

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: P332767-935

Luminaire Tested: **S124DIW-S575D1340U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332767-935  
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: S124DIW-S575D1340U935-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1340 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6768.7 lumens  
Efficiency: N/A  
Efficacy: 125.8 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: Semi-Indirect

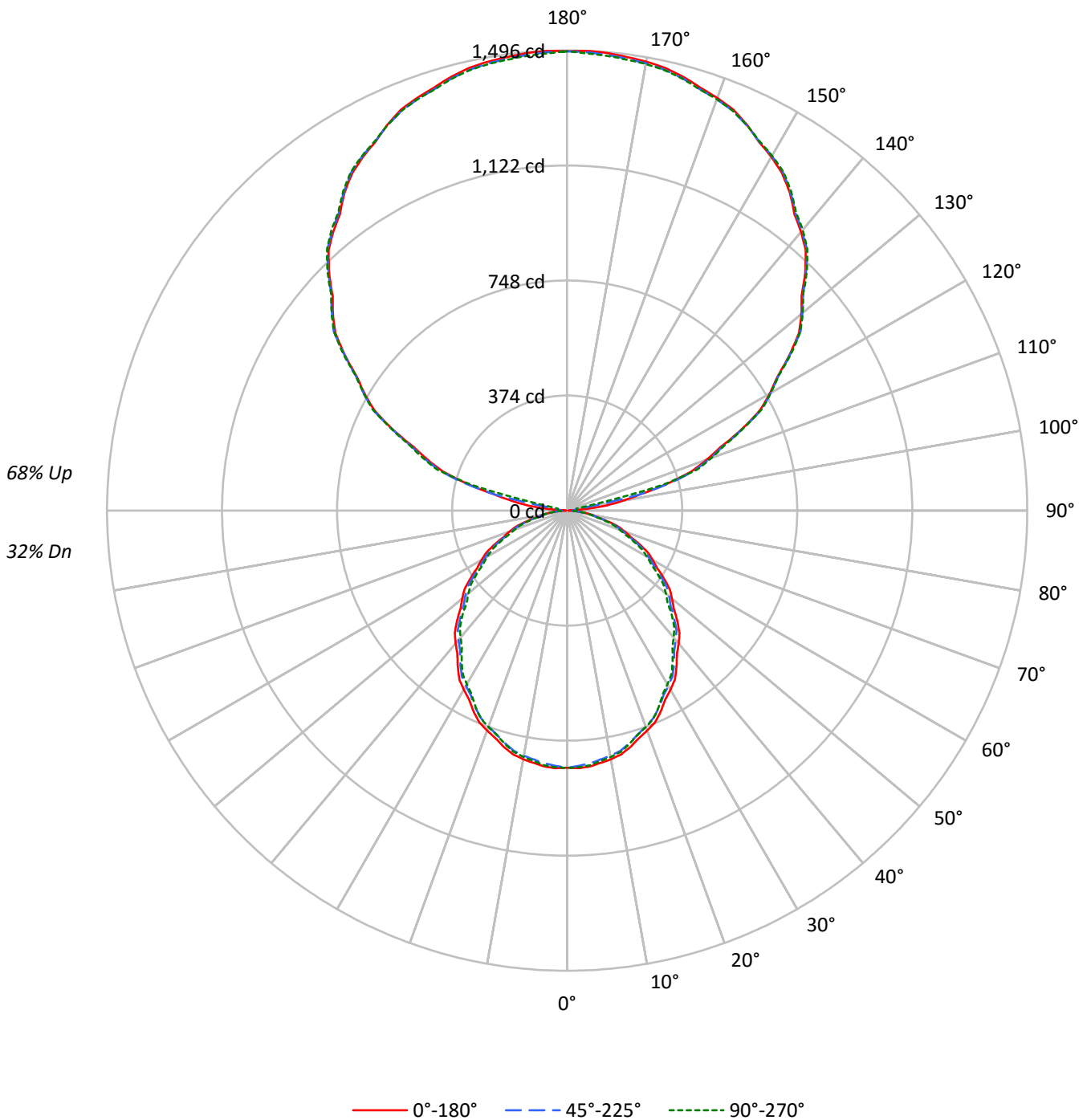
Input Watts (W): 53.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	103	103	103	103	92	92	92	92	73	73	73	56	56	56	39	39	39	32
1	94	89	86	82	84	81	77	75	64	62	60	49	47	46	35	34	33	27
2	85	78	72	67	76	70	65	61	56	53	49	43	40	38	31	29	28	22
3	78	69	61	56	70	62	56	51	49	45	42	38	35	32	27	25	24	19
4	71	61	53	47	64	55	48	43	44	39	35	34	30	28	24	22	20	16
5	65	54	46	40	58	49	42	37	39	34	30	30	27	24	22	20	18	14
6	60	48	40	35	54	44	37	32	35	30	26	27	24	21	20	17	16	12
7	55	43	36	30	50	39	33	28	32	27	23	25	21	18	18	16	14	11
8	51	39	32	27	46	36	29	25	29	24	20	22	19	16	16	14	12	10
9	48	36	28	24	43	33	26	22	26	22	18	21	17	15	15	13	11	9
10	44	33	26	21	40	30	24	19	24	20	16	19	16	13	14	12	10	8

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

	0°	45°	90°
0°	6750	6750	6750
5°	6771	6689	6738
10°	6728	6634	6668
15°	6647	6541	6557
20°	6539	6424	6430
25°	6415	6290	6272
30°	6264	6134	6077
35°	6107	5969	5889
40°	5945	5782	5676
45°	5775	5599	5492
50°	5588	5436	5267
55°	5384	5225	5054
60°	5181	4986	4836
65°	4951	4762	4569
70°	4697	4459	4286
75°	4304	4095	3989
80°	3831	3673	3584
85°	3353	3233	3168



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.7	1.2
10°-20°	221.9	3.3
20°-30°	326.6	4.8
30°-40°	379.6	5.6
40°-50°	379.6	5.6
50°-60°	332.1	4.9
60°-70°	246.6	3.6
70°-80°	140.1	2.1
80°-90°	44.8	0.7
90°-100°	51.1	0.8
100°-110°	325.6	4.8
110°-120°	622.9	9.2
120°-130°	790.7	11.7
130°-140°	846.0	12.5
140°-150°	791.1	11.7
150°-160°	638.0	9.4
160°-170°	411.5	6.1
170°-180°	141.8	2.1
0°-30°	627.2	9.3
0°-40°	1006.8	14.9
0°-60°	1718.5	25.4
0°-90°	2150.0	31.8
90°-120°	999.5	14.8
90°-150°	3427.4	50.6
90°-180°	4619.0	68.2
0°-180°	6768.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	836	836	836	836	836	
5°	836	833	825	832	832	79
15°	795	792	783	786	784	224
25°	720	715	706	707	704	331
35°	620	615	606	601	598	387
45°	506	501	490	483	481	390
55°	382	380	371	363	359	343
65°	259	256	249	243	239	257
75°	138	135	131	129	128	147
85°	36	36	35	35	34	40
90°	3	15	24	31	34	5
95°	61	26	24	31	32	79
105°	336	343	348	356	318	352
115°	628	631	630	632	632	617
125°	882	886	884	888	889	787
135°	1094	1094	1098	1100	1102	843
145°	1262	1265	1265	1266	1269	788
155°	1384	1385	1382	1385	1383	638
165°	1460	1454	1454	1462	1453	412
175°	1493	1487	1488	1496	1484	142
180°	1493	1493	1493	1493	1493	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	836.1	836.1	836.1	836.1	836.1	836.1	836.1	836.1	836.1	836.1	836.1
2.5°	838.3	837.9	837.6	837.2	836.9	836.0	834.7	833.4	832.1	830.8	832.0
5°	835.5	834.9	834.3	833.7	833.1	832.0	830.3	828.7	827.1	825.4	827.1
7.5°	827.7	827.1	826.6	826.0	825.4	824.1	822.3	820.5	818.6	816.8	818.2
10°	820.7	820.2	819.6	819.0	818.4	817.1	815.2	813.2	811.3	809.3	810.5
12.5°	811.7	811.1	810.5	809.9	809.3	808.0	805.9	803.8	801.8	799.7	801.0
15°	795.3	794.7	794.1	793.5	792.9	791.5	789.3	787.0	784.8	782.6	783.4
17.5°	775.6	774.8	774.1	773.4	772.6	771.2	769.0	767.0	764.8	762.8	763.3
20°	761.1	760.3	759.7	758.9	758.1	756.6	754.4	752.2	749.9	747.7	748.1
22.5°	745.5	744.6	743.6	742.6	741.7	740.0	737.8	735.6	733.3	731.1	731.9
25°	720.2	719.2	718.2	717.1	716.1	714.5	712.4	710.3	708.3	706.2	706.4
27.5°	691.3	690.3	689.1	688.1	687.0	685.5	683.5	681.7	679.7	677.8	677.4
30°	672.0	670.8	669.6	668.4	667.3	665.6	663.7	661.8	659.9	658.0	657.4
32.5°	651.6	650.6	649.5	648.4	647.4	645.8	643.8	641.7	639.6	637.6	636.9
35°	619.7	618.7	617.7	616.6	615.6	614.0	611.9	609.8	607.8	605.7	604.6
37.5°	586.1	585.1	584.2	583.2	582.3	580.7	578.5	576.3	574.0	571.8	570.7
40°	564.1	562.9	561.7	560.6	559.4	557.7	555.4	553.2	551.0	548.7	547.3
42.5°	540.5	539.8	539.2	538.4	537.7	536.1	533.6	531.2	528.7	526.2	524.5
45°	505.8	504.8	503.8	502.7	501.7	500.0	497.6	495.2	492.8	490.4	488.8
47.5°	469.5	468.8	468.1	467.4	466.7	465.2	463.0	460.8	458.6	456.4	454.5
50°	444.9	444.3	443.7	443.1	442.5	441.2	439.1	437.0	434.9	432.8	430.8
52.5°	420.8	420.1	419.3	418.6	417.9	416.5	414.2	412.1	409.8	407.6	405.8
55°	382.5	382.1	381.7	381.3	380.8	379.5	377.5	375.3	373.2	371.2	369.4
57.5°	346.1	345.6	345.1	344.6	344.1	342.9	340.8	338.7	336.7	334.6	332.9
60°	320.9	320.2	319.4	318.7	318.0	316.6	314.7	312.7	310.8	308.8	307.5
62.5°	296.3	295.7	295.0	294.4	293.8	292.4	290.4	288.3	286.3	284.2	283.0
65°	259.2	258.6	257.8	257.1	256.3	255.2	253.7	252.2	250.7	249.3	247.7
67.5°	222.1	221.4	220.7	220.0	219.3	218.3	216.8	215.4	214.0	212.5	211.1
70°	199.0	197.9	196.9	195.9	194.8	193.7	192.5	191.3	190.1	188.9	187.8
72.5°	174.4	173.3	172.3	171.2	170.1	169.2	168.2	167.3	166.3	165.3	164.4
75°	138.0	137.2	136.6	135.8	135.0	134.3	133.5	132.8	132.1	131.3	130.7
77.5°	103.3	103.0	102.6	102.4	102.0	101.5	100.8	100.2	99.5	98.9	98.7
80°	82.4	82.0	81.5	81.1	80.6	80.2	80.0	79.6	79.4	79.0	78.8
82.5°	62.1	61.8	61.6	61.4	61.2	61.0	61.0	61.0	60.9	60.9	60.6
85°	36.2	36.2	36.2	36.2	36.2	36.0	35.7	35.5	35.1	34.9	34.9
87.5°	14.6	15.1	15.5	15.9	16.3	16.7	17.0	17.2	17.5	17.7	18.1
90°	3.4	6.1	8.8	11.5	14.3	16.6	18.6	20.6	22.6	24.5	26.1
92.5°	14.0	14.2	14.4	14.6	14.6	15.8	17.7	19.7	21.7	23.7	25.1
95°	61.4	53.0	44.5	36.1	27.6	23.6	23.8	24.1	24.3	24.5	26.1
97.5°	130.4	135.7	140.9	146.2	151.4	140.3	112.5	84.9	57.2	29.4	29.6
100°	183.1	187.6	192.1	196.6	201.0	186.1	151.9	117.6	83.3	49.2	44.9
102.5°	242.1	245.4	248.7	251.9	255.2	254.6	250.1	245.7	241.3	236.8	191.2
105°	336.1	337.6	339.1	340.6	342.1	343.5	344.7	345.9	347.2	348.4	350.7
107.5°	423.4	424.2	425.0	425.7	426.5	427.7	429.4	431.0	432.7	434.5	435.5
110°	482.4	483.2	484.0	484.7	485.4	486.6	488.0	489.5	491.0	492.5	493.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	539.6	541.0	542.3	543.6	545.0	546.0	546.7	547.4	548.1	548.8	548.7
115°	627.6	628.4	629.1	629.8	630.6	630.9	630.6	630.3	630.1	629.8	630.3
117.5°	706.9	707.9	708.9	709.9	710.8	711.6	712.2	712.7	713.3	713.9	713.8
120°	760.5	761.5	762.5	763.5	764.5	764.8	764.7	764.4	764.1	763.9	764.4
122.5°	810.5	811.1	811.8	812.4	813.0	813.4	813.7	814.1	814.4	814.8	815.1
125°	882.3	883.2	884.2	885.2	886.2	886.5	886.0	885.5	884.9	884.5	885.2
127.5°	950.1	950.4	950.6	950.9	951.1	951.8	953.0	954.1	955.3	956.4	956.2
130°	993.9	994.2	994.5	994.6	994.9	995.4	996.2	996.9	997.6	998.4	998.7
132.5°	1034.1	1034.6	1035.0	1035.4	1035.9	1036.6	1037.6	1038.5	1039.4	1040.3	1040.6
135°	1094.4	1094.2	1093.9	1093.7	1093.5	1093.8	1094.8	1095.8	1096.8	1097.8	1098.3
137.5°	1147.8	1147.9	1148.0	1148.1	1148.2	1148.8	1149.9	1151.0	1152.1	1153.1	1153.7
140°	1182.7	1183.2	1183.6	1184.1	1184.6	1185.2	1185.6	1186.1	1186.6	1187.1	1187.8
142.5°	1213.9	1214.8	1215.7	1216.6	1217.5	1218.1	1218.4	1218.7	1219.0	1219.3	1219.9
145°	1262.0	1262.7	1263.4	1264.2	1264.9	1265.3	1265.3	1265.3	1265.3	1265.3	1265.6
147.5°	1300.1	1301.5	1303.0	1304.3	1305.7	1306.3	1306.1	1305.8	1305.5	1305.3	1305.4
150°	1327.8	1328.9	1329.8	1330.8	1331.8	1332.1	1332.0	1331.7	1331.5	1331.2	1331.2
152.5°	1351.1	1351.9	1352.6	1353.4	1354.3	1354.4	1354.0	1353.5	1353.1	1352.6	1353.1
155°	1383.7	1383.9	1384.1	1384.4	1384.7	1384.4	1383.7	1382.9	1382.2	1381.5	1382.4
157.5°	1411.2	1411.0	1410.8	1410.7	1410.6	1410.1	1409.2	1408.3	1407.6	1406.7	1408.0
160°	1427.2	1426.5	1425.7	1425.0	1424.3	1423.7	1423.5	1423.2	1423.0	1422.8	1424.3
162.5°	1441.5	1440.5	1439.7	1438.7	1437.8	1437.2	1436.9	1436.7	1436.4	1436.1	1437.6
165°	1459.7	1458.4	1457.2	1455.9	1454.7	1454.1	1454.1	1454.1	1454.1	1454.1	1456.0
167.5°	1473.9	1472.7	1471.4	1470.1	1468.8	1468.0	1467.9	1467.7	1467.6	1467.4	1469.6
170°	1482.0	1480.5	1478.9	1477.5	1476.0	1475.4	1475.6	1475.8	1476.1	1476.4	1478.3
172.5°	1487.3	1485.8	1484.4	1482.8	1481.4	1480.7	1481.0	1481.3	1481.4	1481.7	1483.7
175°	1493.1	1491.6	1490.1	1488.7	1487.1	1486.5	1486.8	1487.0	1487.3	1487.5	1489.8
177.5°	1495.8	1494.4	1493.0	1491.6	1490.2	1489.7	1490.1	1490.6	1490.9	1491.3	1492.9
180°	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	836.1	836.1	836.1	836.1	836.1	836.1	836.1	836.1
2.5°	833.2	834.4	835.6	836.1	835.9	835.9	835.8	835.6
5°	828.7	830.3	832.0	832.7	832.3	832.1	831.7	831.5
7.5°	819.5	820.8	822.1	822.7	822.5	822.3	822.2	821.9
10°	811.8	813.0	814.2	814.6	814.2	814.0	813.6	813.4
12.5°	802.4	803.7	804.9	805.4	804.9	804.5	804.2	803.7
15°	784.4	785.2	786.1	786.4	785.9	785.5	785.0	784.5
17.5°	763.9	764.4	765.0	765.1	764.8	764.5	764.2	764.0
20°	748.6	749.1	749.5	749.6	749.2	749.0	748.7	748.4
22.5°	732.7	733.5	734.3	734.4	733.9	733.4	732.9	732.3
25°	706.5	706.6	706.8	706.5	705.9	705.3	704.7	704.1
27.5°	677.1	676.7	676.3	675.8	675.0	674.3	673.6	672.8
30°	656.8	656.2	655.6	654.9	654.1	653.4	652.6	651.9
32.5°	636.1	635.4	634.7	634.0	633.3	632.5	631.7	631.0
35°	603.6	602.5	601.5	600.6	599.9	599.1	598.4	597.6
37.5°	569.6	568.3	567.2	566.2	565.2	564.2	563.3	562.2
40°	545.8	544.2	542.8	541.7	540.9	540.2	539.4	538.6
42.5°	522.8	521.0	519.3	518.1	517.7	517.2	516.7	516.2
45°	487.2	485.5	483.9	482.8	482.4	482.0	481.5	481.0
47.5°	452.7	450.8	449.0	447.5	446.4	445.2	444.1	443.0
50°	428.6	426.5	424.5	423.0	422.1	421.2	420.3	419.4
52.5°	403.9	402.1	400.3	398.7	397.6	396.5	395.4	394.3
55°	367.6	365.8	364.0	362.7	361.8	360.9	360.0	359.1
57.5°	331.2	329.5	327.8	326.5	325.6	324.8	323.9	323.0
60°	306.2	304.9	303.5	302.5	301.7	301.0	300.2	299.5
62.5°	281.8	280.5	279.3	278.4	277.6	276.9	276.1	275.3
65°	246.2	244.8	243.3	242.2	241.4	240.6	240.0	239.2
67.5°	209.7	208.3	206.8	206.0	205.8	205.6	205.3	205.2
70°	186.6	185.4	184.2	183.4	182.9	182.4	182.0	181.6
72.5°	163.4	162.5	161.5	160.8	160.4	160.0	159.5	159.0
75°	130.1	129.5	129.0	128.5	128.4	128.3	128.1	127.9
77.5°	98.5	98.3	98.2	97.9	97.5	97.1	96.7	96.3
80°	78.4	78.2	77.8	77.7	77.5	77.3	77.2	77.1
82.5°	60.4	60.3	60.1	59.9	59.8	59.7	59.5	59.3
85°	34.9	34.9	34.9	34.8	34.6	34.4	34.4	34.2
87.5°	18.3	18.7	18.9	19.2	19.3	19.4	19.5	19.5
90°	27.6	29.0	30.6	31.5	32.0	32.5	33.0	33.5
92.5°	26.7	28.2	29.6	30.4	30.6	30.7	30.7	30.8
95°	27.6	29.0	30.6	31.4	31.6	31.9	32.1	32.4
97.5°	29.8	30.0	30.0	30.3	30.6	30.7	31.0	31.3
100°	40.7	36.5	32.3	30.3	30.6	30.7	31.0	31.3
102.5°	145.8	100.2	54.7	31.9	32.0	32.0	32.1	32.2
105°	352.9	355.2	357.4	354.0	345.1	336.1	327.2	318.3
107.5°	436.6	437.7	438.8	439.8	440.7	441.7	442.6	443.6
110°	493.5	494.0	494.5	495.1	495.8	496.6	497.3	498.1





TEST NUMBER: P332767-935

CATALOG NUMBER: S124DIW-S575D1340U935-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	548.5	548.5	548.4	548.8	549.7	550.7	551.6	552.6
115°	630.9	631.4	631.8	632.1	632.1	632.1	632.1	632.1
117.5°	713.6	713.5	713.4	713.3	713.3	713.2	713.1	712.9
120°	764.8	765.3	765.9	765.9	765.3	764.8	764.4	763.9
122.5°	815.4	815.7	816.0	815.9	815.4	814.9	814.4	813.9
125°	886.0	886.7	887.4	887.9	888.2	888.5	888.7	889.0
127.5°	956.1	956.0	955.8	955.6	955.5	955.2	955.0	954.8
130°	998.8	999.1	999.4	999.5	999.5	999.5	999.5	999.5
132.5°	1040.9	1041.1	1041.4	1041.4	1041.2	1041.0	1040.8	1040.6
135°	1098.8	1099.2	1099.8	1100.3	1100.8	1101.2	1101.7	1102.3
137.5°	1154.3	1154.8	1155.4	1155.5	1155.4	1155.3	1155.1	1154.9
140°	1188.6	1189.4	1190.1	1190.6	1190.8	1191.1	1191.4	1191.6
142.5°	1220.4	1220.9	1221.5	1221.8	1221.8	1221.8	1221.9	1221.9
145°	1265.8	1266.0	1266.3	1266.7	1267.1	1267.7	1268.2	1268.7
147.5°	1305.7	1305.9	1306.1	1306.3	1306.6	1306.8	1307.0	1307.3
150°	1331.2	1331.2	1331.2	1331.3	1331.5	1331.8	1332.1	1332.3
152.5°	1353.4	1353.8	1354.2	1354.4	1354.2	1354.0	1353.9	1353.8
155°	1383.5	1384.4	1385.4	1385.5	1384.8	1384.1	1383.3	1382.6
157.5°	1409.3	1410.6	1411.9	1411.9	1410.6	1409.3	1408.0	1406.7
160°	1425.7	1427.2	1428.7	1428.7	1427.2	1425.7	1424.3	1422.8
162.5°	1439.2	1440.6	1442.1	1442.0	1440.4	1438.6	1436.9	1435.3
165°	1458.0	1460.0	1462.0	1461.8	1459.7	1457.4	1455.2	1452.9
167.5°	1471.8	1473.9	1476.2	1476.0	1473.5	1471.0	1468.6	1466.1
170°	1480.3	1482.3	1484.3	1484.0	1481.6	1479.1	1476.6	1474.1
172.5°	1485.7	1487.7	1489.7	1489.4	1486.6	1483.9	1481.3	1478.6
175°	1492.0	1494.3	1496.5	1496.1	1493.1	1490.1	1487.1	1484.2
177.5°	1494.5	1496.1	1497.7	1497.3	1494.9	1492.5	1490.1	1487.7
180°	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1

(END OF REPORT)