756.4	782.3	800.0	810.3	815.5
147.5°	647.6	675.6	700.4	723.3	742.3	757.4	765.4	767.1
150°	639.4	663.2	683.9	702.5	719.1	732.5	738.8	739.9
152.5°	630.2	650.7	669.8	685.1	699.2	710.2	713.9	715.0
155°	616.5	633.1	648.6	661.1	671.5	679.8	682.9	682.9
157.5°	601.8	615.7	628.7	638.7	646.6	652.8	654.7	654.7
160°	592.7	604.0	615.5	623.8	630.0	636.2	637.2	637.2
162.5°	583.5	593.3	602.3	609.7	614.2	620.5	621.5	620.6
165°	571.0	577.1	584.4	589.6	593.7	597.9	596.8	595.8
167.5°	558.7	563.5	569.3	572.4	574.4	577.1	576.9	576.1
170°	551.3	554.4	558.5	561.6	563.7	564.7	563.7	563.7
172.5°	544.6	546.9	549.4	551.6	552.9	553.9	552.9	551.3
175°	535.7	536.7	538.8	538.8	538.8	540.9	538.8	536.7
177.5°	529.9	530.7	530.7	531.5	530.7	531.5	529.9	528.2
180°	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4

(END OF REPORT)