

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: P332766-935

Luminaire Tested: **S124DIW-S575D1340U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332766-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
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-D1  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

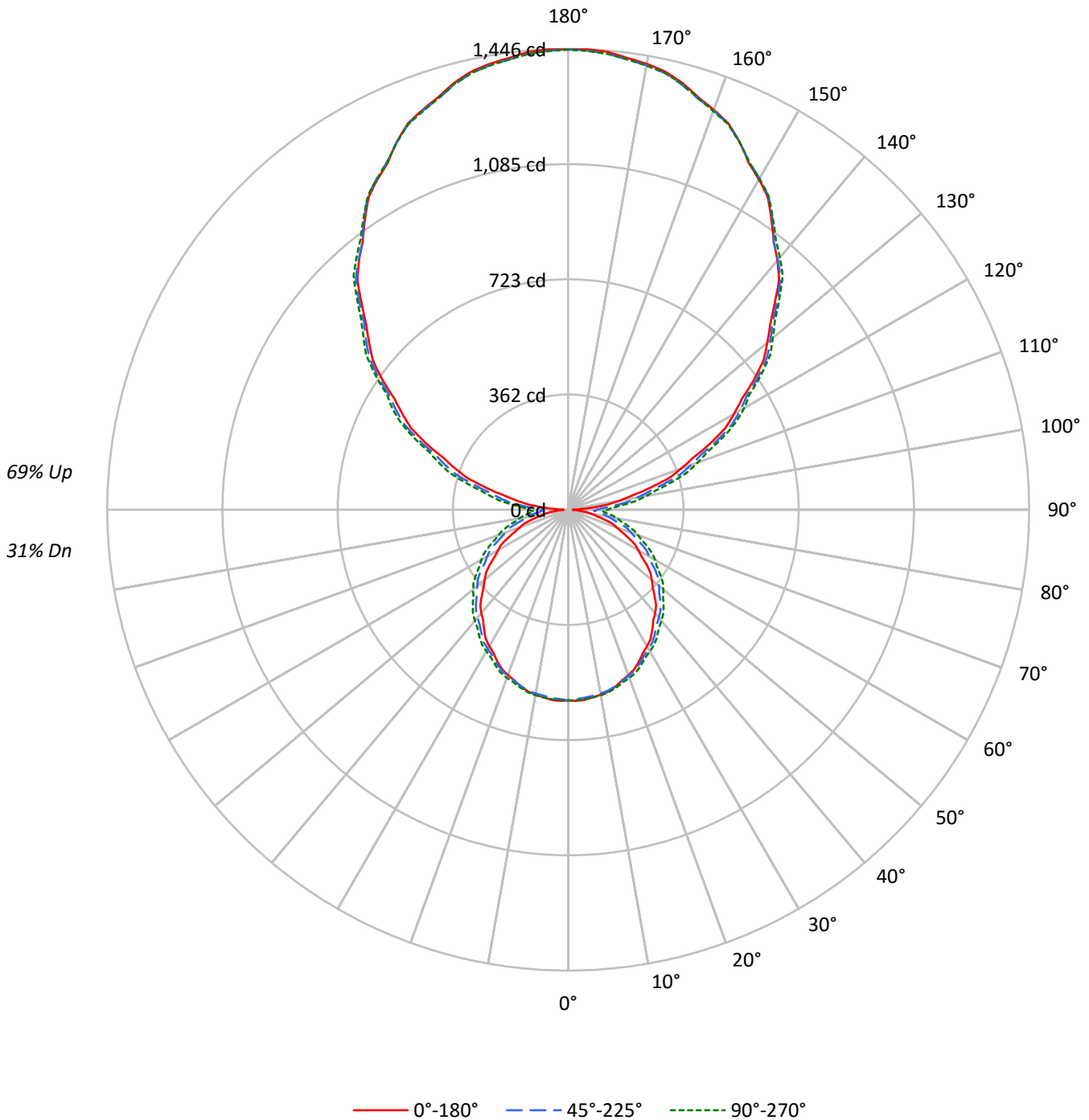
Lumens per Lamp: N/A  
Luminaire Lumens: 6049.5 lumens  
Efficiency: N/A  
Efficacy: 112.4 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect  
  
Input Watts (W): 53.8  
Input Voltage (V): 120  
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	55	55	55	39	39	39	31
1	93	88	84	81	83	80	76	73	63	60	58	47	46	45	33	32	31	25
2	84	77	71	65	75	69	64	59	55	51	48	41	39	37	29	27	26	20
3	77	67	60	54	69	61	54	49	48	43	40	36	33	31	25	23	22	17
4	70	59	51	45	62	53	47	41	42	37	34	32	29	26	23	20	19	14
5	64	53	45	39	57	47	40	35	38	33	29	29	25	22	20	18	16	12
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	18	16	14	11
7	54	42	34	29	49	38	31	26	31	25	22	23	20	17	17	14	12	9
8	50	38	31	25	45	35	28	23	28	23	19	21	18	15	15	13	11	8
9	47	35	27	22	42	31	25	21	25	20	17	19	16	13	14	12	10	8
10	43	32	25	20	39	29	22	18	23	18	15	18	14	12	13	11	9	7

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

	0°	45°	90°
0°	4830	4830	4830
5°	4845	4721	4734
10°	4816	4644	4639
15°	4772	4554	4529
20°	4707	4455	4422
25°	4634	4345	4302
30°	4555	4235	4181
35°	4464	4122	4074
40°	4393	4015	3964
45°	4286	3916	3867
50°	4195	3803	3767
55°	4102	3695	3648
60°	3957	3557	3541
65°	3798	3411	3409
70°	3603	3243	3253
75°	3334	3060	3114
80°	3035	2882	2977
85°	2656	2725	2896



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.7	0.9
10°-20°	162.3	2.7
20°-30°	245.5	4.1
30°-40°	297.0	4.9
40°-50°	314.0	5.2
50°-60°	295.5	4.9
60°-70°	245.2	4.1
70°-80°	172.2	2.8
80°-90°	101.7	1.7
90°-100°	153.0	2.5
100°-110°	324.9	5.4
110°-120°	507.5	8.4
120°-130°	647.5	10.7
130°-140°	716.0	11.8
140°-150°	698.2	11.5
150°-160°	586.0	9.7
160°-170°	389.9	6.4
170°-180°	136.5	2.3
0°-30°	464.5	7.7
0°-40°	761.4	12.6
0°-60°	1370.9	22.7
0°-90°	1889.9	31.2
90°-120°	985.4	16.3
90°-150°	3047.2	50.4
90°-180°	4160.0	68.8
0°-180°	6049.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	598	598	598	598	598	
5°	599	597	592	597	597	57
15°	574	575	573	578	578	162
25°	525	529	531	538	539	242
35°	460	468	474	483	486	288
45°	383	396	409	420	423	296
55°	300	314	334	347	352	267
65°	208	229	252	268	274	206
75°	115	140	168	186	193	123
85°	36	64	94	113	121	38
90°	14	53	91	116	125	11
95°	76	108	143	164	171	81
105°	266	282	310	330	339	283
115°	491	498	516	529	533	484
125°	712	712	727	737	739	634
135°	916	922	927	935	936	708
145°	1112	1115	1117	1119	1119	696
155°	1273	1273	1272	1276	1272	586
165°	1386	1382	1380	1386	1382	390
175°	1442	1436	1435	1442	1435	137
180°	1444	1444	1444	1444	1444	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
2.5°	600.5	600.1	599.8	599.3	599.0	598.4	597.4	596.5	595.5	594.5	595.4
5°	599.0	598.6	598.1	597.6	597.2	596.4	595.4	594.3	593.3	592.3	593.5
7.5°	593.9	593.6	593.3	593.1	592.8	592.3	591.4	590.6	589.6	588.8	590.1
10°	589.6	589.4	589.3	589.2	589.0	588.6	587.8	587.0	586.3	585.6	586.9
12.5°	583.7	583.7	583.7	583.6	583.6	583.3	582.8	582.3	581.8	581.3	582.5
15°	574.2	574.4	574.5	574.6	574.8	574.6	574.2	573.8	573.3	572.8	574.2
17.5°	561.2	561.6	562.1	562.5	563.0	563.2	563.1	563.0	562.9	562.8	564.1
20°	552.1	552.5	552.9	553.5	553.9	554.1	554.3	554.5	554.6	554.7	556.2
22.5°	541.9	542.4	543.0	543.5	544.2	544.6	544.8	545.1	545.4	545.6	547.2
25°	525.3	526.2	527.1	528.0	528.8	529.5	529.9	530.4	530.9	531.3	533.0
27.5°	506.8	508.1	509.4	510.7	512.0	513.0	513.7	514.4	515.1	515.7	517.3
30°	494.5	495.7	496.8	498.0	499.2	500.3	501.4	502.4	503.4	504.5	506.2
32.5°	481.0	482.5	483.9	485.3	486.8	488.1	489.2	490.4	491.5	492.8	494.6
35°	459.6	461.4	463.2	464.9	466.7	468.4	469.8	471.4	472.9	474.3	476.5
37.5°	438.1	440.1	442.1	444.2	446.3	448.2	450.0	451.9	453.7	455.6	457.7
40°	424.1	426.0	428.0	429.9	431.9	433.9	435.9	438.0	440.1	442.2	444.4
42.5°	408.0	410.2	412.3	414.6	416.7	419.0	421.5	423.9	426.4	428.8	431.3
45°	383.2	386.1	388.9	391.8	394.5	397.4	400.2	403.0	405.9	408.7	411.2
47.5°	359.6	362.4	365.3	368.2	371.2	374.3	377.5	380.8	384.1	387.4	390.0
50°	342.3	345.6	348.9	352.2	355.5	358.8	362.1	365.3	368.6	371.9	374.8
52.5°	325.2	328.5	331.7	335.0	338.3	341.8	345.6	349.3	353.1	356.8	359.8
55°	300.1	303.2	306.4	309.5	312.6	316.4	320.9	325.4	329.8	334.3	337.3
57.5°	272.2	276.0	279.9	283.8	287.7	291.8	296.2	300.7	305.1	309.5	313.1
60°	253.9	257.8	261.7	265.5	269.4	273.8	278.7	283.6	288.5	293.4	296.9
62.5°	236.3	240.5	244.7	248.9	253.1	257.7	262.6	267.5	272.5	277.4	280.8
65°	207.7	212.5	217.2	222.0	226.8	231.7	236.7	241.8	246.8	251.9	255.6
67.5°	180.2	185.3	190.4	195.4	200.4	205.7	211.1	216.5	222.0	227.4	231.2
70°	161.4	166.5	171.6	176.7	181.8	187.1	192.7	198.4	204.1	209.7	213.7
72.5°	143.3	148.4	153.6	158.8	163.9	169.5	175.6	181.6	187.6	193.6	197.5
75°	115.2	120.7	126.2	131.7	137.2	143.2	149.4	155.7	162.0	168.2	172.4
77.5°	89.1	95.0	100.8	106.6	112.4	118.6	125.2	131.7	138.3	144.8	149.0
80°	73.0	79.0	85.0	90.9	96.9	103.1	109.7	116.2	122.8	129.3	133.8
82.5°	56.9	63.1	69.3	75.5	81.7	88.1	94.6	101.2	107.7	114.3	118.9
85°	35.5	41.8	48.0	54.2	60.5	67.0	73.7	80.4	87.1	93.8	98.2
87.5°	20.5	27.1	33.8	40.4	47.0	53.7	60.7	67.6	74.5	81.5	86.0
90°	14.0	22.7	31.4	40.1	48.8	57.3	65.7	74.1	82.5	90.9	96.7
92.5°	34.1	42.5	51.1	59.6	68.0	76.2	83.9	91.8	99.5	107.4	112.4
95°	75.7	82.8	90.0	97.1	104.3	111.8	119.6	127.4	135.3	143.2	147.9
97.5°	124.9	131.0	137.0	143.0	149.0	156.0	164.1	172.2	180.3	188.4	193.1
100°	163.7	168.6	173.4	178.3	183.1	189.6	197.6	205.7	213.7	221.8	226.3
102.5°	204.7	208.6	212.4	216.2	220.0	225.8	233.4	241.2	248.9	256.6	261.2
105°	266.2	269.4	272.7	275.9	279.1	284.0	290.5	297.0	303.5	310.0	314.4
107.5°	331.9	334.7	337.4	340.2	342.9	347.0	352.3	357.7	363.0	368.4	372.7
110°	376.1	378.7	381.3	383.8	386.4	390.2	395.1	400.1	405.1	410.0	412.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	422.0	424.0	425.9	427.8	429.8	433.0	437.6	442.0	446.6	451.1	454.3
115°	490.9	492.2	493.5	494.9	496.2	499.0	503.3	507.6	511.9	516.1	519.1
117.5°	556.4	557.4	558.4	559.4	560.4	562.9	567.1	571.1	575.2	579.3	581.5
120°	599.6	601.1	602.5	603.9	605.4	607.9	611.5	615.0	618.6	622.2	623.9
122.5°	645.1	645.7	646.2	646.6	647.1	649.2	653.0	656.7	660.5	664.2	666.3
125°	711.7	711.6	711.4	711.3	711.1	712.8	716.3	719.7	723.2	726.7	729.0
127.5°	772.6	773.2	773.8	774.4	775.0	776.4	778.9	781.4	783.9	786.4	788.5
130°	814.9	815.5	816.1	816.7	817.3	818.8	821.1	823.5	826.0	828.3	830.5
132.5°	858.7	859.1	859.5	859.9	860.2	861.3	863.1	864.7	866.4	868.1	870.2
135°	915.8	917.3	918.9	920.3	921.8	923.1	924.1	925.1	926.2	927.2	929.1
137.5°	978.8	979.4	979.9	980.5	981.0	981.7	982.7	983.5	984.5	985.3	986.9
140°	1020.8	1021.1	1021.5	1021.8	1022.2	1022.4	1022.6	1022.8	1022.9	1023.0	1024.8
142.5°	1058.7	1059.1	1059.6	1060.1	1060.6	1060.7	1060.3	1060.1	1059.8	1059.5	1061.1
145°	1111.7	1112.6	1113.4	1114.2	1115.1	1115.6	1115.9	1116.1	1116.4	1116.6	1117.2
147.5°	1164.4	1165.4	1166.5	1167.5	1168.5	1169.0	1168.8	1168.6	1168.4	1168.2	1168.1
150°	1196.5	1197.4	1198.3	1199.1	1200.0	1200.3	1200.3	1200.3	1200.3	1200.3	1200.3
152.5°	1226.4	1227.0	1227.5	1228.1	1228.6	1229.1	1229.2	1229.4	1229.7	1229.9	1230.5
155°	1272.9	1272.9	1272.9	1272.9	1272.9	1272.8	1272.6	1272.3	1272.0	1271.9	1272.8
157.5°	1312.3	1311.8	1311.4	1310.9	1310.4	1310.2	1310.2	1310.1	1310.1	1310.0	1310.8
160°	1335.5	1335.2	1335.0	1334.7	1334.5	1334.2	1333.9	1333.8	1333.5	1333.3	1333.9
162.5°	1356.9	1356.2	1355.6	1355.0	1354.4	1353.9	1353.7	1353.4	1353.1	1352.9	1354.3
165°	1385.7	1385.0	1384.2	1383.5	1382.8	1382.2	1381.6	1381.1	1380.6	1380.1	1381.6
167.5°	1407.8	1406.8	1405.8	1404.7	1403.7	1403.2	1403.3	1403.3	1403.3	1403.3	1404.9
170°	1420.3	1419.1	1417.9	1416.6	1415.4	1414.9	1415.1	1415.4	1415.7	1415.8	1417.4
172.5°	1429.3	1428.2	1427.2	1426.2	1425.1	1424.6	1424.7	1424.7	1424.8	1424.8	1426.5
175°	1441.6	1440.3	1439.1	1437.9	1436.6	1435.8	1435.6	1435.4	1435.1	1434.9	1436.6
177.5°	1445.5	1444.6	1443.6	1442.6	1441.6	1441.1	1441.1	1441.1	1441.1	1441.1	1442.5
180°	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
2.5°	596.2	597.0	597.9	598.2	598.1	598.0	597.9	597.8
5°	594.7	595.8	597.0	597.5	597.4	597.3	597.1	596.9
7.5°	591.5	592.8	594.2	594.8	594.6	594.4	594.3	594.2
10°	588.2	589.6	590.9	591.5	591.4	591.2	591.1	590.9
12.5°	583.8	585.0	586.2	586.8	586.8	586.7	586.7	586.7
15°	575.5	576.9	578.2	578.8	578.7	578.5	578.3	578.2
17.5°	565.5	566.9	568.3	568.9	568.8	568.7	568.5	568.4
20°	557.8	559.2	560.7	561.5	561.5	561.5	561.5	561.5
22.5°	548.6	550.1	551.6	552.5	552.7	552.9	553.2	553.5
25°	534.6	536.2	537.9	538.7	538.9	539.1	539.2	539.3
27.5°	518.8	520.3	521.9	522.7	522.9	523.1	523.2	523.4
30°	507.8	509.5	511.1	512.0	512.3	512.6	512.9	513.2
32.5°	496.5	498.3	500.2	501.3	501.6	501.9	502.2	502.5
35°	478.5	480.6	482.7	484.0	484.4	484.8	485.3	485.8
37.5°	459.9	461.9	464.1	465.4	465.8	466.3	466.7	467.3
40°	446.7	448.9	451.2	452.5	453.1	453.7	454.3	455.0
42.5°	433.8	436.2	438.7	440.1	440.7	441.1	441.6	442.0
45°	413.8	416.3	418.8	420.4	421.2	422.0	422.7	423.4
47.5°	392.6	395.3	397.9	399.6	400.5	401.4	402.3	403.2
50°	377.8	380.8	383.7	385.7	386.6	387.4	388.4	389.3
52.5°	362.8	365.8	368.8	370.7	371.6	372.5	373.3	374.3
55°	340.3	343.3	346.2	348.2	349.0	350.0	350.9	351.7
57.5°	316.6	320.2	323.7	325.9	326.7	327.5	328.4	329.2
60°	300.3	303.8	307.1	309.4	310.6	311.9	313.1	314.3
62.5°	284.2	287.7	291.1	293.3	294.5	295.8	297.0	298.2
65°	259.3	263.1	266.8	269.2	270.4	271.6	272.9	274.1
67.5°	235.0	238.8	242.5	245.0	246.2	247.3	248.5	249.6
70°	217.7	221.8	225.8	228.3	229.4	230.4	231.4	232.5
72.5°	201.4	205.3	209.2	211.7	212.9	214.0	215.2	216.4
75°	176.5	180.6	184.9	187.6	188.9	190.3	191.7	193.0
77.5°	153.3	157.6	161.8	164.6	166.0	167.5	168.8	170.3
80°	138.3	142.7	147.1	150.0	151.2	152.4	153.6	154.8
82.5°	123.5	128.0	132.7	135.6	136.9	138.2	139.5	140.9
85°	102.7	107.2	111.7	114.7	116.1	117.6	119.1	120.6
87.5°	90.7	95.3	99.9	102.9	104.4	105.7	107.1	108.6
90°	102.5	108.3	114.1	117.9	119.6	121.2	123.0	124.6
92.5°	117.5	122.6	127.7	131.0	132.5	134.0	135.4	137.0
95°	152.7	157.5	162.2	165.2	166.6	168.0	169.3	170.7
97.5°	197.9	202.8	207.5	210.6	211.8	213.1	214.4	215.7
100°	230.8	235.3	239.8	242.6	243.7	244.7	245.7	246.8
102.5°	265.8	270.4	275.0	277.9	279.3	280.7	282.1	283.4
105°	318.9	323.4	327.9	331.1	332.9	334.9	336.8	338.8
107.5°	377.1	381.5	385.8	388.5	389.5	390.5	391.6	392.6
110°	415.9	418.8	421.7	424.1	426.1	428.0	430.0	431.9





TEST NUMBER: P332766-935

CATALOG NUMBER: S124DIW-S575D1340U935-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	457.5	460.7	463.9	466.2	467.5	468.9	470.2	471.6
115°	522.2	525.2	528.2	530.1	530.9	531.7	532.5	533.3
117.5°	583.8	586.1	588.3	589.8	590.5	591.2	591.9	592.5
120°	625.7	627.4	629.1	630.9	632.5	634.2	635.9	637.6
122.5°	668.4	670.5	672.7	673.8	674.1	674.2	674.4	674.6
125°	731.3	733.7	736.0	737.4	737.8	738.2	738.6	739.0
127.5°	790.7	792.9	795.0	796.4	797.1	797.7	798.3	798.9
130°	832.7	834.8	837.1	838.1	838.0	837.9	837.8	837.7
132.5°	872.3	874.3	876.4	877.7	878.2	878.7	879.2	879.7
135°	931.0	932.9	934.8	935.8	935.9	936.1	936.3	936.4
137.5°	988.4	989.9	991.4	992.6	993.6	994.5	995.3	996.3
140°	1026.4	1028.1	1029.8	1030.9	1031.4	1031.9	1032.3	1032.9
142.5°	1062.8	1064.5	1066.1	1067.2	1067.7	1068.3	1068.9	1069.5
145°	1117.9	1118.5	1119.2	1119.5	1119.3	1119.1	1119.0	1118.9
147.5°	1168.0	1167.9	1167.9	1167.9	1168.2	1168.4	1168.6	1168.9
150°	1200.3	1200.3	1200.3	1200.2	1200.0	1199.7	1199.5	1199.3
152.5°	1231.1	1231.7	1232.3	1232.2	1231.6	1230.9	1230.3	1229.6
155°	1273.8	1274.8	1275.8	1275.8	1274.8	1273.8	1272.8	1271.9
157.5°	1311.5	1312.3	1313.0	1312.9	1312.1	1311.2	1310.4	1309.6
160°	1334.7	1335.5	1336.2	1335.9	1334.7	1333.5	1332.2	1331.0
162.5°	1355.6	1356.9	1358.2	1358.3	1357.0	1355.8	1354.6	1353.3
165°	1383.1	1384.6	1386.1	1386.4	1385.3	1384.3	1383.4	1382.3
167.5°	1406.4	1407.8	1409.3	1409.3	1407.7	1406.2	1404.7	1403.2
170°	1418.8	1420.3	1421.9	1421.7	1420.0	1418.2	1416.5	1414.8
172.5°	1428.1	1429.9	1431.6	1431.5	1429.8	1428.1	1426.3	1424.6
175°	1438.3	1440.0	1441.8	1441.8	1440.0	1438.3	1436.6	1434.9
177.5°	1443.9	1445.3	1446.7	1446.6	1445.0	1443.4	1441.8	1440.2
180°	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8

(END OF REPORT)