

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: P332768

Luminaire Tested: **S124DIW-S575D1340U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332768
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-S575D1340U835-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH 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: 7149.4 lumens
Efficiency: N/A
Efficacy: 132.9 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

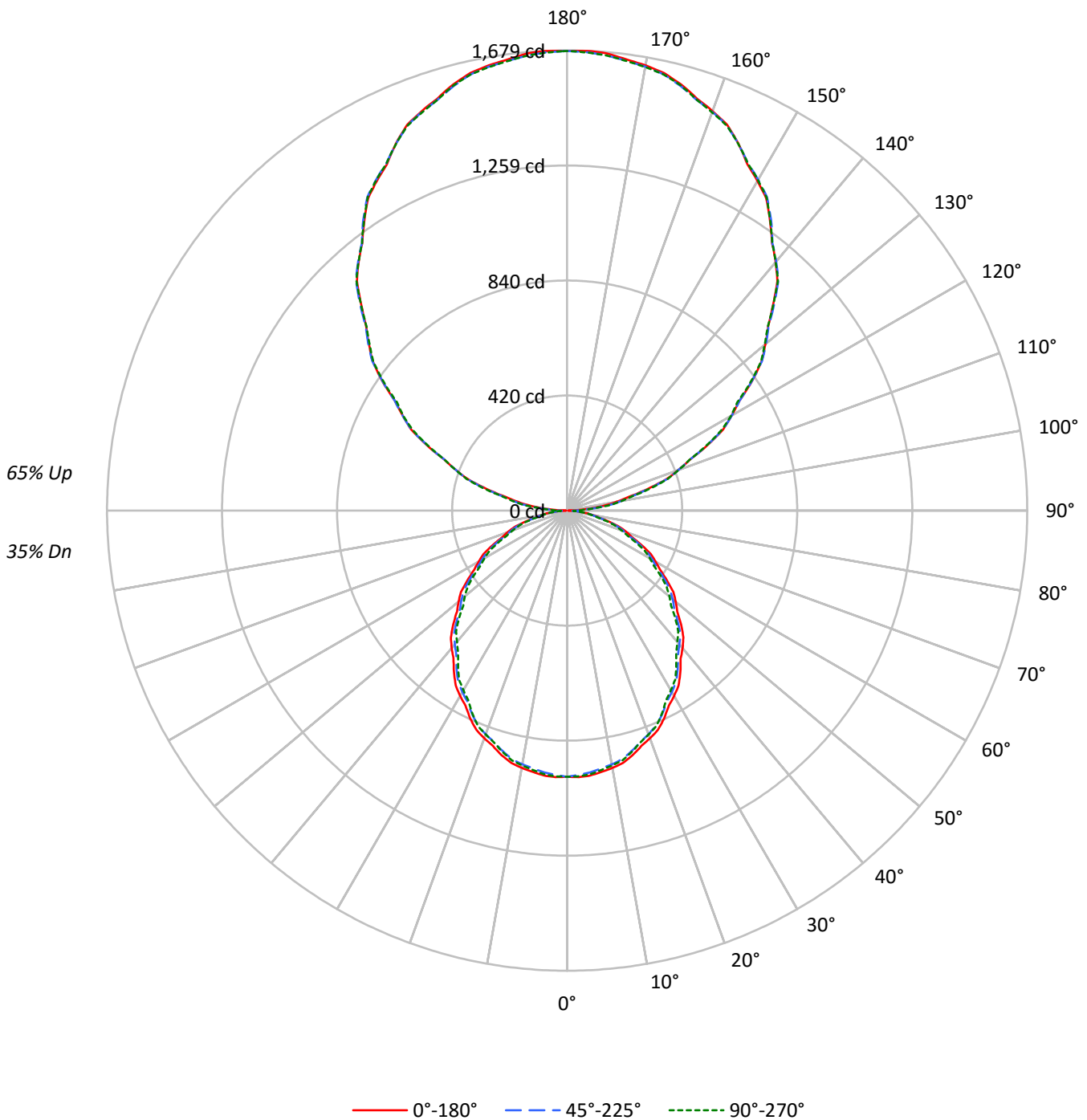
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	75	75	75	58	58	58	42	42	42	35
1	94	90	86	83	85	82	78	75	66	63	61	51	49	48	37	36	36	29
2	86	79	73	68	77	71	66	62	57	54	51	45	42	40	33	31	30	25
3	78	69	62	56	70	63	57	52	51	46	43	39	36	34	29	27	25	21
4	72	61	53	47	64	55	49	44	45	40	36	35	32	29	26	24	22	18
5	66	54	46	41	59	49	42	37	40	35	31	31	28	25	23	21	19	15
6	60	49	41	35	54	44	37	32	36	31	27	28	25	22	21	19	17	14
7	56	44	36	31	50	40	33	28	33	27	24	26	22	19	19	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	23	20	17	18	15	13	11
9	48	36	29	24	43	33	27	22	27	22	19	22	18	15	16	14	12	10
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7840	7840	7840
5°	7864	7769	7826
10°	7814	7706	7744
15°	7720	7596	7616
20°	7594	7460	7467
25°	7451	7306	7285
30°	7276	7124	7058
35°	7094	6933	6841
40°	6905	6716	6593
45°	6707	6503	6379
50°	6489	6314	6118
55°	6253	6068	5871
60°	6018	5792	5616
65°	5752	5530	5307
70°	5455	5179	4978
75°	5000	4757	4635
80°	4449	4268	4161
85°	3890	3751	3677



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.5	1.3
10°-20°	257.7	3.6
20°-30°	379.3	5.3
30°-40°	440.9	6.2
40°-50°	440.9	6.2
50°-60°	385.7	5.4
60°-70°	286.4	4.0
70°-80°	162.7	2.3
80°-90°	52.0	0.7
90°-100°	110.6	1.5
100°-110°	327.6	4.6
110°-120°	556.1	7.8
120°-130°	733.3	10.3
130°-140°	823.5	11.5
140°-150°	809.2	11.3
150°-160°	680.6	9.5
160°-170°	452.8	6.3
170°-180°	158.6	2.2
0°-30°	728.4	10.2
0°-40°	1169.3	16.4
0°-60°	1996.0	27.9
0°-90°	2497.1	34.9
90°-120°	994.3	13.9
90°-150°	3360.3	47.0
90°-180°	4652.0	65.1
0°-180°	7149.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	970	967	959	967	966	92
15°	924	920	909	913	911	260
25°	836	831	820	821	818	385
35°	720	714	704	698	694	450
45°	588	582	570	561	559	453
55°	444	442	431	422	417	398
65°	301	297	290	282	278	298
75°	160	156	152	150	149	170
85°	42	42	40	40	40	46
90°	4	18	28	36	39	7
95°	78	89	99	102	102	87
105°	302	304	309	313	316	321
115°	565	565	563	562	560	557
125°	824	823	822	820	817	734
135°	1062	1070	1070	1067	1063	821
145°	1290	1295	1297	1295	1292	807
155°	1478	1478	1477	1482	1477	680
165°	1609	1606	1603	1610	1606	453
175°	1674	1668	1666	1675	1666	159
180°	1677	1677	1677	1677	1677	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	971.1	971.1	971.1	971.1	971.1	971.1	971.1	971.1	971.1	971.1	971.1
2.5°	973.6	973.2	972.8	972.4	972.0	971.0	969.5	968.0	966.4	964.9	966.3
5°	970.4	969.7	969.0	968.3	967.6	966.3	964.4	962.5	960.6	958.7	960.6
7.5°	961.3	960.6	960.0	959.3	958.6	957.2	955.1	953.0	950.8	948.7	950.3
10°	953.2	952.6	951.9	951.2	950.5	949.0	946.8	944.5	942.3	940.0	941.4
12.5°	942.7	942.0	941.3	940.6	939.9	938.4	936.0	933.6	931.2	928.8	930.3
15°	923.7	923.0	922.3	921.6	920.9	919.3	916.7	914.1	911.5	908.9	909.9
17.5°	900.8	899.9	899.1	898.2	897.3	895.7	893.2	890.8	888.3	885.9	886.5
20°	884.0	883.1	882.3	881.4	880.5	878.8	876.2	873.6	871.0	868.4	868.9
22.5°	865.9	864.8	863.7	862.5	861.4	859.5	856.9	854.3	851.7	849.1	850.1
25°	836.5	835.3	834.1	832.9	831.7	829.9	827.4	825.0	822.6	820.2	820.4
27.5°	802.9	801.7	800.4	799.2	797.9	796.2	793.9	791.7	789.4	787.2	786.8
30°	780.5	779.1	777.7	776.3	775.0	773.1	770.9	768.6	766.4	764.2	763.5
32.5°	756.8	755.6	754.3	753.1	751.9	750.0	747.7	745.3	742.9	740.5	739.7
35°	719.8	718.6	717.4	716.2	715.0	713.1	710.7	708.3	705.9	703.5	702.2
37.5°	680.7	679.6	678.5	677.4	676.3	674.5	671.9	669.3	666.7	664.1	662.8
40°	655.2	653.8	652.4	651.1	649.7	647.7	645.1	642.5	639.9	637.3	635.6
42.5°	627.8	627.0	626.2	625.3	624.5	622.6	619.8	616.9	614.0	611.2	609.2
45°	587.5	586.3	585.1	583.9	582.7	580.7	577.9	575.1	572.4	569.6	567.7
47.5°	545.3	544.5	543.7	542.8	542.0	540.3	537.8	535.2	532.6	530.1	527.9
50°	516.7	516.0	515.3	514.6	513.9	512.4	510.0	507.5	505.1	502.7	500.3
52.5°	488.7	487.9	487.0	486.2	485.4	483.7	481.1	478.6	476.0	473.4	471.3
55°	444.3	443.8	443.3	442.8	442.3	440.8	438.4	435.9	433.5	431.1	429.0
57.5°	402.0	401.4	400.8	400.2	399.6	398.2	395.8	393.4	391.0	388.6	386.6
60°	372.7	371.9	371.0	370.1	369.3	367.7	365.5	363.2	361.0	358.7	357.2
62.5°	344.1	343.4	342.6	341.9	341.2	339.6	337.3	334.9	332.5	330.1	328.7
65°	301.1	300.3	299.4	298.6	297.7	296.4	294.7	292.9	291.2	289.5	287.7
67.5°	257.9	257.1	256.3	255.5	254.7	253.5	251.8	250.2	248.5	246.8	245.2
70°	231.1	229.9	228.7	227.5	226.3	225.0	223.6	222.2	220.8	219.4	218.1
72.5°	202.5	201.3	200.1	198.8	197.6	196.5	195.4	194.3	193.2	192.0	190.9
75°	160.3	159.4	158.6	157.7	156.8	156.0	155.1	154.2	153.4	152.5	151.8
77.5°	120.0	119.6	119.2	118.9	118.5	117.9	117.1	116.4	115.6	114.9	114.6
80°	95.7	95.2	94.7	94.2	93.6	93.2	92.9	92.5	92.2	91.8	91.5
82.5°	72.1	71.8	71.6	71.3	71.1	70.9	70.9	70.8	70.7	70.7	70.4
85°	42.0	42.0	42.0	42.0	42.0	41.8	41.5	41.2	40.8	40.5	40.5
87.5°	17.0	17.5	18.0	18.5	18.9	19.4	19.7	20.0	20.3	20.6	21.0
90°	3.9	7.1	10.2	13.4	16.6	19.3	21.6	23.9	26.2	28.5	30.3
92.5°	27.8	31.4	35.0	38.6	42.3	44.9	46.5	48.1	49.7	51.4	52.4
95°	77.8	80.4	83.0	85.6	88.2	90.5	92.5	94.5	96.5	98.6	99.4
97.5°	135.9	138.0	140.1	142.1	144.2	146.4	148.8	151.2	153.5	155.9	156.9
100°	181.6	182.7	183.9	185.0	186.2	188.0	190.6	193.2	195.8	198.4	199.0
102.5°	229.3	229.8	230.2	230.7	231.1	232.5	234.9	237.3	239.6	242.0	242.8
105°	302.2	302.5	302.8	303.0	303.3	304.0	305.2	306.4	307.5	308.7	309.5
107.5°	378.7	379.0	379.4	379.7	380.1	380.3	380.5	380.7	380.9	381.0	381.8
110°	430.6	431.1	431.7	432.3	432.9	433.0	432.7	432.4	432.2	431.9	431.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	484.5	484.6	484.7	484.9	485.0	484.8	484.3	483.7	483.2	482.7	482.6
115°	565.4	565.4	565.4	565.4	565.4	565.2	564.6	564.0	563.4	562.8	562.6
117.5°	641.7	641.9	642.2	642.4	642.6	642.5	642.1	641.7	641.3	640.9	639.9
120°	692.5	693.7	694.8	696.0	697.1	697.3	696.4	695.6	694.7	693.8	692.4
122.5°	745.4	745.9	746.4	746.8	747.3	747.3	746.9	746.5	746.1	745.7	744.7
125°	823.5	823.5	823.5	823.5	823.5	823.4	823.1	822.8	822.5	822.2	821.6
127.5°	894.3	895.2	896.1	896.9	897.8	898.0	897.5	897.1	896.6	896.1	895.6
130°	944.1	945.0	945.9	946.7	947.6	948.0	948.0	948.0	948.0	948.0	947.4
132.5°	995.0	995.6	996.2	996.9	997.5	997.7	997.5	997.2	997.0	996.8	996.2
135°	1062.1	1063.9	1065.6	1067.3	1069.1	1069.9	1069.9	1069.9	1069.9	1069.9	1069.4
137.5°	1135.3	1136.1	1136.9	1137.7	1138.5	1139.2	1139.6	1140.1	1140.5	1141.0	1140.2
140°	1184.1	1184.6	1185.2	1185.8	1186.4	1186.6	1186.6	1186.6	1186.6	1186.6	1186.4
142.5°	1228.7	1229.2	1229.8	1230.4	1231.0	1231.1	1230.9	1230.7	1230.5	1230.2	1230.2
145°	1290.4	1291.6	1292.7	1293.9	1295.0	1295.7	1296.0	1296.3	1296.6	1296.9	1296.6
147.5°	1351.6	1353.0	1354.4	1355.8	1357.1	1357.7	1357.5	1357.3	1357.0	1356.8	1356.6
150°	1389.0	1390.1	1391.3	1392.4	1393.6	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1
152.5°	1424.2	1424.9	1425.6	1426.3	1427.0	1427.5	1427.7	1427.9	1428.2	1428.4	1429.1
155°	1478.4	1478.4	1478.4	1478.4	1478.4	1478.3	1478.0	1477.7	1477.4	1477.2	1478.3
157.5°	1524.1	1523.6	1523.1	1522.5	1522.0	1521.7	1521.7	1521.6	1521.6	1521.5	1522.4
160°	1551.1	1550.8	1550.5	1550.2	1549.9	1549.6	1549.3	1549.1	1548.8	1548.5	1549.3
162.5°	1576.0	1575.2	1574.5	1573.7	1573.0	1572.5	1572.2	1571.9	1571.6	1571.3	1572.9
165°	1609.4	1608.6	1607.7	1606.8	1606.0	1605.3	1604.7	1604.1	1603.5	1602.9	1604.7
167.5°	1635.1	1633.9	1632.7	1631.5	1630.3	1629.7	1629.8	1629.8	1629.9	1629.9	1631.7
170°	1649.6	1648.2	1646.8	1645.3	1643.9	1643.3	1643.6	1643.9	1644.2	1644.4	1646.2
172.5°	1660.0	1658.8	1657.6	1656.4	1655.2	1654.6	1654.7	1654.7	1654.8	1654.8	1656.8
175°	1674.3	1672.8	1671.4	1670.0	1668.5	1667.6	1667.4	1667.1	1666.8	1666.5	1668.5
177.5°	1678.9	1677.8	1676.6	1675.5	1674.3	1673.8	1673.8	1673.8	1673.8	1673.8	1675.4
180°	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	971.1	971.1	971.1	971.1	971.1	971.1	971.1	971.1
2.5°	967.7	969.1	970.5	971.1	970.9	970.8	970.7	970.5
5°	962.5	964.4	966.3	967.1	966.7	966.4	966.0	965.7
7.5°	951.8	953.3	954.8	955.5	955.3	955.1	954.9	954.6
10°	942.8	944.2	945.6	946.1	945.7	945.4	945.0	944.7
12.5°	931.9	933.4	934.9	935.4	934.9	934.4	934.0	933.5
15°	911.0	912.0	913.0	913.3	912.8	912.3	911.7	911.2
17.5°	887.2	887.8	888.5	888.6	888.3	887.9	887.6	887.3
20°	869.5	870.0	870.5	870.6	870.2	869.9	869.6	869.2
22.5°	851.0	851.9	852.9	853.0	852.4	851.8	851.2	850.5
25°	820.5	820.7	820.9	820.6	819.9	819.2	818.5	817.8
27.5°	786.4	785.9	785.5	784.9	784.0	783.2	782.3	781.4
30°	762.8	762.1	761.4	760.6	759.7	758.9	758.0	757.1
32.5°	738.8	738.0	737.2	736.3	735.5	734.6	733.7	732.9
35°	701.0	699.8	698.6	697.6	696.7	695.8	695.0	694.1
37.5°	661.5	660.1	658.8	657.6	656.5	655.3	654.2	653.0
40°	633.9	632.1	630.4	629.1	628.2	627.4	626.5	625.6
42.5°	607.2	605.1	603.1	601.8	601.3	600.7	600.1	599.5
45°	565.8	563.9	562.0	560.8	560.3	559.8	559.2	558.7
47.5°	525.8	523.6	521.5	519.8	518.5	517.1	515.8	514.5
50°	497.8	495.4	493.0	491.3	490.2	489.2	488.2	487.1
52.5°	469.1	467.0	464.9	463.1	461.8	460.5	459.2	457.9
55°	427.0	424.9	422.8	421.2	420.2	419.2	418.1	417.1
57.5°	384.7	382.7	380.7	379.2	378.2	377.2	376.2	375.2
60°	355.6	354.1	352.5	351.3	350.4	349.6	348.7	347.8
62.5°	327.3	325.8	324.4	323.3	322.4	321.6	320.7	319.8
65°	286.0	284.3	282.6	281.3	280.4	279.5	278.7	277.8
67.5°	243.5	241.9	240.2	239.2	239.0	238.8	238.5	238.3
70°	216.7	215.3	213.9	213.0	212.4	211.9	211.4	210.9
72.5°	189.8	188.7	187.6	186.8	186.3	185.8	185.3	184.7
75°	151.1	150.4	149.8	149.3	149.1	149.0	148.8	148.6
77.5°	114.4	114.2	114.0	113.7	113.2	112.8	112.3	111.9
80°	91.1	90.8	90.4	90.2	90.0	89.8	89.7	89.5
82.5°	70.2	70.0	69.8	69.6	69.5	69.3	69.1	68.9
85°	40.5	40.5	40.5	40.4	40.2	40.0	39.9	39.7
87.5°	21.3	21.7	22.0	22.3	22.4	22.5	22.6	22.7
90°	32.0	33.7	35.4	36.6	37.2	37.8	38.3	38.9
92.5°	53.4	54.5	55.5	56.2	56.5	56.9	57.2	57.6
95°	100.3	101.2	102.0	102.5	102.5	102.5	102.5	102.5
97.5°	158.0	159.0	160.0	160.6	160.6	160.6	160.6	160.6
100°	199.6	200.2	200.7	201.0	201.0	201.0	201.0	201.0
102.5°	243.6	244.4	245.2	245.7	246.0	246.2	246.4	246.7
105°	310.4	311.3	312.1	313.0	313.8	314.7	315.6	316.4
107.5°	382.6	383.4	384.3	384.6	384.6	384.5	384.5	384.4
110°	430.7	430.1	429.6	429.7	430.6	431.4	432.3	433.2



TEST NUMBER: P332768

CATALOG NUMBER: S124DIW-S575D1340U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	482.5	482.4	482.2	482.3	482.4	482.6	482.8	483.0
115°	562.3	562.0	561.7	561.4	561.1	560.8	560.5	560.3
117.5°	639.0	638.0	637.0	636.2	635.6	635.1	634.5	633.9
120°	691.0	689.5	688.1	687.6	688.2	688.8	689.4	689.9
122.5°	743.7	742.8	741.8	740.8	739.7	738.7	737.7	736.6
125°	821.1	820.5	819.9	819.3	818.8	818.2	817.6	817.0
127.5°	895.0	894.4	893.8	893.3	892.9	892.4	891.9	891.5
130°	946.9	946.3	945.7	944.9	943.7	942.5	941.4	940.2
132.5°	995.6	995.1	994.5	994.0	993.5	993.0	992.6	992.1
135°	1068.8	1068.2	1067.6	1066.9	1066.0	1065.2	1064.3	1063.4
137.5°	1139.5	1138.8	1138.0	1137.7	1137.9	1138.1	1138.2	1138.4
140°	1186.1	1185.8	1185.5	1185.2	1184.9	1184.6	1184.3	1184.1
142.5°	1230.1	1230.1	1230.0	1229.9	1229.9	1229.8	1229.8	1229.7
145°	1296.3	1296.0	1295.7	1295.2	1294.3	1293.4	1292.6	1291.7
147.5°	1356.3	1356.1	1355.9	1355.6	1355.3	1355.0	1354.8	1354.5
150°	1394.1	1394.1	1394.1	1394.0	1393.7	1393.4	1393.1	1392.9
152.5°	1429.8	1430.5	1431.2	1431.1	1430.4	1429.6	1428.9	1428.1
155°	1479.5	1480.6	1481.8	1481.8	1480.6	1479.5	1478.3	1477.2
157.5°	1523.2	1524.1	1525.0	1524.9	1523.9	1522.9	1522.0	1521.0
160°	1550.2	1551.1	1551.9	1551.6	1550.2	1548.8	1547.3	1545.9
162.5°	1574.4	1576.0	1577.5	1577.6	1576.1	1574.7	1573.3	1571.8
165°	1606.4	1608.1	1609.9	1610.2	1609.0	1607.8	1606.7	1605.5
167.5°	1633.4	1635.1	1636.8	1636.8	1635.0	1633.2	1631.5	1629.7
170°	1647.9	1649.6	1651.4	1651.2	1649.2	1647.2	1645.2	1643.2
172.5°	1658.7	1660.7	1662.7	1662.6	1660.6	1658.6	1656.6	1654.6
175°	1670.5	1672.5	1674.6	1674.6	1672.5	1670.5	1668.5	1666.5
177.5°	1677.0	1678.6	1680.2	1680.1	1678.3	1676.4	1674.6	1672.7
180°	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9

(END OF REPORT)