

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: P332892-940

Luminaire Tested: **S124RDIP-S350D1205U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332892-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDIP-S350D1205U940-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1205 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5562.7 lumens  
Efficiency: N/A  
Efficacy: 131.8 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: Semi-Indirect

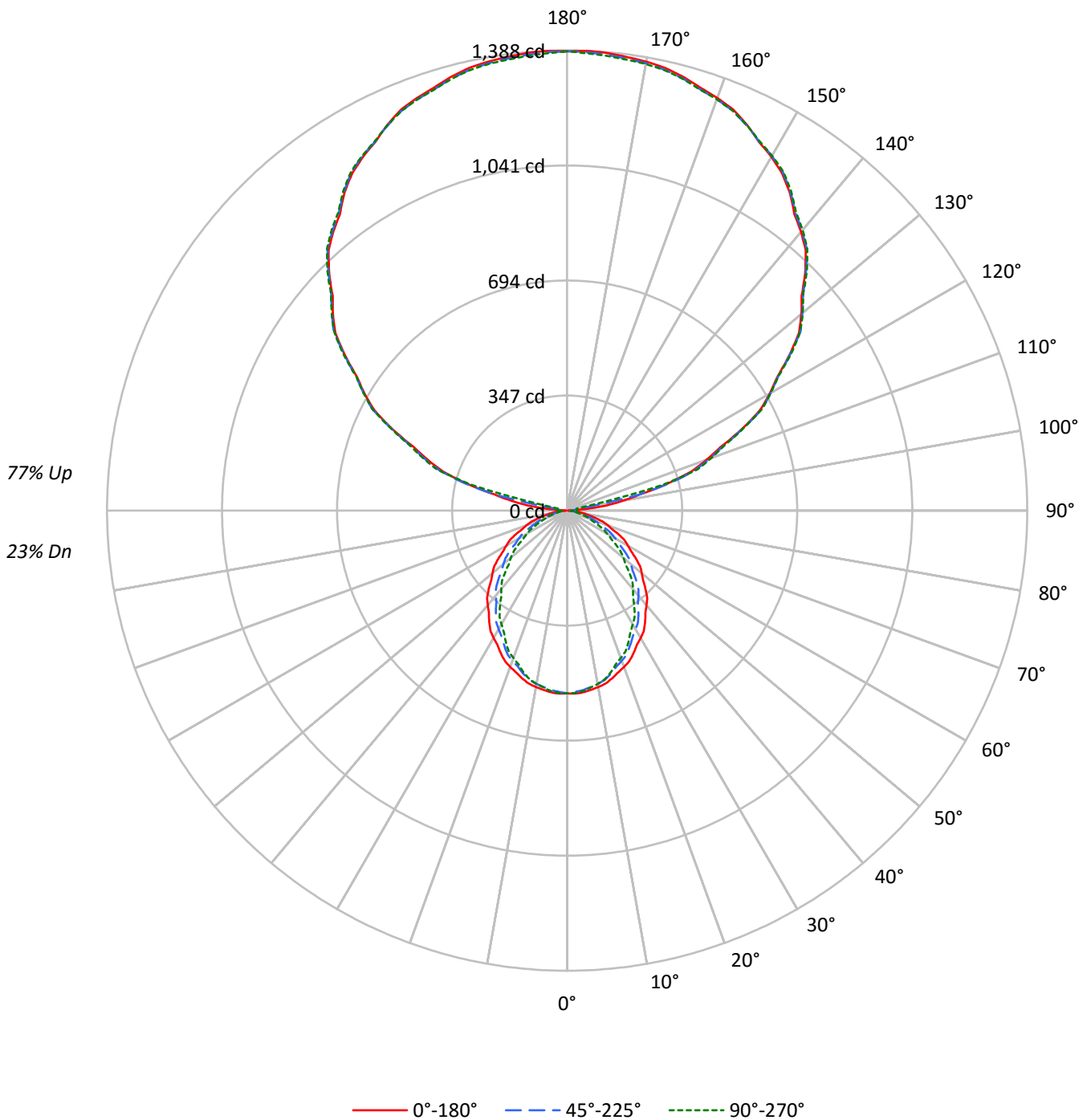
Input Watts (W): 42.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101	101	101	101	89	89	89	89	68	68	68	49	49	49	31	31	31	23
1	92	88	84	81	81	78	75	72	60	58	56	43	42	41	28	27	27	20
2	84	77	71	66	74	68	63	59	53	49	47	38	36	34	25	23	23	17
3	76	67	61	55	68	60	54	50	46	42	39	34	31	29	22	20	19	14
4	70	60	52	46	62	53	47	42	41	37	33	30	27	25	20	18	17	12
5	64	53	45	40	57	47	41	36	37	32	29	27	24	22	18	16	15	11
6	59	47	40	34	52	42	36	31	33	28	25	24	21	19	16	14	13	9
7	54	43	35	30	48	38	32	27	30	25	22	22	19	17	15	13	11	8
8	50	39	31	26	44	35	28	24	27	22	19	20	17	15	13	12	10	8
9	47	35	28	23	41	31	25	21	25	20	17	18	15	13	12	11	9	7
10	43	32	25	21	39	29	23	19	23	18	15	17	14	12	11	10	8	6

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

	0°	45°	90°
0°	4451	4451	4451
5°	4460	4406	4433
10°	4432	4353	4353
15°	4381	4262	4229
20°	4312	4141	4064
25°	4222	4000	3899
30°	4135	3852	3691
35°	4039	3698	3482
40°	3923	3523	3256
45°	3817	3350	3027
50°	3695	3149	2783
55°	3564	2940	2519
60°	3421	2713	2249
65°	3289	2428	1983
70°	3099	2110	1683
75°	2857	1753	1369
80°	2492	1334	1255
85°	2112	1213	1130



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.8	0.9
10°-20°	144.4	2.6
20°-30°	208.5	3.7
30°-40°	236.4	4.2
40°-50°	228.2	4.1
50°-60°	189.8	3.4
60°-70°	131.1	2.4
70°-80°	66.4	1.2
80°-90°	21.0	0.4
90°-100°	47.4	0.9
100°-110°	302.1	5.4
110°-120°	577.9	10.4
120°-130°	733.6	13.2
130°-140°	784.9	14.1
140°-150°	734.0	13.2
150°-160°	591.9	10.6
160°-170°	381.8	6.9
170°-180°	131.6	2.4
0°-30°	404.7	7.3
0°-40°	641.0	11.5
0°-60°	1059.1	19.0
0°-90°	1277.6	23.0
90°-120°	927.4	16.7
90°-150°	3179.9	57.2
90°-180°	4285.0	77.0
0°-180°	5562.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	551	551	551	551	551	
5°	550	548	544	548	547	52
15°	524	520	510	509	506	148
25°	474	466	449	442	438	218
35°	410	396	375	361	353	256
45°	334	318	293	273	265	258
55°	253	236	209	188	179	226
65°	172	154	127	110	104	170
75°	92	76	56	47	44	97
85°	23	15	13	12	12	26
90°	3	14	23	29	31	4
95°	57	24	23	29	30	73
105°	312	318	323	330	295	326
115°	582	585	584	586	586	573
125°	818	822	821	824	825	730
135°	1015	1015	1018	1021	1023	782
145°	1171	1174	1174	1175	1177	731
155°	1284	1285	1282	1285	1283	592
165°	1354	1349	1349	1356	1348	383
175°	1385	1379	1380	1388	1377	132
180°	1385	1385	1385	1385	1385	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3
2.5°	552.6	552.2	552.0	551.7	551.3	550.8	550.0	549.2	548.3	547.5	548.3
5°	550.4	550.0	549.7	549.3	548.8	548.1	547.0	545.9	544.7	543.7	544.6
7.5°	545.4	545.0	544.7	544.2	543.9	542.9	541.4	539.9	538.5	537.1	537.6
10°	540.6	540.2	539.8	539.3	538.8	537.7	536.0	534.3	532.6	531.0	531.4
12.5°	534.6	534.0	533.5	533.0	532.4	531.2	529.1	527.2	525.2	523.2	523.4
15°	524.2	523.3	522.5	521.7	520.8	519.2	516.9	514.5	512.2	509.9	509.7
17.5°	511.7	510.4	509.2	508.0	506.8	504.7	501.9	499.1	496.3	493.5	492.9
20°	501.9	500.6	499.4	498.2	497.0	494.8	491.6	488.4	485.2	482.0	481.3
22.5°	491.1	489.6	488.3	487.0	485.5	483.1	479.7	476.4	473.0	469.5	468.4
25°	474.0	472.3	470.6	469.0	467.3	464.5	460.7	456.8	452.9	449.1	447.5
27.5°	456.1	454.0	451.8	449.8	447.6	444.5	440.4	436.3	432.2	428.1	426.1
30°	443.6	441.2	438.9	436.6	434.3	430.9	426.4	422.0	417.6	413.2	410.9
32.5°	430.4	427.8	425.2	422.5	419.8	416.3	411.7	407.2	402.6	398.1	395.3
35°	409.8	406.8	403.9	400.8	397.8	394.0	389.3	384.6	380.0	375.2	372.0
37.5°	387.8	384.7	381.7	378.5	375.4	371.3	366.0	360.9	355.7	350.5	347.0
40°	372.3	369.2	366.0	363.0	359.9	355.7	350.4	345.0	339.7	334.3	330.4
42.5°	357.4	354.2	350.9	347.7	344.5	340.0	334.5	328.9	323.3	317.7	313.7
45°	334.3	330.8	327.3	323.9	320.4	315.8	310.2	304.6	299.0	293.4	288.7
47.5°	310.4	306.8	303.3	299.6	296.0	291.3	285.5	279.6	273.8	268.0	263.1
50°	294.2	290.5	286.9	283.2	279.6	274.7	268.8	262.7	256.7	250.7	246.0
52.5°	277.7	274.0	270.5	266.9	263.3	258.4	252.3	246.1	240.0	233.8	229.1
55°	253.2	249.5	245.8	242.0	238.3	233.3	227.2	221.1	215.0	208.9	204.0
57.5°	229.1	225.2	221.3	217.4	213.5	208.6	202.5	196.5	190.6	184.5	179.6
60°	211.9	208.1	204.4	200.6	196.9	192.0	186.0	179.9	174.0	168.0	163.1
62.5°	196.4	192.4	188.5	184.7	180.7	175.8	169.6	163.5	157.3	151.1	146.6
65°	172.2	168.2	164.2	160.2	156.0	151.1	145.1	139.0	133.0	127.1	123.1
67.5°	147.1	143.3	139.4	135.5	131.7	127.0	121.4	115.8	110.2	104.7	101.2
70°	131.3	127.3	123.4	119.5	115.5	110.8	105.5	100.1	94.8	89.4	86.4
72.5°	114.4	110.8	107.3	103.7	100.1	95.9	90.8	85.7	80.7	75.6	73.0
75°	91.6	88.1	84.6	81.1	77.7	73.7	69.4	64.9	60.5	56.2	53.9
77.5°	68.5	65.5	62.6	59.7	56.7	53.4	49.8	46.3	42.7	39.1	37.9
80°	53.6	50.9	48.2	45.5	42.7	39.9	37.2	34.3	31.5	28.7	28.4
82.5°	40.8	38.3	35.8	33.3	30.8	28.7	27.1	25.5	23.9	22.3	22.1
85°	22.8	21.0	19.1	17.1	15.2	14.2	13.9	13.6	13.4	13.1	12.9
87.5°	8.4	8.3	8.2	8.1	8.0	8.1	8.4	8.7	9.0	9.3	9.5
90°	3.1	5.6	8.2	10.7	13.2	15.4	17.3	19.1	21.0	22.8	24.2
92.5°	13.0	13.2	13.4	13.5	13.6	14.6	16.4	18.3	20.2	21.9	23.4
95°	57.0	49.1	41.3	33.5	25.7	21.8	22.1	22.3	22.6	22.8	24.2
97.5°	121.0	125.9	130.8	135.6	140.5	130.1	104.4	78.7	53.1	27.4	27.5
100°	170.0	174.1	178.3	182.4	186.5	172.7	140.9	109.1	77.4	45.6	41.6
102.5°	224.6	227.7	230.7	233.7	236.7	236.2	232.1	227.9	223.8	219.6	177.5
105°	311.8	313.3	314.6	316.0	317.4	318.7	319.9	320.9	322.1	323.2	325.4
107.5°	392.9	393.6	394.3	394.9	395.7	396.8	398.3	399.9	401.4	403.1	404.0
110°	447.6	448.3	449.0	449.7	450.4	451.4	452.8	454.1	455.6	456.9	457.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	500.7	501.9	503.1	504.4	505.6	506.6	507.2	507.8	508.5	509.2	509.1
115°	582.3	583.0	583.7	584.3	585.1	585.3	585.1	584.9	584.6	584.3	584.9
117.5°	655.9	656.7	657.7	658.6	659.5	660.2	660.8	661.3	661.8	662.3	662.2
120°	705.6	706.5	707.5	708.4	709.3	709.6	709.4	709.2	708.9	708.7	709.2
122.5°	752.0	752.6	753.1	753.7	754.2	754.7	755.0	755.3	755.6	756.0	756.3
125°	818.5	819.5	820.4	821.3	822.2	822.4	822.0	821.5	821.1	820.6	821.3
127.5°	881.5	881.7	882.0	882.3	882.4	883.1	884.1	885.2	886.3	887.3	887.2
130°	922.1	922.4	922.7	922.8	923.1	923.5	924.3	924.9	925.6	926.3	926.5
132.5°	959.5	959.8	960.3	960.7	961.1	961.8	962.6	963.5	964.4	965.3	965.5
135°	1015.4	1015.2	1014.9	1014.7	1014.5	1014.9	1015.7	1016.6	1017.6	1018.5	1019.0
137.5°	1065.0	1065.1	1065.1	1065.2	1065.3	1065.9	1066.8	1067.9	1068.9	1069.9	1070.4
140°	1097.3	1097.7	1098.1	1098.7	1099.1	1099.6	1100.0	1100.5	1100.9	1101.4	1102.1
142.5°	1126.2	1127.1	1127.9	1128.7	1129.6	1130.2	1130.4	1130.7	1131.0	1131.2	1131.8
145°	1170.8	1171.5	1172.2	1172.9	1173.6	1173.9	1173.9	1173.9	1173.9	1173.9	1174.2
147.5°	1206.2	1207.6	1208.8	1210.1	1211.4	1211.9	1211.7	1211.5	1211.2	1211.0	1211.2
150°	1232.0	1232.9	1233.8	1234.8	1235.6	1236.0	1235.7	1235.6	1235.3	1235.0	1235.0
152.5°	1253.5	1254.3	1255.0	1255.7	1256.4	1256.6	1256.2	1255.8	1255.4	1255.0	1255.4
155°	1283.8	1284.0	1284.2	1284.4	1284.7	1284.4	1283.8	1283.1	1282.4	1281.7	1282.6
157.5°	1309.2	1309.1	1308.9	1308.9	1308.7	1308.2	1307.4	1306.7	1305.9	1305.1	1306.3
160°	1324.2	1323.5	1322.8	1322.1	1321.4	1321.0	1320.7	1320.4	1320.3	1320.0	1321.4
162.5°	1337.4	1336.6	1335.7	1334.8	1333.9	1333.4	1333.1	1332.9	1332.7	1332.5	1333.8
165°	1354.2	1353.1	1351.9	1350.8	1349.6	1349.1	1349.1	1349.1	1349.1	1349.1	1350.9
167.5°	1367.4	1366.3	1365.1	1363.9	1362.7	1362.0	1361.9	1361.7	1361.6	1361.5	1363.5
170°	1374.9	1373.6	1372.2	1370.8	1369.4	1368.9	1369.0	1369.3	1369.5	1369.8	1371.6
172.5°	1379.9	1378.5	1377.2	1375.7	1374.4	1373.8	1374.0	1374.3	1374.5	1374.8	1376.5
175°	1385.3	1383.9	1382.5	1381.2	1379.7	1379.2	1379.4	1379.7	1379.9	1380.1	1382.2
177.5°	1387.8	1386.5	1385.2	1383.9	1382.6	1382.2	1382.5	1382.9	1383.3	1383.7	1385.1
180°	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3
2.5°	549.2	550.0	550.8	551.2	551.1	551.1	551.0	550.9
5°	545.5	546.4	547.4	547.8	547.6	547.4	547.2	547.0
7.5°	538.2	538.9	539.5	539.6	539.3	539.0	538.7	538.4
10°	531.7	532.1	532.4	532.4	532.1	531.7	531.4	531.0
12.5°	523.6	523.9	524.1	524.0	523.4	522.9	522.4	521.8
15°	509.5	509.3	509.1	508.7	508.0	507.4	506.8	506.0
17.5°	492.4	492.0	491.4	490.6	489.6	488.7	487.7	486.7
20°	480.5	479.7	479.0	478.0	476.8	475.5	474.4	473.1
22.5°	467.3	466.1	465.0	464.0	463.0	462.0	461.0	459.9
25°	445.9	444.3	442.7	441.5	440.5	439.5	438.6	437.7
27.5°	424.1	422.1	420.2	418.6	417.1	415.8	414.5	413.1
30°	408.5	406.2	403.9	401.9	400.4	399.0	397.4	395.9
32.5°	392.6	389.9	387.2	385.0	383.6	382.2	380.8	379.3
35°	368.8	365.7	362.5	360.1	358.4	356.7	355.0	353.3
37.5°	343.4	339.8	336.3	333.6	331.9	330.2	328.5	326.8
40°	326.4	322.4	318.5	315.8	314.1	312.4	310.7	309.0
42.5°	309.7	305.7	301.7	298.8	297.0	295.2	293.5	291.8
45°	284.2	279.6	274.9	271.8	270.1	268.4	266.7	265.1
47.5°	258.4	253.6	248.9	245.6	243.7	241.8	240.0	238.2
50°	241.3	236.7	231.9	228.7	226.9	225.2	223.4	221.6
52.5°	224.3	219.5	214.8	211.4	209.6	207.8	205.9	204.0
55°	199.2	194.3	189.4	186.1	184.3	182.5	180.7	179.0
57.5°	174.6	169.7	164.7	161.6	160.2	158.9	157.5	156.1
60°	158.2	153.4	148.5	145.3	143.7	142.3	140.8	139.3
62.5°	142.1	137.6	133.1	130.3	129.0	127.9	126.6	125.5
65°	119.0	114.9	110.9	108.3	107.2	106.1	105.0	103.8
67.5°	97.7	94.3	90.8	88.5	87.2	86.0	84.7	83.5
70°	83.3	80.2	77.1	75.1	74.1	73.2	72.2	71.3
72.5°	70.4	67.7	65.1	63.3	62.4	61.6	60.7	59.8
75°	51.8	49.7	47.5	46.2	45.6	45.0	44.5	43.9
77.5°	36.6	35.4	34.2	33.4	33.3	33.1	32.9	32.7
80°	28.2	27.8	27.6	27.4	27.3	27.2	27.1	27.0
82.5°	21.8	21.7	21.5	21.3	21.2	21.1	21.0	21.0
85°	12.8	12.5	12.3	12.2	12.2	12.2	12.2	12.2
87.5°	9.7	9.9	10.1	10.3	10.4	10.6	10.8	11.0
90°	25.6	26.9	28.4	29.2	29.7	30.1	30.6	31.1
92.5°	24.7	26.1	27.5	28.3	28.4	28.4	28.5	28.6
95°	25.6	26.9	28.4	29.2	29.3	29.6	29.8	30.1
97.5°	27.6	27.7	27.9	28.1	28.4	28.5	28.8	29.0
100°	37.7	33.9	30.0	28.1	28.4	28.5	28.8	29.0
102.5°	135.2	93.0	50.7	29.7	29.7	29.8	29.8	29.9
105°	327.4	329.5	331.5	328.4	320.1	311.8	303.6	295.3
107.5°	405.1	406.1	407.1	408.0	408.9	409.8	410.6	411.5
110°	457.9	458.3	458.8	459.3	460.0	460.7	461.5	462.1





TEST NUMBER: P332892-940

CATALOG NUMBER: S124RDIP-S350D1205U940-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	509.0	508.9	508.8	509.2	510.1	511.0	511.8	512.6
115°	585.3	585.8	586.2	586.5	586.5	586.5	586.5	586.5
117.5°	662.1	662.0	661.9	661.8	661.7	661.6	661.6	661.5
120°	709.6	710.1	710.5	710.5	710.1	709.6	709.2	708.7
122.5°	756.5	756.8	757.1	757.0	756.5	756.1	755.5	755.1
125°	822.0	822.7	823.4	823.9	824.0	824.3	824.6	824.7
127.5°	887.1	886.9	886.8	886.6	886.4	886.3	886.1	885.9
130°	926.8	927.0	927.2	927.3	927.3	927.3	927.3	927.3
132.5°	965.7	966.0	966.2	966.2	966.0	965.8	965.6	965.5
135°	1019.4	1019.8	1020.4	1020.8	1021.3	1021.7	1022.2	1022.6
137.5°	1070.9	1071.4	1071.9	1072.1	1072.0	1071.8	1071.7	1071.6
140°	1102.8	1103.5	1104.2	1104.7	1104.8	1105.1	1105.3	1105.5
142.5°	1132.3	1132.7	1133.3	1133.5	1133.6	1133.6	1133.7	1133.7
145°	1174.4	1174.7	1174.8	1175.2	1175.6	1176.1	1176.6	1177.1
147.5°	1211.4	1211.6	1211.7	1211.9	1212.2	1212.5	1212.6	1212.9
150°	1235.0	1235.0	1235.0	1235.2	1235.4	1235.6	1235.9	1236.1
152.5°	1255.7	1256.1	1256.4	1256.5	1256.4	1256.2	1256.2	1256.0
155°	1283.5	1284.4	1285.4	1285.5	1284.8	1284.1	1283.4	1282.7
157.5°	1307.5	1308.7	1309.9	1309.9	1308.7	1307.5	1306.3	1305.1
160°	1322.8	1324.2	1325.5	1325.5	1324.2	1322.8	1321.4	1320.0
162.5°	1335.2	1336.6	1338.0	1337.9	1336.3	1334.8	1333.2	1331.6
165°	1352.7	1354.6	1356.4	1356.3	1354.2	1352.1	1350.1	1348.0
167.5°	1365.6	1367.5	1369.6	1369.4	1367.2	1364.9	1362.5	1360.2
170°	1373.4	1375.3	1377.2	1376.9	1374.6	1372.3	1370.0	1367.7
172.5°	1378.4	1380.3	1382.1	1381.8	1379.3	1376.8	1374.3	1371.8
175°	1384.3	1386.3	1388.4	1388.0	1385.3	1382.5	1379.7	1377.0
177.5°	1386.6	1388.0	1389.6	1389.2	1387.0	1384.7	1382.5	1380.4
180°	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3

(END OF REPORT)