

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: P332267

Luminaire Tested: **S123RDIP-S340D1195U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332267  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S340D1195U835-4F0-1E-UDD-F  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1195 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6071.1 lumens  
Efficiency: N/A  
Efficacy: 143.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

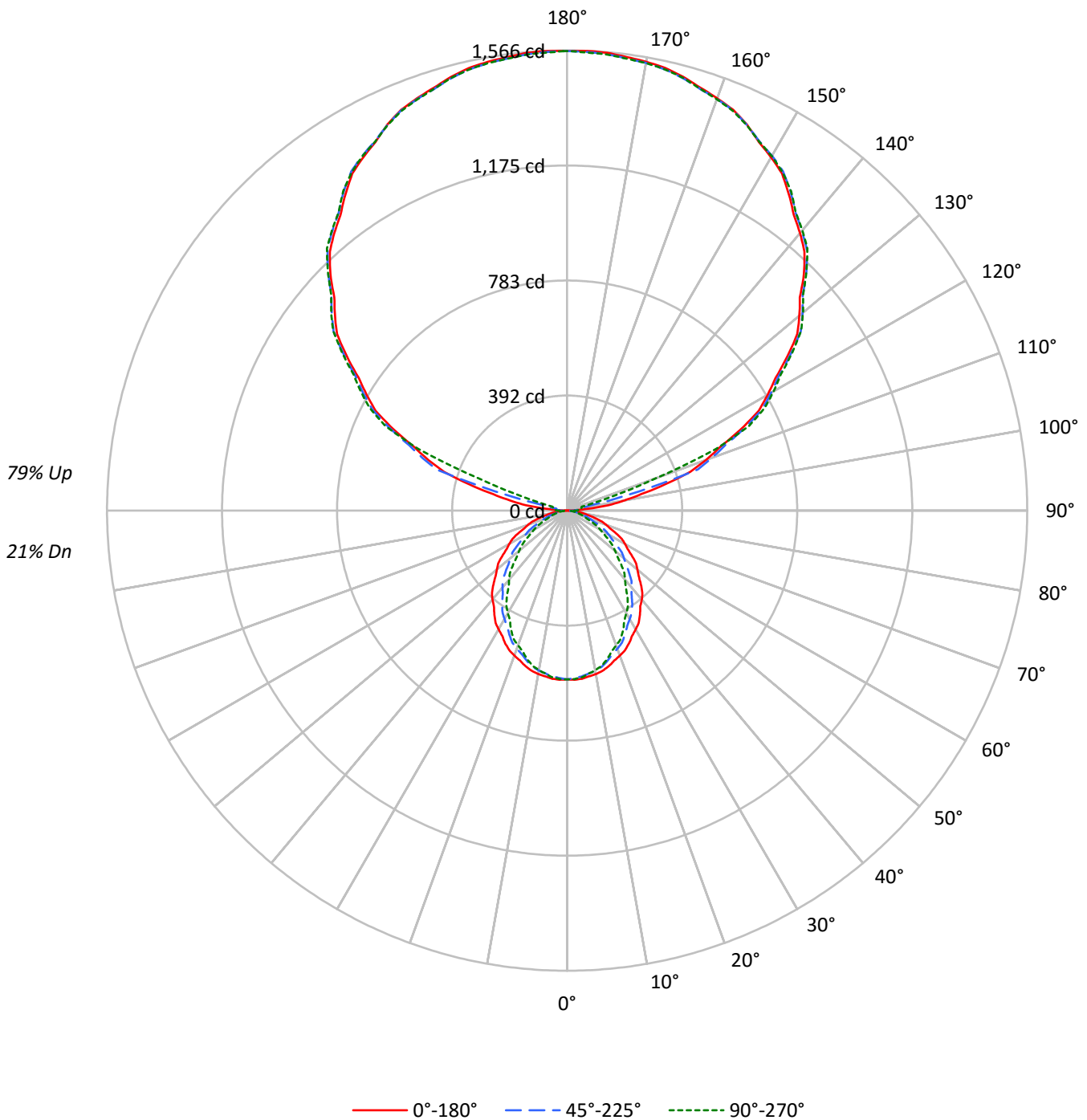
Input Watts (W): 42.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	100	100	100	89	89	89	89	67	67	67	48	48	48	30	30	30	21
1	92	87	84	80	81	78	75	72	59	57	55	42	41	40	27	26	25	18
2	83	76	71	66	74	68	63	59	52	49	46	37	35	33	24	22	22	16
3	76	67	60	55	67	60	54	49	46	42	39	33	30	28	21	20	18	13
4	70	59	52	46	61	53	47	42	41	36	33	29	27	24	19	17	16	12
5	64	53	45	40	56	47	41	36	36	32	28	26	23	21	17	15	14	10
6	59	47	40	34	52	42	36	31	33	28	25	24	21	18	15	14	12	9
7	54	42	35	30	48	38	32	27	29	25	22	21	18	16	14	12	11	8
8	50	38	31	26	44	34	28	24	27	22	19	20	17	14	13	11	10	7
9	46	35	28	23	41	31	25	21	24	20	17	18	15	13	12	10	9	6
10	43	32	25	20	38	29	23	19	22	18	15	17	14	12	11	9	8	6

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

	0°	45°	90°
0°	6184	6184	6184
5°	6207	6122	6158
10°	6172	6045	6025
15°	6107	5904	5841
20°	6015	5727	5593
25°	5922	5529	5352
30°	5797	5299	5009
35°	5670	5070	4696
40°	5552	4799	4308
45°	5398	4532	3958
50°	5228	4228	3565
55°	5054	3883	3200
60°	4895	3511	2799
65°	4689	3110	2397
70°	4428	2609	1936
75°	4051	2054	1822
80°	3608	1822	1674
85°	3051	1606	1494



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.0	0.9
10°-20°	150.1	2.5
20°-30°	216.1	3.6
30°-40°	243.5	4.0
40°-50°	232.9	3.8
50°-60°	190.7	3.1
60°-70°	128.7	2.1
70°-80°	64.7	1.1
80°-90°	21.5	0.4
90°-100°	56.9	0.9
100°-110°	271.0	4.5
110°-120°	650.9	10.7
120°-130°	828.8	13.7
130°-140°	885.6	14.6
140°-150°	828.1	13.6
150°-160°	668.0	11.0
160°-170°	431.1	7.1
170°-180°	148.6	2.4
0°-30°	420.2	6.9
0°-40°	663.7	10.9
0°-60°	1087.3	17.9
0°-90°	1302.2	21.5
90°-120°	978.7	16.1
90°-150°	3521.2	58.0
90°-180°	4769.0	78.6
0°-180°	6071.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	574	572	567	570	570	54
15°	548	542	530	527	524	154
25°	499	486	466	456	451	229
35°	432	414	386	366	357	270
45°	355	333	298	272	260	273
55°	269	246	207	181	170	241
65°	184	158	122	100	94	182
75°	97	75	49	45	44	104
85°	25	15	13	12	12	28
90°	1	13	28	32	35	5
95°	71	27	36	44	44	88
105°	346	352	254	60	51	367
115°	650	657	667	678	683	641
125°	916	925	929	932	934	817
135°	1140	1147	1151	1154	1151	877
145°	1315	1323	1326	1328	1328	823
155°	1449	1447	1448	1453	1446	667
165°	1528	1524	1523	1531	1524	431
175°	1564	1558	1559	1566	1558	149
180°	1564	1564	1564	1564	1564	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5
2.5°	576.4	576.0	575.7	575.4	575.1	574.4	573.4	572.4	571.4	570.4	571.3
5°	574.5	574.0	573.5	573.0	572.4	571.6	570.3	569.1	567.8	566.6	567.5
7.5°	569.2	568.6	568.1	567.5	567.0	565.9	564.3	562.7	561.0	559.4	559.9
10°	564.7	564.0	563.3	562.6	561.8	560.5	558.7	556.8	554.9	553.1	553.2
12.5°	558.4	557.6	556.8	556.0	555.2	553.6	551.3	549.1	546.8	544.5	544.4
15°	548.0	546.8	545.7	544.5	543.4	541.4	538.5	535.6	532.7	529.8	529.3
17.5°	534.8	533.5	532.2	530.8	529.5	527.0	523.3	519.6	516.0	512.3	511.2
20°	525.1	523.5	521.8	520.2	518.5	515.7	511.8	507.8	503.9	500.0	498.6
22.5°	514.3	512.4	510.5	508.6	506.7	503.7	499.5	495.3	491.1	486.9	485.2
25°	498.6	496.0	493.4	490.8	488.2	484.5	479.8	475.0	470.2	465.5	463.3
27.5°	479.5	476.6	473.7	470.9	468.0	464.0	458.7	453.3	448.0	442.7	439.7
30°	466.4	463.3	460.2	457.1	454.0	449.5	443.7	437.9	432.1	426.3	422.8
32.5°	453.4	449.8	446.3	442.8	439.3	434.5	428.3	422.2	416.1	409.9	406.1
35°	431.5	427.7	424.0	420.3	416.6	411.5	405.1	398.6	392.2	385.8	381.4
37.5°	409.3	405.1	401.0	396.9	392.7	387.2	380.4	373.5	366.7	359.8	354.8
40°	395.1	390.6	386.0	381.5	376.9	370.9	363.6	356.2	348.9	341.5	336.2
42.5°	379.1	374.5	370.0	365.4	360.9	354.8	347.2	339.6	332.0	324.4	318.5
45°	354.6	349.9	345.3	340.6	335.9	329.6	321.7	313.7	305.7	297.7	291.8
47.5°	330.1	325.0	319.8	314.7	309.6	303.1	295.1	287.1	279.2	271.2	264.8
50°	312.2	307.3	302.5	297.6	292.7	286.1	277.7	269.3	260.9	252.5	246.1
52.5°	296.2	290.9	285.6	280.3	275.0	268.2	259.9	251.6	243.3	235.0	228.4
55°	269.3	264.2	259.2	254.1	249.0	242.1	233.3	224.5	215.7	206.9	200.9
57.5°	244.5	239.0	233.5	227.9	222.4	215.2	206.4	197.5	188.7	179.9	174.2
60°	227.4	221.7	216.0	210.3	204.6	197.5	188.9	180.3	171.7	163.1	157.5
62.5°	210.2	204.5	198.8	193.2	187.5	180.3	171.7	163.1	154.5	145.9	140.7
65°	184.1	178.4	172.7	167.0	161.3	154.4	146.3	138.2	130.2	122.1	117.0
67.5°	157.9	152.1	146.3	140.6	134.8	128.1	120.3	112.6	104.8	97.1	93.3
70°	140.7	135.1	129.5	123.9	118.4	111.9	104.7	97.4	90.2	82.9	79.3
72.5°	123.6	118.1	112.6	107.0	101.5	95.5	88.9	82.3	75.7	69.1	66.2
75°	97.4	92.4	87.4	82.5	77.5	72.2	66.5	60.8	55.1	49.4	48.4
77.5°	73.5	69.0	64.5	60.0	55.6	51.5	47.8	44.1	40.5	36.8	36.3
80°	58.2	54.0	49.8	45.5	41.3	38.1	35.9	33.7	31.5	29.4	29.0
82.5°	43.7	40.0	36.4	32.7	29.0	26.7	25.7	24.7	23.7	22.6	22.3
85°	24.7	22.4	20.1	17.9	15.6	14.3	14.0	13.7	13.4	13.0	12.8
87.5°	9.2	8.8	8.4	8.0	7.6	7.7	8.4	9.1	9.8	10.4	10.5
90°	1.2	3.7	6.3	8.9	11.5	14.5	17.8	21.2	24.5	27.9	28.9
92.5°	21.6	20.9	20.2	19.4	18.7	19.6	22.2	24.7	27.2	29.7	31.4
95°	70.9	60.3	49.7	39.1	28.5	24.7	27.5	30.3	33.2	36.0	37.8
97.5°	142.4	137.7	132.9	128.2	123.4	111.8	93.2	74.6	56.0	37.4	39.5
100°	196.3	201.5	206.7	211.8	217.0	199.4	159.2	118.9	78.6	38.3	40.4
102.5°	257.7	261.4	265.1	268.8	272.6	252.4	208.4	164.4	120.4	76.4	70.0
105°	346.2	349.1	351.9	354.7	357.6	347.4	324.1	300.9	277.7	254.4	208.7
107.5°	439.6	441.9	444.2	446.4	448.7	451.7	455.4	459.0	462.7	466.4	432.8
110°	501.9	504.0	506.0	508.1	510.2	512.6	515.5	518.3	521.1	524.0	515.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	561.4	563.2	565.1	567.0	568.8	571.2	574.0	576.9	579.7	582.5	582.7
115°	649.5	651.0	652.5	654.1	655.6	657.6	659.9	662.2	664.6	666.9	669.5
117.5°	734.7	736.6	738.5	740.5	742.4	743.9	745.1	746.3	747.5	748.7	750.7
120°	787.7	790.0	792.4	794.7	797.0	798.6	799.3	800.1	800.9	801.6	803.7
122.5°	841.6	843.5	845.4	847.3	849.3	850.7	851.7	852.7	853.6	854.6	856.1
125°	915.5	917.6	919.6	921.7	923.8	925.3	926.3	927.4	928.4	929.4	930.0
127.5°	987.1	989.1	991.2	993.3	995.3	997.0	998.2	999.5	1000.7	1001.9	1002.8
130°	1031.7	1033.8	1035.8	1037.9	1039.9	1041.5	1042.5	1043.6	1044.6	1045.6	1046.7
132.5°	1074.4	1076.5	1078.6	1080.6	1082.7	1084.1	1085.0	1085.8	1086.6	1087.5	1088.5
135°	1139.7	1141.3	1142.8	1144.4	1145.9	1147.2	1148.3	1149.3	1150.3	1151.4	1152.1
137.5°	1195.5	1197.5	1199.4	1201.4	1203.4	1204.6	1205.2	1205.8	1206.3	1206.9	1208.1
140°	1232.7	1234.2	1235.8	1237.3	1238.9	1240.0	1240.8	1241.6	1242.4	1243.1	1244.2
142.5°	1267.1	1268.6	1270.2	1271.7	1273.3	1274.4	1275.2	1276.0	1276.8	1277.5	1278.4
145°	1315.2	1317.0	1318.8	1320.6	1322.4	1323.6	1324.1	1324.6	1325.1	1325.6	1326.1
147.5°	1360.5	1361.7	1362.9	1364.0	1365.2	1366.1	1366.6	1367.1	1367.6	1368.1	1368.7
150°	1388.4	1389.1	1389.9	1390.7	1391.5	1392.1	1392.6	1393.1	1393.7	1394.2	1394.7
152.5°	1413.5	1413.8	1414.2	1414.5	1414.9	1415.2	1415.5	1415.9	1416.2	1416.5	1417.4
155°	1448.8	1448.3	1447.7	1447.2	1446.7	1446.6	1446.8	1447.1	1447.4	1447.6	1448.9
157.5°	1476.2	1476.1	1476.1	1476.0	1476.0	1475.8	1475.6	1475.3	1475.1	1474.8	1476.4
160°	1492.9	1492.7	1492.4	1492.2	1491.9	1491.6	1491.4	1491.1	1490.9	1490.6	1492.2
162.5°	1508.7	1508.1	1507.4	1506.7	1506.0	1505.6	1505.3	1505.1	1504.8	1504.5	1506.3
165°	1527.8	1527.0	1526.2	1525.5	1524.7	1524.2	1523.9	1523.6	1523.4	1523.1	1525.2
167.5°	1542.7	1541.6	1540.6	1539.6	1538.5	1538.0	1538.0	1538.0	1538.0	1538.0	1540.1
170°	1551.0	1550.0	1549.0	1547.9	1546.9	1546.4	1546.4	1546.4	1546.4	1546.4	1548.4
172.5°	1556.6	1555.4	1554.1	1552.9	1551.6	1551.1	1551.3	1551.5	1551.7	1551.9	1554.0
175°	1563.8	1562.5	1561.2	1559.9	1558.6	1558.1	1558.4	1558.6	1558.9	1559.1	1561.0
177.5°	1565.7	1564.6	1563.6	1562.6	1561.5	1561.1	1561.3	1561.5	1561.7	1561.9	1563.6
180°	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5
2.5°	572.2	573.1	574.1	574.4	574.3	574.1	573.9	573.8
5°	568.5	569.4	570.3	570.7	570.5	570.3	570.1	569.9
7.5°	560.5	561.0	561.5	561.6	561.2	560.9	560.5	560.2
10°	553.3	553.4	553.5	553.3	552.8	552.3	551.7	551.2
12.5°	544.4	544.3	544.3	543.9	543.3	542.7	542.1	541.5
15°	528.7	528.2	527.7	527.1	526.4	525.6	524.9	524.2
17.5°	510.1	509.0	507.9	506.8	505.7	504.6	503.6	502.5
20°	497.3	495.9	494.6	493.3	492.0	490.8	489.6	488.3
22.5°	483.6	481.9	480.2	478.8	477.6	476.5	475.3	474.2
25°	461.1	459.0	456.8	455.1	454.0	452.9	451.7	450.6
27.5°	436.7	433.7	430.7	428.3	426.5	424.8	423.1	421.3
30°	419.3	415.8	412.3	409.7	408.0	406.4	404.7	403.0
32.5°	402.2	398.4	394.5	391.7	390.0	388.3	386.5	384.8
35°	376.9	372.4	368.0	364.8	363.0	361.1	359.2	357.4
37.5°	349.7	344.6	339.6	335.9	333.6	331.3	329.0	326.7
40°	330.8	325.4	320.0	316.1	313.7	311.4	309.0	306.6
42.5°	312.6	306.8	300.9	296.9	294.7	292.6	290.5	288.3
45°	285.9	280.0	274.1	269.9	267.5	265.0	262.5	260.0
47.5°	258.3	251.9	245.5	241.2	239.0	236.8	234.5	232.3
50°	239.7	233.3	226.9	222.5	220.1	217.7	215.3	212.9
52.5°	221.7	215.0	208.4	204.0	201.8	199.7	197.6	195.4
55°	194.9	188.9	182.9	178.8	176.8	174.7	172.6	170.5
57.5°	168.5	162.8	157.2	153.4	151.7	149.9	148.2	146.4
60°	151.9	146.3	140.7	137.0	135.3	133.5	131.8	130.0
62.5°	135.4	130.2	124.9	121.3	119.5	117.7	115.8	114.0
65°	111.9	106.9	101.8	98.7	97.5	96.4	95.3	94.1
67.5°	89.5	85.7	81.9	79.4	78.2	77.0	75.8	74.6
70°	75.7	72.1	68.4	66.1	64.9	63.8	62.6	61.5
72.5°	63.2	60.3	57.3	55.6	55.1	54.6	54.2	53.7
75°	47.3	46.3	45.2	44.6	44.4	44.2	44.0	43.8
77.5°	35.7	35.1	34.6	34.2	34.0	33.8	33.6	33.4
80°	28.7	28.4	28.1	27.9	27.6	27.4	27.2	27.0
82.5°	22.0	21.7	21.4	21.2	21.2	21.1	21.1	21.1
85°	12.6	12.4	12.2	12.1	12.1	12.1	12.1	12.1
87.5°	10.7	10.8	10.9	11.0	11.0	11.0	11.1	11.1
90°	29.9	31.0	32.0	32.8	33.3	33.8	34.3	34.9
92.5°	33.0	34.7	36.4	37.3	37.6	38.0	38.3	38.6
95°	39.6	41.4	43.2	44.1	44.1	44.1	44.1	44.1
97.5°	41.5	43.6	45.7	46.8	47.1	47.4	47.6	47.9
100°	42.5	44.5	46.6	47.8	48.0	48.3	48.5	48.8
102.5°	63.6	57.2	50.8	47.9	48.3	48.8	49.3	49.7
105°	163.0	117.3	71.6	49.1	49.6	50.1	50.6	51.1
107.5°	399.3	365.8	332.3	298.3	263.9	229.4	195.0	160.6
110°	506.9	498.4	489.9	467.2	430.3	393.3	356.4	319.5





TEST NUMBER: P332267

CATALOG NUMBER: S123RDIP-S340D1195U835-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	582.8	583.0	583.2	579.3	571.5	563.7	555.9	548.1
115°	672.0	674.6	677.2	679.0	680.0	681.1	682.1	683.1
117.5°	752.8	754.9	756.9	758.1	758.3	758.5	758.7	758.9
120°	805.8	807.8	809.9	810.9	810.9	810.9	810.9	810.9
122.5°	857.5	859.0	860.4	861.2	861.4	861.6	861.9	862.1
125°	930.5	931.0	931.5	932.0	932.5	933.1	933.6	934.1
127.5°	1003.6	1004.4	1005.2	1005.4	1004.9	1004.4	1003.9	1003.3
130°	1047.7	1048.7	1049.8	1050.0	1049.5	1049.0	1048.5	1048.0
132.5°	1089.5	1090.6	1091.6	1091.7	1091.0	1090.3	1089.6	1088.8
135°	1152.9	1153.7	1154.5	1154.5	1153.7	1152.9	1152.1	1151.4
137.5°	1209.4	1210.6	1211.8	1212.2	1211.7	1211.2	1210.7	1210.1
140°	1245.2	1246.2	1247.3	1247.5	1247.0	1246.5	1246.0	1245.5
142.5°	1279.2	1280.0	1280.8	1280.9	1280.2	1279.4	1278.7	1278.0
145°	1326.7	1327.2	1327.7	1327.9	1327.9	1327.9	1327.9	1327.9
147.5°	1369.2	1369.7	1370.2	1369.9	1368.7	1367.5	1366.3	1365.1
150°	1395.2	1395.7	1396.2	1396.1	1395.3	1394.6	1393.8	1393.0
152.5°	1418.3	1419.3	1420.2	1420.1	1418.9	1417.7	1416.5	1415.3
155°	1450.2	1451.5	1452.8	1452.6	1451.1	1449.6	1448.0	1446.5
157.5°	1477.9	1479.4	1481.0	1480.8	1478.8	1476.7	1474.7	1472.7
160°	1493.7	1495.2	1496.8	1496.7	1494.9	1493.1	1491.2	1489.4
162.5°	1508.1	1509.8	1511.6	1511.6	1510.0	1508.4	1506.8	1505.2
165°	1527.3	1529.3	1531.4	1531.5	1529.7	1527.9	1526.1	1524.3
167.5°	1542.1	1544.2	1546.3	1546.3	1544.2	1542.1	1540.1	1538.0
170°	1550.5	1552.6	1554.6	1554.6	1552.6	1550.5	1548.4	1546.4
172.5°	1556.1	1558.1	1560.2	1560.1	1557.8	1555.6	1553.3	1551.0
175°	1562.8	1564.6	1566.4	1566.2	1564.2	1562.1	1560.1	1558.0
177.5°	1565.2	1566.9	1568.5	1568.3	1566.3	1564.2	1562.1	1560.1
180°	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8

(END OF REPORT)