

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: P333008-930

Luminaire Tested: **SA4XXRDIP-C1195D1035U930-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P333008-930  
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-C1195D1035U930-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

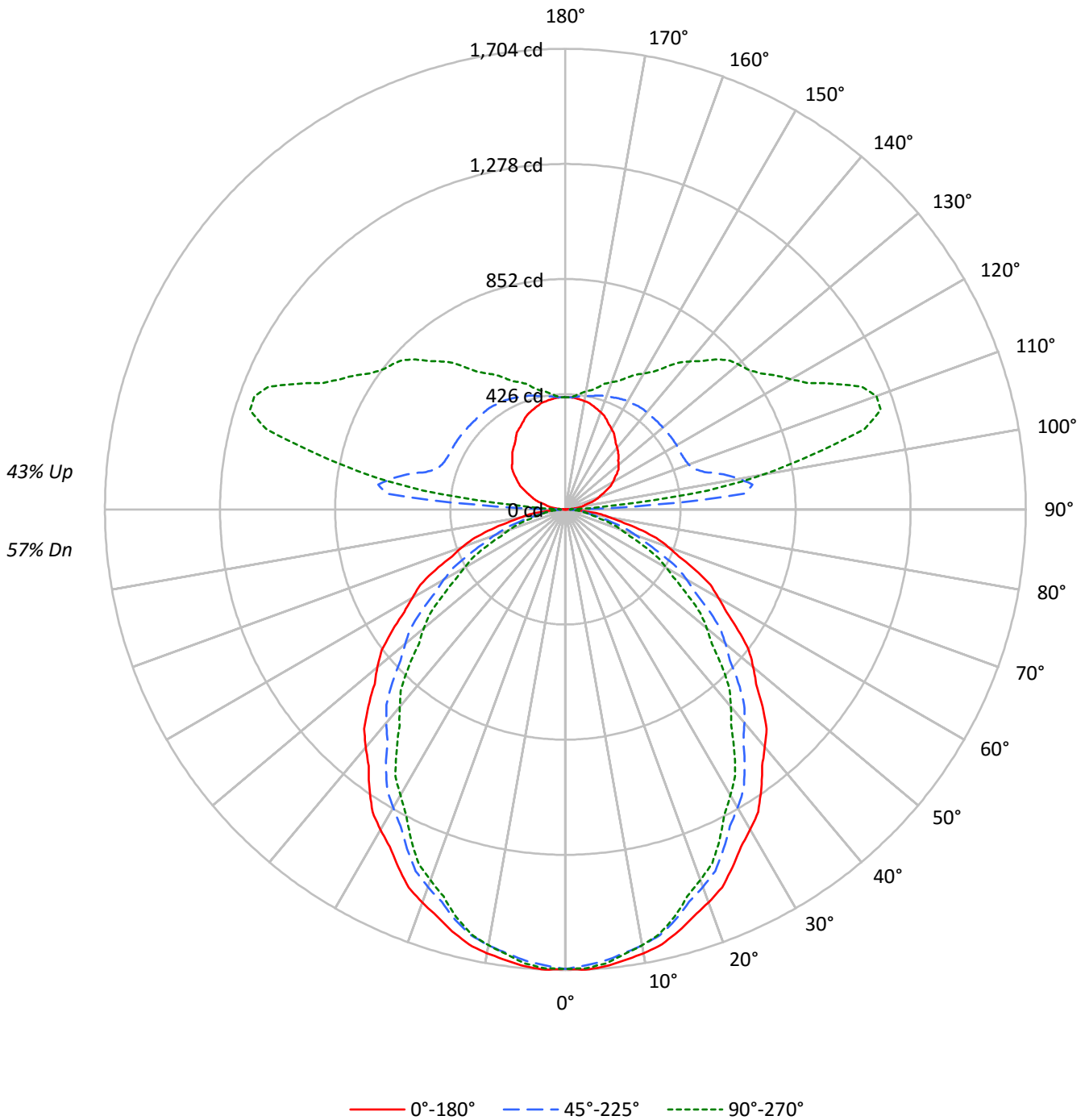
Lumens per Lamp: N/A  
Luminaire Lumens: 6943.6 lumens  
Efficiency: N/A  
Efficacy: 103.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 66.8  
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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	57
1	100	95	92	88	93	89	86	83	77	74	72	66	64	62	55	54	53	48
2	91	84	78	72	84	78	73	68	68	64	60	58	55	53	49	47	45	41
3	83	74	66	61	77	69	63	57	60	55	51	52	48	45	44	41	39	35
4	76	65	58	52	71	61	54	49	53	48	44	46	42	39	39	36	34	30
5	70	58	50	44	65	55	48	42	48	42	38	42	37	34	36	32	30	26
6	65	53	45	39	60	49	42	37	43	38	33	38	33	30	32	29	26	23
7	60	48	40	34	56	45	38	33	39	34	29	34	30	26	30	26	23	21
8	56	43	36	30	52	41	34	29	36	30	26	32	27	24	27	24	21	19
9	52	40	32	27	48	37	31	26	33	27	24	29	25	21	25	22	19	17
10	49	36	29	24	45	34	28	23	31	25	21	27	22	19	23	20	17	15

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

	0°	45°	90°
0°	13726	13726	13726
5°	13757	13588	13674
10°	13671	13426	13426
15°	13514	13143	13046
20°	13298	12773	12538
25°	13023	12339	12026
30°	12755	11882	11384
35°	12458	11406	10738
40°	12101	10866	10043
45°	11772	10330	9334
50°	11396	9712	8584
55°	10994	9070	7769
60°	10551	8365	6936
65°	10147	7484	6117
70°	9557	6515	5193
75°	8812	5402	4223
80°	7685	4114	3873
85°	6512	3742	3492



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.7	2.3
10°-20°	445.4	6.4
20°-30°	643.1	9.3
30°-40°	729.0	10.5
40°-50°	704.0	10.1
50°-60°	585.4	8.4
60°-70°	404.2	5.8
70°-80°	204.9	3.0
80°-90°	54.8	0.8
90°-100°	299.2	4.3
100°-110°	622.8	9.0
110°-120°	557.8	8.0
120°-130°	469.2	6.8
130°-140°	391.2	5.6
140°-150°	298.9	4.3
150°-160°	210.1	3.0
160°-170°	123.6	1.8
170°-180°	40.2	0.6
0°-30°	1248.2	18.0
0°-40°	1977.3	28.5
0°-60°	3266.6	47.0
0°-90°	3930.6	56.6
90°-120°	1479.8	21.3
90°-150°	2639.2	38.0
90°-180°	3013.0	43.4
0°-180°	6943.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1700	1700	1700	1700	1700	
5°	1698	1692	1677	1689	1687	161
15°	1617	1604	1573	1570	1561	455
25°	1462	1437	1385	1364	1350	673
35°	1264	1221	1157	1114	1090	790
45°	1031	981	905	843	818	795
55°	781	727	644	579	552	698
65°	531	474	392	338	320	524
75°	282	234	173	144	135	298
85°	70	46	40	38	38	79
90°	1	6	15	16	17	5
95°	27	85	663	328	199	30
105°	95	138	534	1150	1145	102
115°	168	210	476	915	1100	166
125°	234	278	474	778	877	208
135°	278	330	470	691	785	214
145°	320	366	467	583	641	201
155°	364	393	454	514	536	168
165°	396	409	436	461	468	112
175°	413	414	418	423	422	39
180°	414	414	414	414	414	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2
2.5°	1704.4	1703.5	1702.6	1701.6	1700.7	1699.0	1696.5	1693.9	1691.3	1688.8	1691.3
5°	1697.6	1696.5	1695.3	1694.2	1693.1	1690.7	1687.3	1683.8	1680.3	1676.8	1679.7
7.5°	1682.3	1681.1	1679.8	1678.6	1677.4	1674.5	1670.1	1665.6	1661.0	1656.5	1658.4
10°	1667.7	1666.2	1664.8	1663.4	1661.9	1658.6	1653.4	1648.2	1643.0	1637.8	1638.9
12.5°	1648.9	1647.3	1645.6	1643.9	1642.3	1638.3	1632.2	1626.1	1619.9	1613.8	1614.5
15°	1616.9	1614.3	1611.8	1609.2	1606.5	1601.6	1594.4	1587.1	1579.9	1572.6	1572.1
17.5°	1578.2	1574.3	1570.6	1566.8	1563.1	1556.9	1548.2	1539.5	1530.8	1522.2	1520.5
20°	1547.9	1544.2	1540.4	1536.7	1532.9	1526.1	1516.3	1506.4	1496.6	1486.8	1484.4
22.5°	1514.6	1510.4	1506.2	1501.9	1497.7	1490.4	1479.8	1469.3	1458.7	1448.2	1444.7
25°	1462.0	1456.8	1451.6	1446.4	1441.2	1432.6	1420.8	1408.9	1397.1	1385.2	1380.3
27.5°	1406.8	1400.3	1393.8	1387.2	1380.6	1371.1	1358.4	1345.7	1333.0	1320.4	1314.3
30°	1368.3	1361.1	1353.8	1346.5	1339.4	1328.9	1315.3	1301.7	1288.2	1274.6	1267.3
32.5°	1327.6	1319.5	1311.3	1303.2	1295.0	1283.9	1269.8	1255.8	1241.7	1227.7	1219.3
35°	1264.1	1254.8	1245.6	1236.3	1227.1	1215.2	1200.8	1186.3	1171.8	1157.4	1147.5
37.5°	1196.2	1186.6	1177.0	1167.5	1158.0	1145.2	1129.2	1113.1	1097.1	1081.1	1070.1
40°	1148.3	1138.7	1129.2	1119.7	1110.0	1097.1	1080.6	1064.0	1047.6	1031.1	1019.0
42.5°	1102.4	1092.4	1082.4	1072.4	1062.4	1048.8	1031.6	1014.4	997.3	980.1	967.7
45°	1031.1	1020.3	1009.7	999.0	988.3	974.2	956.9	939.6	922.2	904.8	890.6
47.5°	957.4	946.3	935.3	924.2	913.2	898.6	880.6	862.5	844.5	826.5	811.7
50°	907.4	896.1	884.8	873.6	862.3	847.3	828.8	810.3	791.8	773.3	758.9
52.5°	856.4	845.3	834.3	823.2	812.2	797.1	778.2	759.2	740.2	721.2	706.5
55°	781.1	769.6	758.0	746.4	734.8	719.7	700.8	682.1	663.2	644.4	629.4
57.5°	706.6	694.6	682.6	670.6	658.5	643.3	624.8	606.2	587.7	569.2	553.9
60°	653.5	642.0	630.4	618.8	607.2	592.2	573.7	555.2	536.6	518.1	503.1
62.5°	605.6	593.6	581.6	569.6	557.5	542.0	523.0	504.0	485.0	466.1	452.2
65°	531.2	518.7	506.3	493.8	481.4	465.9	447.4	428.9	410.4	391.8	379.4
67.5°	453.8	441.9	430.0	418.1	406.2	391.6	374.4	357.3	340.1	322.9	312.2
70°	404.9	392.7	380.6	368.4	356.3	341.9	325.5	309.0	292.5	276.0	266.4
72.5°	352.8	341.9	330.8	319.8	308.8	295.5	280.0	264.4	248.8	233.3	225.1
75°	282.5	271.8	261.1	250.4	239.7	227.6	213.9	200.3	186.8	173.2	166.5
77.5°	211.2	202.1	193.0	183.9	174.8	164.8	153.8	142.8	131.8	120.8	116.9
80°	165.3	156.9	148.5	140.1	131.8	123.3	114.5	105.9	97.2	88.5	87.6
82.5°	125.8	118.1	110.4	102.6	95.0	88.6	83.6	78.7	73.7	68.7	68.1
85°	70.3	64.5	58.7	52.9	47.1	43.9	43.0	42.1	41.3	40.4	39.8
87.5°	24.1	22.6	21.2	19.6	17.9	16.8	17.5	17.3	17.4	17.5	17.1
90°	0.8	2.4	4.9	5.7	6.5	6.5	11.4	11.4	13.0	14.7	13.9
92.5°	9.3	13.5	21.2	31.1	43.0	59.9	101.3	164.4	225.9	258.2	215.1
95°	26.8	29.3	37.4	48.0	67.6	101.7	172.5	306.1	500.6	663.3	682.1
97.5°	48.2	48.2	55.2	65.0	81.7	110.4	164.9	275.1	468.5	698.6	856.9
100°	61.9	61.9	67.6	77.3	92.8	118.9	166.9	258.9	424.9	654.4	862.7
102.5°	74.8	76.1	81.2	90.3	105.2	129.9	173.3	254.3	395.6	599.1	813.9
105°	95.2	97.7	101.7	111.5	126.1	149.8	188.8	256.4	370.3	533.9	725.2
107.5°	117.7	119.4	123.4	133.8	147.8	171.0	206.9	268.4	365.7	497.5	653.5
110°	132.6	134.3	138.4	148.1	162.8	184.7	220.5	277.5	367.0	485.1	617.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	147.0	148.6	153.4	162.5	177.1	199.1	233.6	287.3	371.0	479.2	597.6
115°	167.7	170.1	175.8	183.9	199.4	221.4	254.0	302.8	378.5	476.1	578.7
117.5°	189.1	191.4	196.5	205.5	219.9	242.7	273.6	318.5	386.5	475.3	570.2
120°	203.5	205.1	210.8	219.7	233.6	256.4	287.3	329.6	392.3	475.3	565.7
122.5°	216.5	218.1	223.8	232.1	247.3	269.4	300.4	340.1	398.2	474.7	560.4
125°	233.6	236.8	241.7	250.7	266.1	288.9	318.2	355.7	407.0	473.7	551.9
127.5°	248.7	251.4	257.2	267.4	283.6	306.6	334.8	369.2	413.9	471.9	540.3
130°	257.2	260.5	266.9	279.2	294.6	318.2	345.9	377.6	419.1	471.2	533.1
132.5°	265.6	268.2	276.7	288.3	305.1	327.3	355.1	386.1	423.7	470.6	526.6
135°	277.5	280.8	288.9	302.8	319.8	341.0	367.9	397.2	430.6	469.6	516.8
137.5°	289.4	292.5	301.5	314.6	332.4	352.6	377.6	405.0	434.6	469.4	508.3
140°	297.9	300.4	309.3	323.1	340.2	359.8	384.2	410.2	437.9	468.8	503.9
142.5°	307.0	309.5	317.7	330.9	347.4	366.2	390.0	414.1	440.5	468.8	499.9
145°	319.8	322.3	330.4	341.9	357.3	375.2	396.4	418.3	442.0	467.2	493.3
147.5°	334.4	335.2	342.3	354.1	366.9	383.0	402.9	422.1	442.8	464.2	487.2
150°	343.5	344.3	350.8	360.6	372.8	388.2	406.2	424.0	442.8	462.3	482.7
152.5°	352.0	352.1	358.7	367.7	378.6	392.8	408.8	425.3	441.5	459.0	477.4
155°	363.8	364.6	369.5	377.6	386.6	398.8	412.6	426.5	439.5	454.2	469.6
157.5°	375.4	375.4	379.9	386.3	394.1	403.7	415.4	426.5	437.4	449.1	461.6
160°	382.5	382.5	385.8	391.5	398.0	407.0	416.7	426.5	435.5	445.2	455.8
162.5°	389.1	388.4	391.0	396.1	401.9	409.0	418.0	426.5	433.5	441.3	450.6
165°	396.4	396.4	398.0	402.1	406.2	411.0	418.3	424.9	429.7	435.5	442.0
167.5°	403.7	402.9	403.7	406.8	409.1	412.8	418.2	422.9	425.8	429.6	434.1
170°	407.0	406.2	407.0	409.4	411.0	413.4	417.5	421.6	423.2	425.7	428.9
172.5°	410.2	409.4	409.5	411.3	412.3	414.1	416.9	420.3	420.6	421.8	424.4
175°	413.4	412.6	412.6	413.4	414.3	414.3	415.9	418.3	417.5	417.5	419.1
177.5°	414.9	414.3	413.6	414.3	414.3	414.3	414.9	416.2	414.9	414.9	415.6
180°	414.3	414.3	414.3	414.3	414.3	414.3	414.3	414.3	414.3	414.3	414.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2
2.5°	1693.9	1696.5	1699.0	1700.1	1699.9	1699.7	1699.4	1699.2
5°	1682.6	1685.5	1688.4	1689.5	1689.0	1688.4	1687.8	1687.3
7.5°	1660.2	1662.1	1663.9	1664.4	1663.5	1662.6	1661.6	1660.7
10°	1640.1	1641.2	1642.4	1642.4	1641.2	1640.1	1638.9	1637.8
12.5°	1615.2	1615.9	1616.6	1616.1	1614.5	1612.9	1611.3	1609.6
15°	1571.5	1570.9	1570.3	1569.0	1567.0	1565.0	1563.0	1561.0
17.5°	1518.9	1517.3	1515.6	1513.4	1510.3	1507.2	1504.1	1501.0
20°	1482.1	1479.8	1477.5	1474.5	1470.7	1467.0	1463.1	1459.4
22.5°	1441.3	1437.8	1434.4	1431.1	1428.0	1424.9	1421.9	1418.8
25°	1375.3	1370.4	1365.5	1361.6	1358.7	1355.8	1352.9	1350.1
27.5°	1308.2	1302.1	1296.1	1290.9	1286.8	1282.6	1278.5	1274.3
30°	1260.0	1252.9	1245.6	1239.7	1235.0	1230.4	1225.8	1221.2
32.5°	1210.9	1202.5	1194.1	1187.7	1183.3	1178.9	1174.5	1170.1
35°	1137.7	1127.9	1118.0	1110.5	1105.3	1100.1	1094.9	1089.6
37.5°	1059.1	1048.1	1037.1	1029.0	1023.8	1018.6	1013.4	1008.2
40°	1006.8	994.7	982.5	973.8	968.6	963.4	958.2	953.0
42.5°	955.3	942.9	930.5	921.6	916.2	910.8	905.3	899.8
45°	876.4	862.3	848.1	838.4	833.2	828.0	822.8	817.6
47.5°	797.0	782.4	767.7	757.4	751.7	746.0	740.2	734.5
50°	744.4	729.9	715.4	705.5	700.0	694.5	689.0	683.5
52.5°	691.9	677.2	662.4	652.2	646.5	640.8	635.0	629.3
55°	614.3	599.3	584.2	574.0	568.5	563.0	557.5	552.0
57.5°	538.7	523.3	508.1	498.4	494.2	490.0	485.8	481.7
60°	488.0	473.0	458.0	448.2	443.5	438.9	434.2	429.6
62.5°	438.3	424.4	410.5	401.7	398.0	394.4	390.6	386.9
65°	367.0	354.6	342.1	334.1	330.7	327.2	323.8	320.2
67.5°	301.5	290.7	280.1	272.8	269.0	265.1	261.3	257.5
70°	256.9	247.4	237.8	231.6	228.7	225.8	222.9	220.0
72.5°	217.0	208.8	200.6	195.3	192.6	190.0	187.3	184.6
75°	159.9	153.2	146.5	142.4	140.6	138.8	137.1	135.4
77.5°	113.1	109.2	105.3	103.1	102.6	102.1	101.6	101.0
80°	86.8	85.9	85.0	84.5	84.2	83.9	83.6	83.3
82.5°	67.5	66.9	66.2	65.7	65.5	65.1	64.9	64.6
85°	39.2	38.6	38.1	37.7	37.7	37.7	37.7	37.7
87.5°	17.0	17.0	16.9	16.9	17.3	17.7	17.8	18.0
90°	14.7	15.5	16.3	16.3	17.1	17.9	17.1	17.1
92.5°	159.9	120.3	95.7	79.4	69.9	65.5	62.7	62.7
95°	603.1	477.0	367.9	288.9	249.1	223.8	209.2	198.6
97.5°	891.1	844.2	764.6	679.6	621.2	572.2	547.8	530.8
100°	981.6	997.8	958.0	897.7	827.0	777.3	752.8	746.4
102.5°	977.1	1057.8	1069.3	1044.2	1000.8	964.8	939.1	933.9
105°	911.6	1052.4	1132.9	1166.4	1168.0	1161.5	1150.1	1145.2
107.5°	818.6	968.6	1082.1	1154.6	1194.8	1213.4	1221.6	1223.7
110°	762.6	903.4	1021.5	1111.0	1168.8	1203.0	1217.6	1225.0





TEST NUMBER: P333008-930

CATALOG NUMBER: SA4XXRDIP-C1195D1035U930-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	721.6	846.1	957.7	1047.2	1112.8	1154.1	1174.7	1186.5
115°	680.4	780.6	875.8	953.9	1018.2	1067.1	1093.1	1099.6
117.5°	660.2	743.1	818.0	884.3	939.1	980.2	1006.5	1011.5
120°	651.1	726.8	792.0	849.7	896.1	932.0	953.1	962.1
122.5°	643.4	716.4	775.7	826.3	865.5	896.1	914.0	923.0
125°	630.0	699.9	756.1	800.9	833.5	857.0	872.5	877.4
127.5°	613.7	680.6	736.6	779.1	811.8	832.8	845.8	850.7
130°	600.7	665.0	720.3	763.4	796.8	817.2	830.2	835.1
132.5°	587.0	647.4	701.4	744.6	777.3	800.2	812.6	817.5
135°	568.1	621.0	670.7	711.3	744.0	766.7	779.8	784.6
137.5°	551.1	595.8	637.6	674.4	704.8	727.3	738.1	744.0
140°	541.3	579.5	616.1	650.3	678.8	696.8	708.1	714.6
142.5°	532.1	565.8	597.3	626.9	652.1	668.7	678.8	683.4
145°	519.3	547.0	571.4	594.2	614.5	628.4	636.5	640.6
147.5°	508.7	530.7	550.2	568.1	583.1	595.0	601.2	602.6
150°	502.2	520.9	537.2	551.9	564.8	575.4	580.3	581.1
152.5°	495.0	511.1	526.1	538.2	549.3	557.8	560.8	561.6
155°	484.3	497.3	509.5	519.3	527.4	533.9	536.4	536.4
157.5°	472.7	483.6	493.9	501.7	507.8	512.7	514.2	514.2
160°	465.5	474.5	483.5	490.0	494.9	499.8	500.6	500.6
162.5°	458.4	466.0	473.0	478.9	482.5	487.4	488.2	487.5
165°	448.5	453.4	459.0	463.1	466.4	469.6	468.8	468.0
167.5°	438.9	442.6	447.2	449.6	451.3	453.4	453.2	452.6
170°	433.0	435.5	438.7	441.2	442.8	443.6	442.8	442.8
172.5°	427.8	429.6	431.5	433.3	434.3	435.1	434.3	433.0
175°	420.8	421.6	423.2	423.2	423.2	424.9	423.2	421.6
177.5°	416.2	416.9	416.9	417.5	416.9	417.5	416.2	414.9
180°	414.3	414.3	414.3	414.3	414.3	414.3	414.3	414.3

(END OF REPORT)