

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: P332765-840

Luminaire Tested: **S124DIW-S575D1340U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332765-840
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-S575D1340U840-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1340 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7814.4 lumens
Efficiency: N/A
Efficacy: 145.2 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

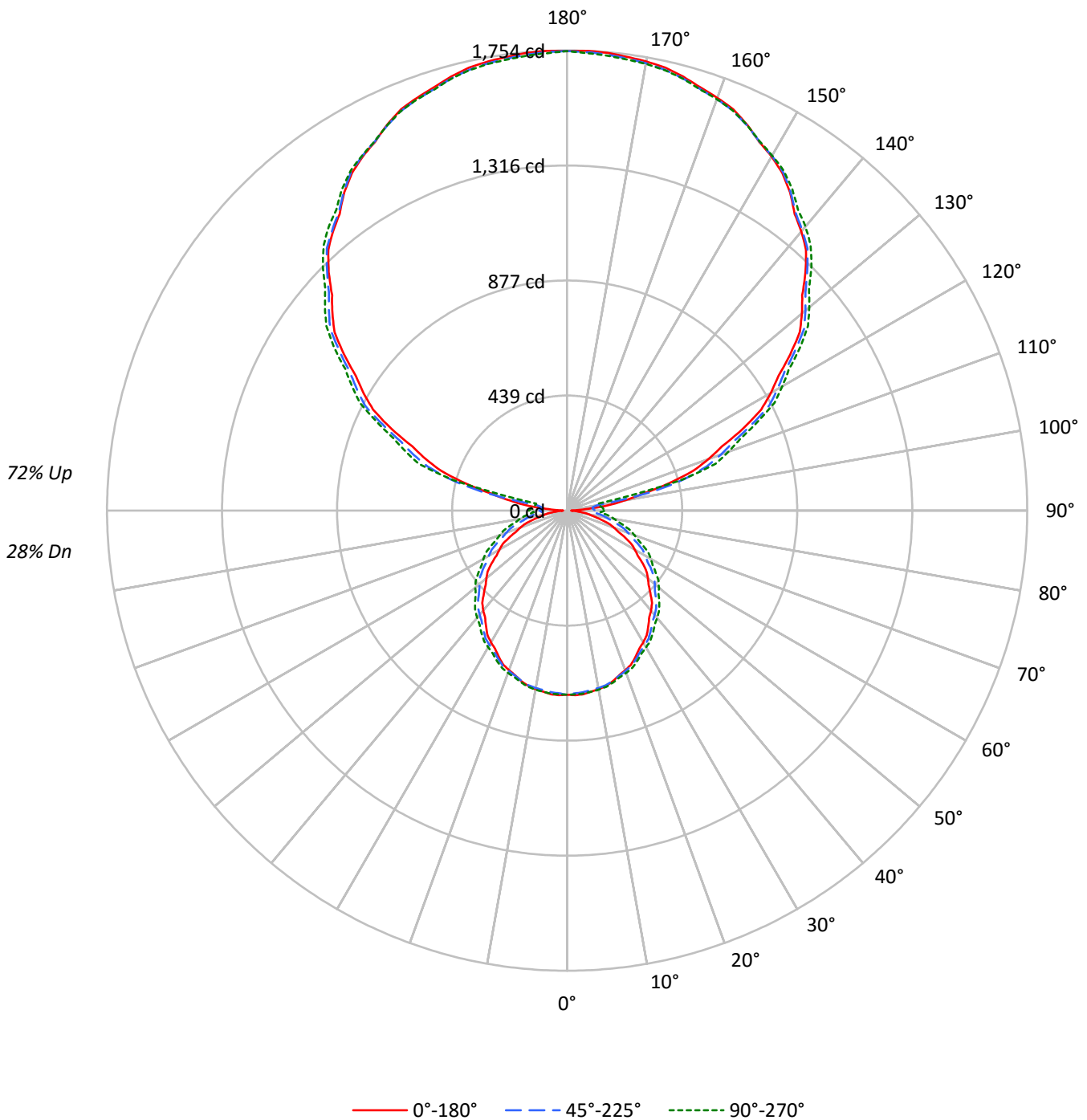
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332765-840

CATALOG NUMBER: S124DIW-S575D1340U840-4F0-1E-UDD-D

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	50	30	10	0	
RCR																						
0	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28				
1	92	88	84	80	82	79	75	72	61	59	57	46	44	43	31	30	29	23				
2	84	76	70	65	75	68	63	59	53	50	47	40	37	35	27	26	24	19				
3	76	67	60	54	68	60	54	49	47	43	39	35	32	29	24	22	20	15				
4	70	59	51	45	62	53	46	41	41	37	33	31	28	25	21	19	17	13				
5	64	52	44	38	57	47	40	35	37	32	28	28	24	21	19	17	15	11				
6	58	47	39	33	52	42	35	30	33	28	24	25	21	19	17	15	13	10				
7	54	42	34	29	48	38	31	26	30	25	21	22	19	16	15	13	12	9				
8	50	38	30	25	44	34	28	23	27	22	19	20	17	14	14	12	10	8				
9	46	34	27	22	41	31	25	20	25	20	17	19	15	13	13	11	9	7				
10	43	31	24	20	39	28	22	18	23	18	15	17	14	11	12	10	8	6				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5666	5666	5666
5°	5683	5537	5552
10°	5649	5446	5442
15°	5598	5341	5312
20°	5521	5226	5185
25°	5435	5096	5047
30°	5342	4967	4904
35°	5237	4834	4779
40°	5153	4710	4648
45°	5027	4594	4537
50°	4920	4460	4418
55°	4811	4333	4278
60°	4641	4173	4153
65°	4454	4001	3997
70°	4226	3805	3816
75°	3910	3587	3652
80°	3559	3381	3492
85°	3112	3195	3398



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.5	0.9
10°-20°	190.4	2.4
20°-30°	287.9	3.7
30°-40°	348.3	4.5
40°-50°	368.3	4.7
50°-60°	346.6	4.4
60°-70°	287.5	3.7
70°-80°	202.0	2.6
80°-90°	119.2	1.5
90°-100°	127.7	1.6
100°-110°	432.1	5.5
110°-120°	764.3	9.8
120°-130°	946.4	12.1
130°-140°	1000.5	12.8
140°-150°	929.6	11.9
150°-160°	748.3	9.6
160°-170°	482.6	6.2
170°-180°	166.3	2.1
0°-30°	544.7	7.0
0°-40°	893.1	11.4
0°-60°	1607.9	20.6
0°-90°	2216.7	28.4
90°-120°	1324.0	16.9
90°-150°	4200.5	53.8
90°-180°	5598.0	71.6
0°-180°	7814.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	702	702	702	702	702	
5°	703	700	695	700	700	67
15°	674	674	672	678	678	190
25°	616	621	623	631	633	284
35°	539	548	556	567	570	337
45°	450	464	479	492	497	347
55°	352	369	392	407	412	314
65°	244	269	296	314	321	241
75°	135	164	197	218	226	144
85°	42	75	110	133	142	44
90°	16	62	107	136	146	12
95°	82	67	97	125	135	101
105°	401	426	460	488	451	421
115°	741	753	776	795	801	729
125°	1038	1043	1059	1078	1084	926
135°	1285	1285	1295	1309	1317	990
145°	1481	1484	1484	1490	1496	925
155°	1623	1624	1620	1625	1622	748
165°	1712	1706	1706	1715	1704	484
175°	1751	1744	1745	1755	1741	167
180°	1751	1751	1751	1751	1751	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	704.3	703.9	703.5	703.0	702.6	701.9	700.7	699.6	698.4	697.3	698.3
5°	702.6	702.1	701.5	700.9	700.4	699.5	698.3	697.1	695.9	694.7	696.1
7.5°	696.6	696.2	695.9	695.6	695.3	694.7	693.7	692.7	691.6	690.5	692.2
10°	691.6	691.4	691.2	691.1	690.8	690.3	689.4	688.5	687.7	686.8	688.4
12.5°	684.6	684.6	684.6	684.5	684.5	684.2	683.6	683.0	682.4	681.8	683.2
15°	673.5	673.7	673.8	674.0	674.2	674.0	673.5	673.0	672.4	671.9	673.5
17.5°	658.2	658.7	659.2	659.7	660.4	660.6	660.5	660.4	660.2	660.1	661.7
20°	647.5	648.0	648.5	649.1	649.6	649.9	650.2	650.4	650.5	650.7	652.4
22.5°	635.6	636.2	636.9	637.5	638.2	638.7	639.0	639.3	639.6	640.0	641.8
25°	616.1	617.1	618.2	619.2	620.3	621.1	621.6	622.1	622.7	623.2	625.1
27.5°	594.4	595.9	597.4	599.1	600.6	601.7	602.5	603.3	604.1	604.9	606.7
30°	580.0	581.4	582.7	584.1	585.5	586.8	588.0	589.3	590.5	591.8	593.7
32.5°	564.2	565.9	567.5	569.3	571.0	572.5	573.8	575.2	576.5	577.9	580.1
35°	539.1	541.2	543.3	545.3	547.4	549.4	551.1	552.9	554.6	556.3	558.9
37.5°	513.8	516.1	518.6	521.0	523.4	525.7	527.9	530.1	532.2	534.3	536.8
40°	497.5	499.7	502.0	504.2	506.5	508.9	511.3	513.7	516.2	518.7	521.3
42.5°	478.6	481.1	483.6	486.3	488.8	491.5	494.3	497.2	500.1	502.9	505.8
45°	449.5	452.8	456.2	459.5	462.7	466.1	469.4	472.7	476.1	479.4	482.3
47.5°	421.7	425.1	428.5	431.9	435.4	439.0	442.8	446.7	450.5	454.3	457.5
50°	401.5	405.4	409.2	413.1	417.0	420.8	424.6	428.5	432.3	436.2	439.6
52.5°	381.4	385.3	389.1	392.9	396.8	400.9	405.4	409.7	414.1	418.5	422.0
55°	352.0	355.7	359.4	363.0	366.7	371.1	376.4	381.6	386.9	392.1	395.7
57.5°	319.2	323.8	328.3	332.9	337.4	342.2	347.4	352.6	357.9	363.0	367.2
60°	297.8	302.4	306.9	311.4	316.0	321.1	326.9	332.6	338.4	344.2	348.2
62.5°	277.1	282.1	287.0	292.0	296.9	302.3	308.0	313.8	319.6	325.4	329.3
65°	243.6	249.2	254.8	260.3	266.0	271.8	277.6	283.6	289.5	295.5	299.8
67.5°	211.4	217.3	223.3	229.2	235.1	241.3	247.6	254.0	260.3	266.7	271.1
70°	189.3	195.3	201.3	207.2	213.2	219.4	226.0	232.7	239.3	246.0	250.6
72.5°	168.0	174.1	180.2	186.2	192.3	198.8	205.9	213.0	220.0	227.1	231.7
75°	135.1	141.6	148.0	154.5	161.0	167.9	175.2	182.6	190.0	197.2	202.2
77.5°	104.5	111.4	118.3	125.0	131.9	139.2	146.8	154.5	162.2	169.9	174.8
80°	85.6	92.6	99.7	106.6	113.6	120.9	128.7	136.3	144.0	151.7	156.9
82.5°	66.8	74.0	81.3	88.6	95.8	103.3	111.0	118.7	126.3	134.1	139.5
85°	41.6	49.0	56.4	63.6	71.0	78.6	86.4	94.3	102.2	110.0	115.2
87.5°	24.0	31.8	39.6	47.4	55.1	63.0	71.2	79.3	87.4	95.5	100.9
90°	16.5	26.7	36.9	47.1	57.3	67.3	77.1	86.9	96.7	106.6	113.4
92.5°	28.5	34.9	41.4	47.9	54.3	62.4	72.3	82.1	92.0	101.8	108.5
95°	82.3	78.2	74.0	69.9	65.7	67.4	74.8	82.3	89.8	97.1	103.6
97.5°	162.3	173.4	184.5	195.6	206.8	199.7	174.3	148.9	123.5	98.1	102.8
100°	223.5	233.3	243.0	252.8	262.6	250.7	217.4	184.1	150.7	117.3	117.1
102.5°	292.7	300.4	308.3	316.1	324.0	328.5	330.0	331.4	332.9	334.3	285.5
105°	401.3	406.6	411.8	417.1	422.3	428.9	436.8	444.7	452.6	460.5	467.6
107.5°	503.6	507.4	511.1	514.8	518.6	524.5	532.6	540.7	548.8	556.8	562.4
110°	572.2	575.4	578.8	582.1	585.4	591.0	598.8	606.7	614.6	622.5	627.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	638.5	642.3	646.0	649.7	653.5	658.7	665.4	672.1	678.6	685.3	689.0
115°	740.8	743.3	745.8	748.2	750.6	754.5	759.8	765.1	770.4	775.7	780.1
117.5°	833.7	835.8	837.9	840.0	842.1	846.1	851.9	857.8	863.6	869.5	873.0
120°	896.0	897.7	899.3	901.0	902.7	905.9	910.7	915.4	920.3	925.0	929.1
122.5°	954.6	955.4	956.2	957.0	957.9	960.8	966.0	971.2	976.4	981.6	985.4
125°	1037.9	1038.9	1039.9	1040.9	1041.9	1044.3	1048.0	1051.9	1055.6	1059.4	1063.6
127.5°	1117.4	1117.5	1117.6	1117.7	1117.9	1120.2	1125.0	1129.6	1134.4	1139.0	1142.1
130°	1168.1	1168.2	1168.3	1168.5	1168.6	1170.4	1174.2	1177.8	1181.4	1185.2	1188.6
132.5°	1215.3	1215.7	1216.0	1216.3	1216.7	1218.5	1221.8	1225.2	1228.5	1231.9	1235.2
135°	1285.3	1285.0	1284.6	1284.3	1284.0	1285.2	1287.5	1289.9	1292.2	1294.6	1298.1
137.5°	1347.9	1347.8	1347.8	1347.7	1347.6	1348.5	1350.4	1352.3	1354.1	1356.0	1359.2
140°	1388.7	1389.1	1389.5	1390.0	1390.4	1390.9	1391.7	1392.4	1393.2	1393.9	1397.0
142.5°	1424.7	1425.7	1426.7	1427.7	1428.8	1429.5	1429.7	1430.0	1430.2	1430.4	1433.0
145°	1481.0	1481.6	1482.3	1483.0	1483.7	1484.1	1484.1	1484.1	1484.1	1484.1	1485.4
147.5°	1525.7	1527.2	1528.6	1530.0	1531.6	1532.2	1531.9	1531.6	1531.3	1531.0	1531.4
150°	1558.2	1559.2	1560.1	1561.2	1562.2	1562.5	1562.3	1562.0	1561.7	1561.4	1561.4
152.5°	1584.8	1585.7	1586.6	1587.5	1588.4	1588.6	1588.1	1587.5	1587.0	1586.5	1587.0
155°	1623.0	1623.2	1623.5	1623.8	1624.1	1623.8	1623.0	1622.0	1621.1	1620.3	1621.4
157.5°	1655.2	1655.0	1654.8	1654.6	1654.5	1653.9	1652.8	1651.8	1650.9	1649.9	1651.4
160°	1674.0	1673.1	1672.2	1671.3	1670.5	1669.9	1669.6	1669.3	1669.0	1668.8	1670.5
162.5°	1690.7	1689.6	1688.6	1687.5	1686.4	1685.7	1685.4	1685.1	1684.8	1684.5	1686.2
165°	1712.0	1710.5	1709.1	1707.6	1706.2	1705.5	1705.5	1705.5	1705.5	1705.5	1707.8
167.5°	1728.8	1727.3	1725.8	1724.2	1722.7	1721.8	1721.7	1721.5	1721.3	1721.1	1723.7
170°	1738.2	1736.5	1734.6	1732.9	1731.2	1730.5	1730.7	1731.0	1731.3	1731.6	1733.9
172.5°	1744.4	1742.7	1741.0	1739.2	1737.5	1736.8	1737.1	1737.4	1737.6	1737.9	1740.2
175°	1751.3	1749.5	1747.8	1746.1	1744.2	1743.5	1743.8	1744.1	1744.4	1744.7	1747.4
177.5°	1754.4	1752.8	1751.1	1749.5	1747.9	1747.3	1747.8	1748.3	1748.7	1749.2	1751.0
180°	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	699.3	700.2	701.3	701.7	701.6	701.4	701.3	701.1
5°	697.5	698.8	700.2	700.8	700.7	700.5	700.3	700.1
7.5°	693.8	695.3	696.9	697.6	697.4	697.2	697.0	696.9
10°	689.9	691.6	693.1	693.8	693.7	693.5	693.3	693.1
12.5°	684.7	686.1	687.5	688.2	688.2	688.1	688.1	688.1
15°	675.0	676.6	678.1	678.8	678.7	678.5	678.3	678.1
17.5°	663.3	664.9	666.5	667.2	667.1	667.0	666.8	666.7
20°	654.2	655.9	657.6	658.5	658.5	658.5	658.5	658.5
22.5°	643.5	645.2	646.9	648.0	648.2	648.5	648.8	649.1
25°	627.0	628.9	630.9	631.9	632.1	632.3	632.4	632.6
27.5°	608.5	610.3	612.1	613.1	613.3	613.5	613.7	613.9
30°	595.6	597.5	599.5	600.6	600.9	601.3	601.6	602.0
32.5°	582.3	584.5	586.7	587.9	588.3	588.7	589.1	589.4
35°	561.3	563.7	566.1	567.6	568.2	568.7	569.2	569.8
37.5°	539.4	541.8	544.3	545.8	546.3	546.9	547.4	548.1
40°	523.9	526.5	529.2	530.8	531.5	532.2	532.9	533.6
42.5°	508.8	511.6	514.5	516.2	516.8	517.4	518.0	518.5
45°	485.3	488.3	491.2	493.1	494.0	494.9	495.7	496.7
47.5°	460.5	463.6	466.7	468.7	469.8	470.8	471.9	472.9
50°	443.1	446.7	450.1	452.4	453.4	454.4	455.6	456.6
52.5°	425.6	429.0	432.5	434.7	435.9	436.9	437.9	439.0
55°	399.1	402.6	406.1	408.4	409.4	410.5	411.5	412.5
57.5°	371.3	375.6	379.7	382.2	383.2	384.2	385.2	386.2
60°	352.2	356.3	360.2	362.9	364.4	365.8	367.2	368.6
62.5°	333.4	337.4	341.4	344.1	345.5	346.9	348.3	349.7
65°	304.2	308.6	313.0	315.8	317.2	318.6	320.0	321.4
67.5°	275.6	280.0	284.5	287.3	288.7	290.0	291.4	292.8
70°	255.4	260.1	264.8	267.8	269.0	270.2	271.5	272.7
72.5°	236.2	240.9	245.4	248.3	249.7	251.1	252.5	253.8
75°	207.0	211.9	216.8	220.0	221.6	223.2	224.8	226.3
77.5°	179.9	184.8	189.8	193.1	194.7	196.4	198.0	199.8
80°	162.2	167.3	172.6	175.9	177.3	178.7	180.2	181.6
82.5°	144.8	150.2	155.6	159.1	160.6	162.1	163.6	165.2
85°	120.5	125.7	131.0	134.5	136.2	137.9	139.7	141.5
87.5°	106.3	111.8	117.1	120.7	122.4	124.0	125.6	127.3
90°	120.3	127.0	133.8	138.3	140.3	142.2	144.2	146.1
92.5°	115.1	121.8	128.5	132.6	134.1	135.6	137.1	138.7
95°	110.1	116.5	123.0	127.1	129.1	130.9	132.8	134.6
97.5°	107.6	112.3	117.0	120.4	122.1	123.9	125.7	127.5
100°	116.8	116.6	116.4	117.0	118.6	120.1	121.6	123.1
102.5°	236.6	187.8	139.1	115.3	116.7	118.2	119.6	121.0
105°	474.5	481.5	488.5	487.5	478.4	469.3	460.2	451.1
107.5°	567.9	573.6	579.2	583.1	585.5	587.8	590.2	592.6
110°	631.7	636.2	640.9	644.3	646.5	648.8	651.1	653.4



TEST NUMBER: P332765-840

CATALOG NUMBER: S124DIW-S575D1340U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	692.9	696.6	700.3	703.5	706.0	708.5	710.9	713.5
115°	784.6	789.0	793.3	796.2	797.4	798.7	799.9	801.1
117.5°	876.5	880.0	883.5	886.0	887.3	888.5	889.8	891.1
120°	933.1	937.3	941.3	943.7	944.5	945.4	946.2	947.1
122.5°	989.3	993.1	996.9	999.3	999.9	1000.6	1001.3	1001.9
125°	1067.8	1072.0	1076.2	1078.9	1080.3	1081.6	1083.0	1084.3
127.5°	1145.0	1147.9	1150.9	1152.9	1153.9	1154.8	1155.8	1156.7
130°	1192.0	1195.5	1198.9	1201.1	1202.1	1203.3	1204.3	1205.3
132.5°	1238.5	1241.7	1245.1	1247.1	1247.9	1248.8	1249.6	1250.4
135°	1301.4	1304.7	1308.2	1310.7	1312.3	1313.9	1315.6	1317.2
137.5°	1362.4	1365.5	1368.8	1370.7	1371.4	1372.1	1372.8	1373.5
140°	1400.3	1403.4	1406.5	1408.7	1409.9	1411.0	1412.2	1413.3
142.5°	1435.6	1438.4	1441.0	1442.7	1443.4	1444.2	1445.0	1445.8
145°	1486.7	1488.0	1489.4	1490.8	1492.0	1493.3	1494.6	1495.8
147.5°	1531.7	1532.1	1532.5	1533.1	1533.9	1534.8	1535.6	1536.4
150°	1561.4	1561.4	1561.4	1561.5	1561.8	1562.1	1562.4	1562.7
152.5°	1587.4	1587.9	1588.3	1588.5	1588.3	1588.1	1588.0	1587.8
155°	1622.7	1623.8	1625.0	1625.1	1624.3	1623.4	1622.4	1621.6
157.5°	1652.9	1654.5	1656.0	1656.0	1654.5	1652.9	1651.4	1649.9
160°	1672.2	1674.0	1675.8	1675.8	1674.0	1672.2	1670.5	1668.8
162.5°	1688.0	1689.7	1691.4	1691.3	1689.4	1687.4	1685.4	1683.4
165°	1710.1	1712.4	1714.8	1714.5	1712.0	1709.4	1706.8	1704.1
167.5°	1726.3	1728.8	1731.4	1731.2	1728.3	1725.4	1722.5	1719.6
170°	1736.3	1738.6	1740.9	1740.6	1737.8	1734.8	1731.9	1729.0
172.5°	1742.5	1744.9	1747.3	1746.9	1743.6	1740.5	1737.4	1734.2
175°	1750.0	1752.6	1755.2	1754.7	1751.3	1747.8	1744.2	1740.8
177.5°	1752.9	1754.7	1756.7	1756.2	1753.3	1750.6	1747.8	1744.9
180°	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3

(END OF REPORT)