

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: P332714-940

Luminaire Tested: **SA4XXDIP-C1195D1205U940-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332714-940
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: SA4XXDIP-C1195D1205U940-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

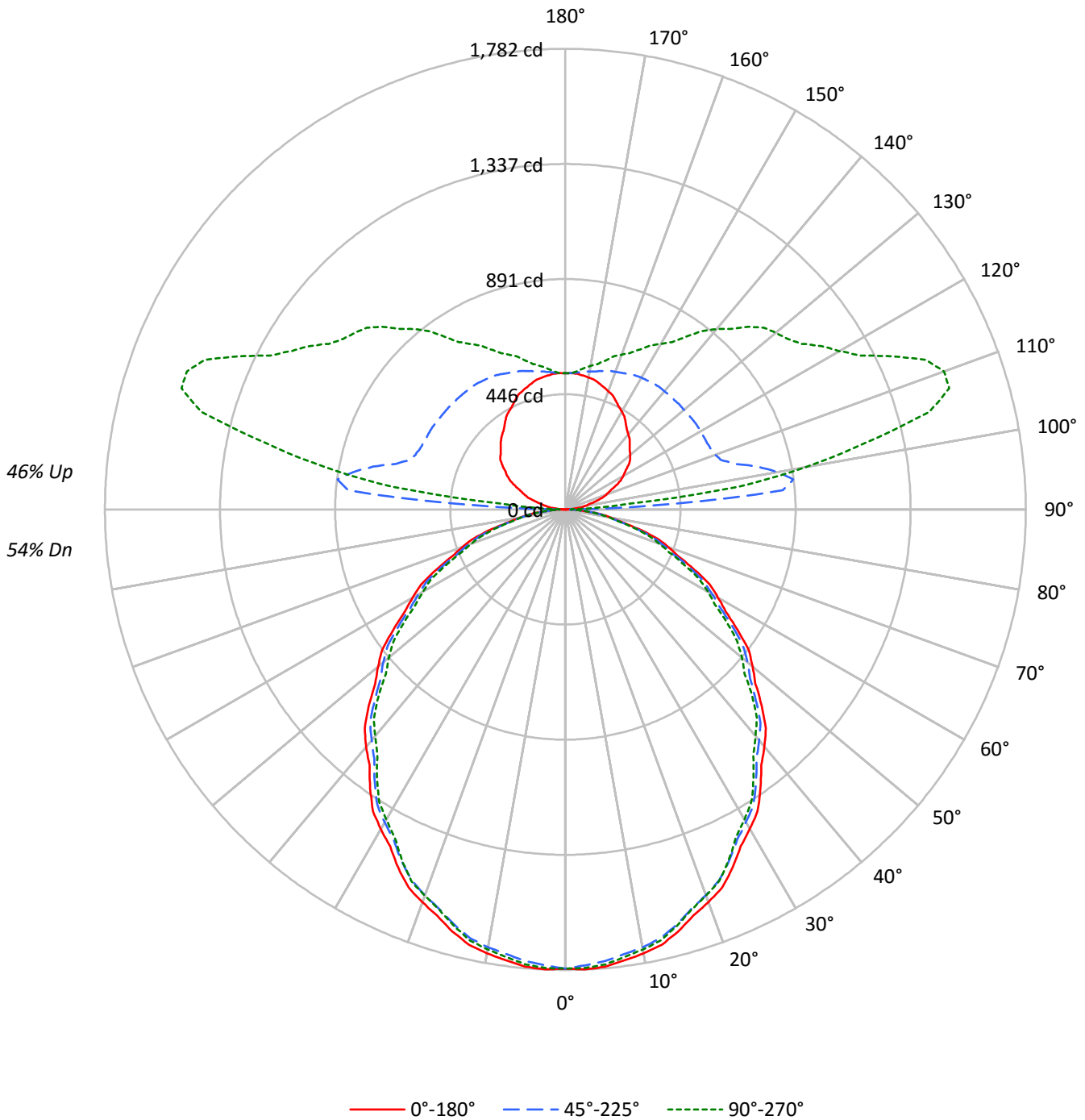
Lumens per Lamp: N/A
Luminaire Lumens: 8398.8 lumens
Efficiency: N/A
Efficacy: 117.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

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	50	30	10	0	
RCR																						
0	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54				
1	99	94	90	87	91	88	84	81	75	73	70	64	62	60	53	52	51	46				
2	90	82	76	71	83	77	71	67	66	62	58	56	53	50	47	45	43	38				
3	82	72	65	59	76	67	61	56	58	53	49	49	46	43	41	39	36	32				
4	75	64	56	50	69	60	53	47	52	46	42	44	40	36	37	34	31	28				
5	69	57	49	43	64	53	46	41	46	40	36	40	35	32	33	30	27	24				
6	63	51	43	37	59	48	41	35	42	36	31	36	31	28	30	27	24	21				
7	59	46	38	33	54	43	36	31	38	32	28	33	28	25	28	24	21	19				
8	55	42	34	29	50	39	32	27	34	29	25	30	25	22	25	22	19	17				
9	51	38	31	26	47	36	29	25	32	26	22	27	23	20	23	20	17	15				
10	47	35	28	23	44	33	27	22	29	24	20	25	21	18	22	18	16	14				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14346	14346	14346
5°	14389	14216	14319
10°	14299	14100	14170
15°	14125	13900	13936
20°	13897	13651	13664
25°	13635	13367	13331
30°	13313	13035	12915
35°	12980	12686	12518
40°	12635	12290	12064
45°	12273	11900	11671
50°	11875	11552	11195
55°	11444	11102	10742
60°	11013	10598	10277
65°	10527	10118	9712
70°	9982	9477	9106
75°	9148	8706	8484
80°	8140	7810	7610
85°	7123	6854	6725



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.3	2.0
10°-20°	471.5	5.6
20°-30°	694.0	8.3
30°-40°	806.8	9.6
40°-50°	806.8	9.6
50°-60°	705.8	8.4
60°-70°	524.1	6.2
70°-80°	297.8	3.5
80°-90°	88.8	1.1
90°-100°	380.9	4.5
100°-110°	792.8	9.4
110°-120°	710.1	8.5
120°-130°	597.3	7.1
130°-140°	498.1	5.9
140°-150°	380.5	4.5
150°-160°	267.5	3.2
160°-170°	157.3	1.9
170°-180°	51.2	0.6
0°-30°	1332.9	15.9
0°-40°	2139.7	25.5
0°-60°	3652.3	43.5
0°-90°	4563.0	54.3
90°-120°	1883.9	22.4
90°-150°	3359.8	40.0
90°-180°	3836.0	45.7
0°-180°	8398.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1777	1777	1777	1777	1777	
5°	1776	1769	1754	1769	1767	168
15°	1690	1684	1663	1671	1667	476
25°	1531	1520	1501	1502	1497	704
35°	1317	1307	1287	1277	1270	823
45°	1075	1064	1042	1027	1022	828
55°	813	808	789	772	763	728
65°	551	544	530	516	508	545
75°	293	286	279	274	272	312
85°	77	77	74	74	73	85
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	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0
2.5°	1781.5	1780.8	1780.0	1779.3	1778.5	1776.7	1774.0	1771.2	1768.4	1765.7	1768.2
5°	1775.6	1774.3	1773.1	1771.8	1770.6	1768.2	1764.7	1761.2	1757.7	1754.3	1757.7
7.5°	1759.1	1757.8	1756.6	1755.2	1754.0	1751.5	1747.6	1743.7	1739.9	1736.0	1738.8
10°	1744.3	1743.0	1741.8	1740.4	1739.2	1736.5	1732.4	1728.3	1724.2	1720.1	1722.6
12.5°	1724.9	1723.7	1722.3	1721.1	1719.8	1717.0	1712.7	1708.3	1704.0	1699.6	1702.4
15°	1690.1	1688.9	1687.7	1686.4	1685.1	1682.1	1677.3	1672.6	1667.9	1663.1	1665.0
17.5°	1648.3	1646.7	1645.1	1643.6	1642.0	1639.0	1634.4	1630.0	1625.5	1621.0	1622.2
20°	1617.6	1616.0	1614.4	1612.8	1611.2	1608.0	1603.3	1598.6	1593.8	1589.0	1590.0
22.5°	1584.5	1582.4	1580.4	1578.2	1576.2	1572.7	1568.0	1563.3	1558.5	1553.7	1555.5
25°	1530.7	1528.5	1526.3	1524.0	1521.8	1518.5	1514.0	1509.7	1505.2	1500.7	1501.1
27.5°	1469.2	1466.9	1464.6	1462.3	1460.1	1456.9	1452.8	1448.7	1444.6	1440.4	1439.7
30°	1428.2	1425.7	1423.1	1420.6	1418.1	1414.7	1410.6	1406.5	1402.4	1398.3	1397.0
32.5°	1384.9	1382.6	1380.4	1378.0	1375.7	1372.4	1368.1	1363.7	1359.3	1355.0	1353.4
35°	1317.1	1314.9	1312.7	1310.5	1308.2	1304.9	1300.5	1296.1	1291.6	1287.2	1285.0
37.5°	1245.6	1243.6	1241.6	1239.6	1237.5	1234.1	1229.4	1224.7	1219.9	1215.1	1212.7
40°	1198.9	1196.4	1193.8	1191.3	1188.8	1185.2	1180.4	1175.6	1170.9	1166.2	1163.0
42.5°	1148.8	1147.3	1145.8	1144.2	1142.7	1139.3	1134.1	1128.8	1123.6	1118.3	1114.6
45°	1075.0	1072.8	1070.6	1068.4	1066.2	1062.6	1057.5	1052.4	1047.3	1042.3	1038.8
47.5°	997.8	996.3	994.8	993.3	991.8	988.7	984.0	979.4	974.6	970.0	966.1
50°	945.5	944.2	942.9	941.6	940.4	937.5	933.1	928.7	924.3	919.8	915.4
52.5°	894.2	892.7	891.2	889.7	888.1	885.0	880.4	875.7	871.0	866.3	862.4
55°	813.1	812.1	811.2	810.2	809.2	806.6	802.1	797.7	793.3	788.8	785.1
57.5°	735.6	734.5	733.4	732.4	731.3	728.5	724.2	719.8	715.4	711.1	707.5
60°	682.1	680.5	678.9	677.3	675.7	672.9	668.8	664.7	660.5	656.4	653.5
62.5°	629.6	628.3	627.0	625.6	624.4	621.5	617.2	612.8	608.4	604.0	601.5
65°	551.1	549.5	547.9	546.3	544.7	542.3	539.2	536.0	532.9	529.7	526.6
67.5°	471.9	470.5	469.0	467.5	466.1	463.8	460.7	457.7	454.7	451.7	448.6
70°	422.9	420.7	418.5	416.3	414.0	411.7	409.1	406.6	404.0	401.5	399.0
72.5°	370.5	368.3	366.0	363.8	361.7	359.5	357.5	355.4	353.5	351.4	349.4
75°	293.3	291.8	290.2	288.6	287.0	285.4	283.8	282.2	280.7	279.1	277.9
77.5°	219.5	218.8	218.2	217.5	216.8	215.7	214.4	212.9	211.6	210.2	209.8
80°	175.1	174.2	173.3	172.3	171.4	170.6	170.0	169.2	168.6	168.0	167.4
82.5°	131.9	131.4	131.0	130.5	130.1	129.8	129.7	129.6	129.4	129.3	128.9
85°	76.9	76.9	76.9	76.9	76.9	76.6	76.0	75.3	74.6	74.0	74.0
87.5°	29.8	30.0	30.3	30.3	30.2	30.1	31.0	30.8	30.9	31.0	30.9
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



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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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0
2.5°	1770.7	1773.3	1775.8	1776.9	1776.6	1776.4	1776.1	1775.8
5°	1761.2	1764.7	1768.2	1769.6	1769.0	1768.4	1767.7	1767.0
7.5°	1741.6	1744.4	1747.1	1748.4	1748.0	1747.6	1747.2	1746.9
10°	1725.1	1727.7	1730.2	1731.2	1730.5	1729.9	1729.2	1728.6
12.5°	1705.1	1707.9	1710.7	1711.6	1710.7	1709.9	1709.0	1708.1
15°	1666.9	1668.8	1670.7	1671.2	1670.3	1669.3	1668.3	1667.4
17.5°	1623.4	1624.6	1625.8	1626.0	1625.4	1624.8	1624.2	1623.5
20°	1591.0	1591.9	1592.9	1593.0	1592.4	1591.8	1591.2	1590.5
22.5°	1557.2	1558.9	1560.6	1560.9	1559.8	1558.6	1557.5	1556.3
25°	1501.5	1501.7	1502.1	1501.6	1500.3	1499.1	1497.8	1496.6
27.5°	1438.9	1438.2	1437.3	1436.2	1434.6	1433.1	1431.5	1429.9
30°	1395.7	1394.5	1393.2	1391.8	1390.2	1388.7	1387.1	1385.5
32.5°	1351.9	1350.4	1348.9	1347.4	1345.8	1344.2	1342.6	1341.0
35°	1282.8	1280.6	1278.4	1276.5	1274.9	1273.3	1271.7	1270.2
37.5°	1210.3	1207.9	1205.5	1203.3	1201.2	1199.1	1197.0	1194.9
40°	1159.8	1156.6	1153.5	1151.1	1149.6	1148.0	1146.4	1144.8
42.5°	1111.0	1107.3	1103.7	1101.3	1100.2	1099.1	1098.1	1097.0
45°	1035.4	1031.9	1028.4	1026.2	1025.2	1024.2	1023.3	1022.3
47.5°	962.2	958.2	954.3	951.1	948.7	946.3	943.9	941.5
50°	911.0	906.5	902.1	898.9	897.1	895.2	893.2	891.4
52.5°	858.4	854.5	850.6	847.5	845.1	842.7	840.3	837.9
55°	781.2	777.5	773.6	770.8	768.9	767.0	765.1	763.2
57.5°	703.9	700.3	696.7	693.9	692.1	690.3	688.4	686.6
60°	650.7	647.9	645.1	642.8	641.2	639.6	638.1	636.5
62.5°	598.8	596.2	593.6	591.6	590.0	588.4	586.8	585.2
65°	523.3	520.2	517.0	514.7	513.1	511.5	509.9	508.4
67.5°	445.6	442.6	439.5	437.7	437.3	436.8	436.4	436.0
70°	396.5	394.0	391.4	389.7	388.7	387.8	386.8	385.8
72.5°	347.4	345.4	343.3	341.8	340.9	339.9	338.9	338.0
75°	276.5	275.3	274.0	273.2	273.0	272.6	272.2	272.0
77.5°	209.4	209.0	208.7	208.0	207.2	206.4	205.5	204.7
80°	166.7	166.1	165.5	165.1	164.7	164.3	164.1	163.7
82.5°	128.5	128.1	127.8	127.4	127.1	126.8	126.4	126.2
85°	74.0	74.0	74.0	73.9	73.6	73.2	72.9	72.6
87.5°	31.0	31.3	31.5	31.5	31.7	31.9	31.7	31.7
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: P332714-940

CATALOG NUMBER: SA4XXDIP-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)