

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: P332922-935

Luminaire Tested: **S124RDIP-S575D1205U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332922-935  
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-S575D1205U935-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 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: 6163.1 lumens  
Efficiency: N/A  
Efficacy: 124.8 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

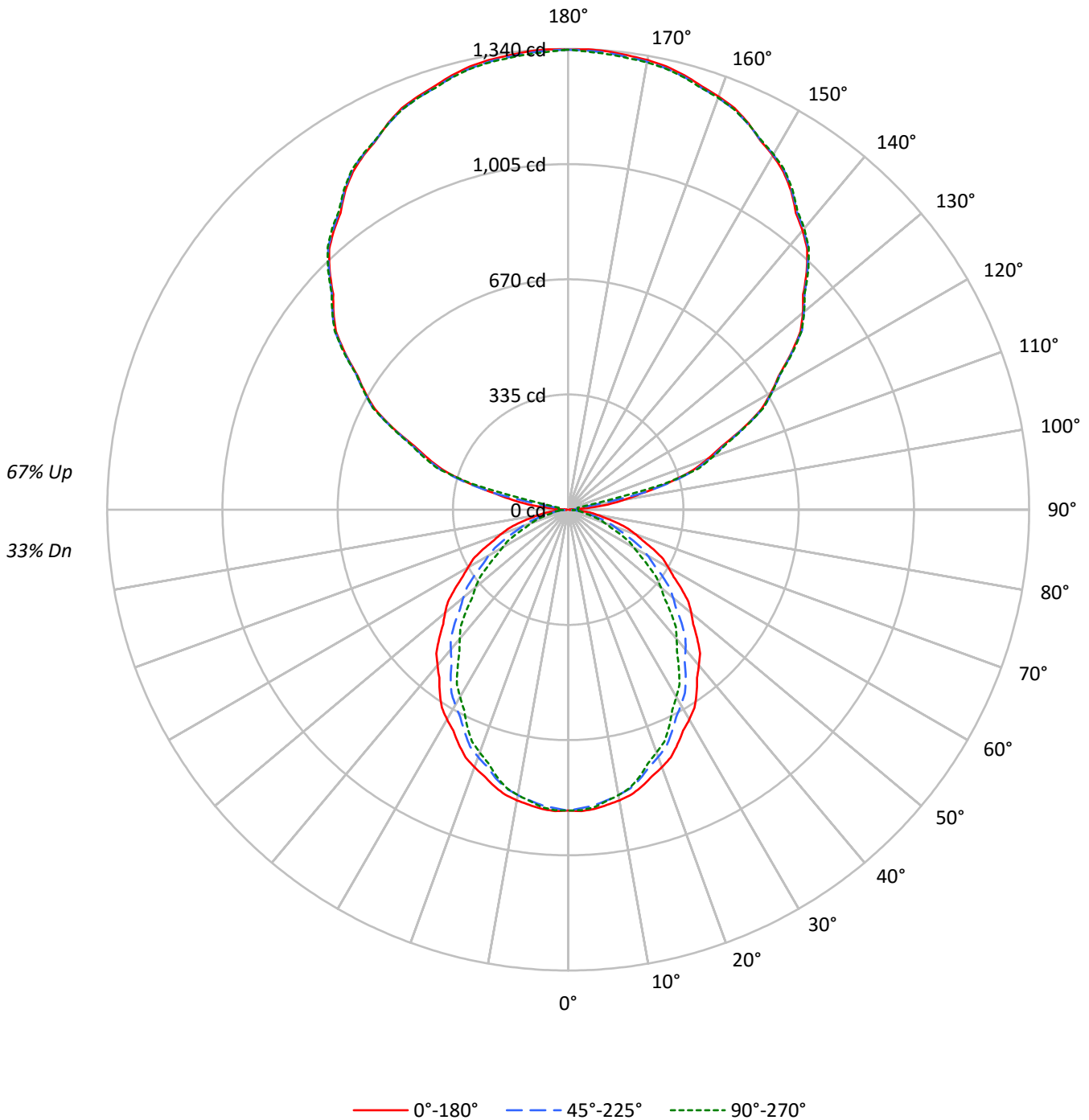
Input Watts (W): 49.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40	33
1	94	90	86	83	85	81	78	75	65	63	61	50	48	47	36	35	34	28
2	86	79	73	68	77	71	66	62	57	54	51	44	42	40	32	30	29	24
3	78	69	62	57	70	63	57	52	50	46	43	39	36	34	28	27	25	20
4	72	61	54	48	64	56	49	44	45	40	36	35	32	29	25	23	22	18
5	66	55	47	41	59	50	43	38	40	35	31	31	28	25	23	21	19	15
6	61	49	41	36	54	44	38	33	36	31	27	28	25	22	21	19	17	14
7	56	44	36	31	50	40	33	29	33	28	24	26	22	19	19	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	23	20	17	17	15	13	11
9	48	36	29	24	43	33	27	23	27	22	19	21	18	16	16	14	12	10
10	45	33	26	22	41	30	24	20	25	20	17	20	16	14	15	13	11	9

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

	0°	45°	90°
0°	7064	7064	7064
5°	7080	6994	7037
10°	7035	6909	6909
15°	6955	6764	6714
20°	6844	6574	6453
25°	6702	6350	6188
30°	6564	6114	5858
35°	6412	5870	5527
40°	6227	5592	5168
45°	6058	5316	4804
50°	5865	4999	4417
55°	5658	4669	3997
60°	5430	4306	3570
65°	5223	3851	3148
70°	4919	3354	2672
75°	4535	2779	2174
80°	3956	2115	1994
85°	3353	1927	1806



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.2	1.3
10°-20°	229.2	3.7
20°-30°	331.0	5.4
30°-40°	375.2	6.1
40°-50°	362.3	5.9
50°-60°	301.3	4.9
60°-70°	208.0	3.4
70°-80°	105.4	1.7
80°-90°	30.9	0.5
90°-100°	45.8	0.7
100°-110°	291.7	4.7
110°-120°	558.0	9.1
120°-130°	708.4	11.5
130°-140°	757.9	12.3
140°-150°	708.7	11.5
150°-160°	571.5	9.3
160°-170°	368.6	6.0
170°-180°	127.0	2.1
0°-30°	642.4	10.4
0°-40°	1017.6	16.5
0°-60°	1681.1	27.3
0°-90°	2025.5	32.9
90°-120°	895.4	14.5
90°-150°	3070.4	49.8
90°-180°	4138.0	67.1
0°-180°	6163.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	875	875	875	875	875	
5°	874	871	863	869	868	83
15°	832	825	809	808	803	234
25°	752	740	713	702	695	347
35°	651	628	596	573	561	406
45°	531	505	466	434	421	409
55°	402	374	332	298	284	359
65°	273	244	202	174	165	270
75°	145	120	89	74	70	154
85°	36	23	21	20	20	41
90°	3	14	22	28	30	4
95°	55	23	22	28	29	71
105°	301	307	312	319	285	315
115°	562	565	564	566	566	553
125°	790	794	792	795	796	705
135°	980	980	983	985	987	755
145°	1130	1133	1134	1135	1136	706
155°	1240	1240	1238	1241	1238	571
165°	1308	1303	1303	1310	1302	369
175°	1338	1332	1333	1340	1330	127
180°	1338	1338	1338	1338	1338	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0
2.5°	877.2	876.7	876.2	875.7	875.3	874.3	873.1	871.8	870.4	869.1	870.4
5°	873.7	873.1	872.5	871.8	871.3	870.1	868.3	866.5	864.7	863.0	864.4
7.5°	865.7	865.1	864.5	863.9	863.2	861.8	859.5	857.1	854.8	852.5	853.4
10°	858.2	857.6	856.8	856.0	855.3	853.6	850.9	848.2	845.5	842.8	843.4
12.5°	848.6	847.7	846.9	846.0	845.2	843.2	840.0	836.8	833.7	830.5	830.9
15°	832.2	830.8	829.5	828.1	826.7	824.2	820.5	816.8	813.0	809.3	809.1
17.5°	812.2	810.2	808.3	806.3	804.4	801.2	796.8	792.3	787.8	783.3	782.6
20°	796.6	794.7	792.7	790.8	788.8	785.4	780.3	775.2	770.2	765.2	764.0
22.5°	779.5	777.3	775.2	772.9	770.8	767.0	761.6	756.1	750.7	745.3	743.5
25°	752.4	749.8	747.0	744.3	741.7	737.3	731.2	725.0	718.9	712.9	710.3
27.5°	724.0	720.7	717.3	713.9	710.5	705.6	699.0	692.6	686.0	679.5	676.4
30°	704.1	700.4	696.7	693.0	689.3	683.9	676.9	669.9	662.9	655.9	652.2
32.5°	683.3	679.1	674.9	670.6	666.5	660.7	653.5	646.3	639.0	631.8	627.5
35°	650.6	645.8	641.0	636.3	631.5	625.4	617.9	610.5	603.0	595.6	590.6
37.5°	615.6	610.7	605.8	600.9	595.9	589.4	581.1	572.8	564.6	556.4	550.7
40°	590.9	586.0	581.1	576.2	571.3	564.6	556.1	547.6	539.2	530.6	524.3
42.5°	567.3	562.2	557.1	551.9	546.7	539.8	530.9	522.0	513.2	504.4	498.0
45°	530.6	525.1	519.6	514.1	508.6	501.4	492.4	483.5	474.6	465.6	458.3
47.5°	492.8	487.1	481.3	475.6	469.9	462.4	453.1	443.9	434.6	425.3	417.8
50°	467.0	461.2	455.4	449.5	443.8	436.1	426.5	417.1	407.5	398.0	390.5
52.5°	440.7	435.1	429.4	423.7	417.9	410.3	400.5	390.7	380.9	371.2	363.6
55°	402.0	396.1	390.1	384.1	378.2	370.3	360.7	351.0	341.3	331.7	323.9
57.5°	363.7	357.5	351.3	345.1	338.9	331.1	321.5	311.9	302.5	292.9	285.1
60°	336.3	330.4	324.4	318.5	312.5	304.8	295.2	285.7	276.2	266.7	258.9
62.5°	311.7	305.5	299.3	293.1	286.9	279.0	269.1	259.4	249.6	239.9	232.7
65°	273.4	267.0	260.5	254.2	247.7	239.8	230.2	220.8	211.2	201.6	195.3
67.5°	233.6	227.4	221.3	215.2	209.1	201.6	192.7	183.8	175.0	166.2	160.7
70°	208.4	202.1	195.9	189.6	183.4	176.0	167.5	159.0	150.5	142.1	137.2
72.5°	181.6	175.9	170.2	164.6	158.9	152.1	144.1	136.1	128.0	120.0	115.9
75°	145.4	139.9	134.4	128.9	123.4	117.1	110.1	103.1	96.1	89.1	85.7
77.5°	108.7	104.0	99.4	94.6	90.0	84.8	79.1	73.5	67.8	62.2	60.2
80°	85.1	80.8	76.5	72.2	67.8	63.5	59.0	54.5	50.0	45.5	45.1
82.5°	64.7	60.8	56.8	52.9	48.9	45.6	43.0	40.5	38.0	35.4	35.0
85°	36.2	33.2	30.2	27.2	24.3	22.6	22.1	21.7	21.2	20.8	20.5
87.5°	12.9	12.5	12.0	11.5	11.1	10.9	11.2	11.5	11.7	11.9	12.1
90°	3.0	5.4	7.9	10.3	12.7	14.9	16.7	18.4	20.2	22.0	23.3
92.5°	12.6	12.7	12.9	13.0	13.2	14.1	15.8	17.7	19.5	21.2	22.6
95°	55.0	47.4	39.9	32.4	24.8	21.1	21.4	21.5	21.8	22.0	23.3
97.5°	116.8	121.6	126.3	131.0	135.7	125.6	100.8	76.0	51.2	26.4	26.5
100°	164.1	168.1	172.1	176.1	180.1	166.8	136.0	105.4	74.7	44.0	40.2
102.5°	216.9	219.8	222.7	225.7	228.6	228.1	224.1	220.1	216.1	212.1	171.3
105°	301.1	302.5	303.8	305.1	306.4	307.7	308.8	309.9	311.0	312.1	314.2
107.5°	379.4	380.0	380.7	381.3	382.0	383.1	384.6	386.2	387.6	389.2	390.1
110°	432.2	432.8	433.5	434.2	434.9	435.8	437.2	438.5	439.9	441.2	441.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	483.5	484.7	485.8	487.0	488.2	489.1	489.7	490.3	491.0	491.6	491.5
115°	562.2	562.9	563.6	564.2	564.9	565.2	564.9	564.7	564.5	564.2	564.7
117.5°	633.3	634.1	635.1	635.9	636.8	637.5	638.0	638.5	639.0	639.5	639.4
120°	681.3	682.2	683.1	684.0	684.8	685.2	685.0	684.8	684.5	684.3	684.8
122.5°	726.1	726.7	727.2	727.7	728.2	728.7	729.0	729.3	729.6	730.0	730.2
125°	790.3	791.3	792.1	793.0	793.9	794.1	793.7	793.2	792.8	792.4	793.0
127.5°	851.2	851.4	851.6	851.9	852.0	852.6	853.7	854.7	855.7	856.8	856.6
130°	890.4	890.6	890.9	891.0	891.3	891.7	892.4	893.0	893.7	894.4	894.6
132.5°	926.4	926.8	927.2	927.6	928.0	928.7	929.4	930.3	931.2	932.0	932.2
135°	980.4	980.2	980.0	979.7	979.6	979.9	980.8	981.6	982.6	983.4	983.9
137.5°	1028.3	1028.4	1028.5	1028.6	1028.6	1029.2	1030.1	1031.1	1032.1	1033.0	1033.5
140°	1059.5	1059.9	1060.3	1060.8	1061.3	1061.7	1062.1	1062.6	1063.0	1063.5	1064.1
142.5°	1087.4	1088.3	1089.1	1089.9	1090.7	1091.2	1091.5	1091.7	1092.0	1092.3	1092.8
145°	1130.5	1131.2	1131.9	1132.5	1133.2	1133.5	1133.5	1133.5	1133.5	1133.5	1133.8
147.5°	1164.7	1166.0	1167.2	1168.5	1169.7	1170.2	1170.0	1169.8	1169.5	1169.3	1169.5
150°	1189.6	1190.4	1191.3	1192.2	1193.1	1193.4	1193.2	1193.0	1192.7	1192.5	1192.5
152.5°	1210.3	1211.1	1211.8	1212.5	1213.1	1213.3	1213.0	1212.5	1212.1	1211.8	1212.1
155°	1239.6	1239.8	1240.0	1240.2	1240.4	1240.2	1239.6	1238.9	1238.2	1237.5	1238.5
157.5°	1264.1	1264.0	1263.9	1263.8	1263.6	1263.2	1262.4	1261.7	1260.9	1260.2	1261.3
160°	1278.6	1277.9	1277.2	1276.6	1275.9	1275.5	1275.2	1275.0	1274.8	1274.5	1275.9
162.5°	1291.3	1290.6	1289.7	1288.8	1288.0	1287.5	1287.2	1287.0	1286.8	1286.6	1287.9
165°	1307.6	1306.5	1305.4	1304.2	1303.1	1302.6	1302.6	1302.6	1302.6	1302.6	1304.3
167.5°	1320.3	1319.2	1318.1	1316.9	1315.8	1315.1	1315.0	1314.8	1314.7	1314.6	1316.6
170°	1327.6	1326.3	1324.9	1323.6	1322.2	1321.7	1321.9	1322.2	1322.3	1322.6	1324.4
172.5°	1332.4	1331.0	1329.7	1328.4	1327.1	1326.5	1326.7	1327.0	1327.1	1327.4	1329.1
175°	1337.6	1336.3	1334.9	1333.6	1332.2	1331.7	1331.9	1332.1	1332.4	1332.6	1334.6
177.5°	1340.0	1338.8	1337.5	1336.3	1335.0	1334.6	1334.9	1335.2	1335.7	1336.0	1337.4
180°	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0
2.5°	871.8	873.1	874.3	874.9	874.9	874.7	874.6	874.5
5°	865.9	867.5	868.9	869.5	869.2	868.9	868.6	868.3
7.5°	854.4	855.3	856.4	856.5	856.1	855.6	855.1	854.6
10°	844.0	844.6	845.2	845.2	844.6	844.0	843.4	842.8
12.5°	831.2	831.6	832.0	831.7	830.9	830.1	829.2	828.4
15°	808.7	808.5	808.1	807.5	806.4	805.4	804.3	803.3
17.5°	781.7	780.8	780.0	778.8	777.2	775.7	774.0	772.5
20°	762.8	761.6	760.3	758.8	756.9	754.9	753.0	751.1
22.5°	741.8	739.9	738.1	736.5	734.9	733.3	731.8	730.1
25°	707.8	705.2	702.7	700.8	699.2	697.8	696.3	694.7
27.5°	673.2	670.1	667.0	664.3	662.2	660.0	658.0	655.8
30°	648.5	644.7	641.0	638.0	635.6	633.2	630.9	628.4
32.5°	623.2	618.9	614.5	611.2	609.0	606.7	604.4	602.2
35°	585.5	580.4	575.4	571.5	568.9	566.1	563.4	560.8
37.5°	545.0	539.4	533.7	529.6	526.8	524.2	521.5	518.8
40°	518.1	511.9	505.6	501.2	498.4	495.8	493.1	490.4
42.5°	491.6	485.3	478.9	474.3	471.5	468.7	465.9	463.1
45°	451.1	443.8	436.4	431.4	428.8	426.1	423.4	420.8
47.5°	410.2	402.6	395.0	389.8	386.8	383.9	381.0	378.0
50°	383.1	375.7	368.2	363.1	360.2	357.4	354.6	351.7
52.5°	356.0	348.4	341.0	335.7	332.7	329.8	326.8	323.9
55°	316.2	308.4	300.7	295.4	292.6	289.7	286.9	284.0
57.5°	277.2	269.3	261.5	256.5	254.3	252.2	250.0	247.9
60°	251.2	243.4	235.7	230.7	228.3	225.8	223.5	221.1
62.5°	225.6	218.4	211.3	206.7	204.8	202.9	201.0	199.1
65°	188.9	182.4	176.1	171.9	170.2	168.4	166.6	164.8
67.5°	155.2	149.6	144.1	140.4	138.4	136.5	134.5	132.5
70°	132.2	127.3	122.3	119.2	117.7	116.2	114.7	113.2
72.5°	111.7	107.5	103.2	100.5	99.1	97.7	96.3	95.0
75°	82.2	78.9	75.4	73.3	72.3	71.5	70.6	69.7
77.5°	58.2	56.2	54.2	53.0	52.8	52.5	52.3	52.0
80°	44.7	44.3	43.7	43.5	43.3	43.1	43.0	42.9
82.5°	34.7	34.4	34.1	33.8	33.7	33.5	33.4	33.2
85°	20.1	19.9	19.5	19.5	19.5	19.5	19.5	19.5
87.5°	12.2	12.3	12.5	12.7	12.9	13.1	13.3	13.5
90°	24.7	26.0	27.4	28.2	28.7	29.1	29.5	30.0
92.5°	23.8	25.2	26.5	27.3	27.4	27.5	27.6	27.6
95°	24.7	26.0	27.4	28.2	28.3	28.6	28.8	29.0
97.5°	26.7	26.8	26.9	27.1	27.4	27.6	27.8	28.0
100°	36.4	32.7	28.9	27.1	27.4	27.6	27.8	28.0
102.5°	130.5	89.8	49.0	28.7	28.7	28.8	28.8	28.8
105°	316.2	318.1	320.1	317.1	309.1	301.1	293.2	285.2
107.5°	391.2	392.1	393.0	394.0	394.9	395.7	396.5	397.4
110°	442.1	442.6	443.0	443.5	444.2	444.9	445.6	446.2





TEST NUMBER: P332922-935

CATALOG NUMBER: S124RDIP-S575D1205U935-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	491.5	491.4	491.3	491.6	492.5	493.4	494.2	495.0
115°	565.2	565.6	566.0	566.3	566.3	566.3	566.3	566.3
117.5°	639.3	639.2	639.1	639.0	638.9	638.9	638.8	638.7
120°	685.2	685.6	686.0	686.0	685.6	685.2	684.8	684.3
122.5°	730.5	730.7	731.0	730.9	730.5	730.0	729.5	729.1
125°	793.7	794.4	795.0	795.5	795.7	795.9	796.2	796.3
127.5°	856.5	856.4	856.3	856.1	855.9	855.7	855.6	855.4
130°	894.8	895.1	895.3	895.4	895.4	895.4	895.4	895.4
132.5°	932.5	932.7	932.9	932.9	932.7	932.5	932.4	932.2
135°	984.3	984.7	985.2	985.7	986.1	986.5	987.0	987.4
137.5°	1034.1	1034.5	1035.0	1035.2	1035.1	1034.9	1034.7	1034.7
140°	1064.8	1065.5	1066.2	1066.6	1066.8	1067.0	1067.2	1067.5
142.5°	1093.3	1093.7	1094.2	1094.5	1094.6	1094.6	1094.7	1094.7
145°	1133.9	1134.2	1134.4	1134.7	1135.1	1135.6	1136.1	1136.5
147.5°	1169.7	1169.8	1170.0	1170.2	1170.4	1170.7	1170.9	1171.1
150°	1192.5	1192.5	1192.5	1192.7	1192.8	1193.1	1193.3	1193.5
152.5°	1212.5	1212.8	1213.1	1213.2	1213.1	1213.0	1212.9	1212.7
155°	1239.3	1240.2	1241.1	1241.2	1240.5	1239.8	1239.2	1238.5
157.5°	1262.5	1263.6	1264.8	1264.8	1263.6	1262.5	1261.3	1260.2
160°	1277.2	1278.6	1279.9	1279.9	1278.6	1277.2	1275.9	1274.5
162.5°	1289.3	1290.6	1291.9	1291.8	1290.3	1288.8	1287.3	1285.7
165°	1306.1	1307.9	1309.7	1309.6	1307.6	1305.5	1303.6	1301.6
167.5°	1318.5	1320.4	1322.4	1322.2	1320.1	1317.8	1315.6	1313.4
170°	1326.1	1327.9	1329.7	1329.5	1327.2	1325.0	1322.8	1320.6
172.5°	1330.9	1332.7	1334.5	1334.2	1331.8	1329.4	1327.0	1324.6
175°	1336.6	1338.6	1340.6	1340.2	1337.6	1334.9	1332.2	1329.6
177.5°	1338.9	1340.2	1341.7	1341.4	1339.2	1337.0	1334.9	1332.8
180°	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6

(END OF REPORT)