

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: P332759-840

Luminaire Tested: **S124DIW-S575D1050U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332759-840
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-S575D1050U840-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6627.7 lumens
Efficiency: N/A
Efficacy: 146.6 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

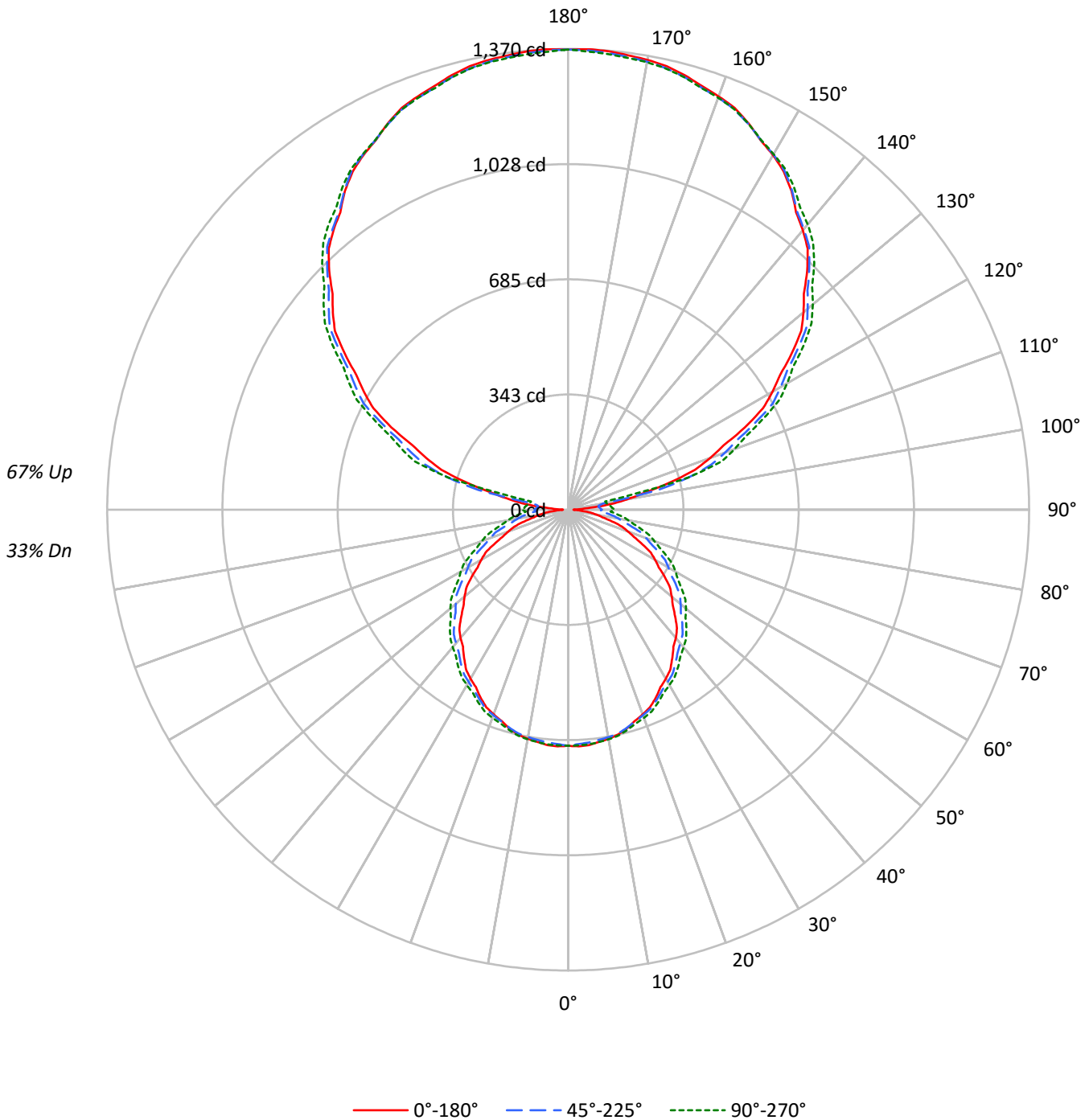
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332759-840

CATALOG NUMBER: S124DIW-S575D1050U840-4F0-1E-UDD-D

Luminous Intensity Polar Plot





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CATALOG NUMBER: S124DIW-S575D1050U840-4F0-1E-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	0
RCR																		
0	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	33
1	93	89	85	81	84	80	77	74	64	61	59	49	47	46	35	34	33	27
2	85	77	71	66	76	70	64	60	55	52	48	42	40	38	30	29	27	22
3	77	68	60	54	69	61	55	50	49	44	40	37	34	31	27	25	23	18
4	70	60	52	46	63	54	47	42	43	38	34	33	30	27	24	21	20	15
5	64	53	45	39	58	48	41	36	38	33	29	29	26	23	21	19	17	13
6	59	47	39	33	53	43	36	31	34	29	25	27	23	20	19	17	15	11
7	55	42	35	29	49	38	32	27	31	26	22	24	20	17	17	15	13	10
8	51	38	31	25	45	35	28	23	28	23	19	22	18	15	16	13	12	9
9	47	35	27	22	42	32	25	21	26	21	17	20	16	14	15	12	10	8
10	44	32	25	20	39	29	23	18	24	19	15	18	15	12	14	11	9	7

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



TEST NUMBER: P332759-840

CATALOG NUMBER: S124DIW-S575D1050U840-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.5	1.0
10°-20°	190.4	2.9
20°-30°	287.9	4.3
30°-40°	348.3	5.3
40°-50°	368.3	5.6
50°-60°	346.6	5.2
60°-70°	287.5	4.3
70°-80°	202.0	3.0
80°-90°	118.1	1.8
90°-100°	114.6	1.7
100°-110°	348.5	5.3
110°-120°	604.4	9.1
120°-130°	743.4	11.2
130°-140°	783.3	11.8
140°-150°	726.5	11.0
150°-160°	584.5	8.8
160°-170°	377.0	5.7
170°-180°	129.9	2.0
0°-30°	544.7	8.2
0°-40°	893.1	13.5
0°-60°	1607.9	24.3
0°-90°	2215.5	33.4
90°-120°	1067.5	16.1
90°-150°	3320.7	50.1
90°-180°	4412.0	66.6
0°-180°	6627.7	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	58	100	128	138	11
95°	66	60	91	117	126	80
105°	315	338	371	397	369	330
115°	580	591	614	633	639	571
125°	811	816	832	850	856	724
135°	1004	1004	1013	1027	1034	774
145°	1157	1159	1159	1165	1170	723
155°	1268	1268	1266	1269	1267	584
165°	1337	1332	1332	1339	1331	378
175°	1368	1362	1363	1371	1360	130
180°	1368	1368	1368	1368	1368	



TEST NUMBER: P332759-840

CATALOG NUMBER: S124DIW-S575D1050U840-4F0-1E-UDD-D

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°	23.8	31.5	39.1	46.8	54.3	62.2	70.2	78.3	86.2	94.2	99.6
90°	15.7	25.1	34.6	44.1	53.6	63.0	72.3	81.7	91.0	100.3	106.7
92.5°	24.8	31.3	37.7	44.1	50.5	58.4	67.8	77.1	86.3	95.7	102.0
95°	66.4	64.5	62.5	60.6	58.6	61.3	68.7	76.1	83.5	90.9	96.9
97.5°	128.8	138.6	148.3	158.1	167.9	163.6	145.3	127.0	108.8	90.5	95.2
100°	176.4	185.1	193.7	202.4	211.0	203.0	178.4	153.9	129.3	104.7	105.6
102.5°	230.5	237.4	244.4	251.5	258.4	263.2	265.8	268.3	270.9	273.5	236.4
105°	315.1	319.9	324.8	329.6	334.5	340.7	348.3	355.9	363.5	371.1	377.5
107.5°	394.9	398.5	402.0	405.6	409.1	414.7	422.3	430.0	437.7	445.4	450.6
110°	448.3	451.4	454.5	457.7	460.8	466.2	473.6	481.1	488.6	496.0	500.5



TEST NUMBER: P332759-840

CATALOG NUMBER: S124DIW-S575D1050U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	500.1	503.4	506.9	510.3	513.6	518.6	525.0	531.5	538.0	544.4	548.3
115°	579.8	582.0	584.2	586.5	588.8	592.6	597.9	603.3	608.6	614.0	618.3
117.5°	652.3	654.1	655.9	657.8	659.6	663.4	669.1	674.8	680.5	686.2	689.7
120°	700.7	702.2	703.6	705.0	706.4	709.5	714.4	719.2	724.1	728.9	732.9
122.5°	746.6	747.2	747.8	748.5	749.1	752.0	757.1	762.2	767.3	772.4	776.2
125°	811.4	812.2	812.9	813.6	814.4	816.7	820.6	824.6	828.5	832.3	836.4
127.5°	873.5	873.5	873.6	873.6	873.7	876.0	880.3	884.7	889.1	893.5	896.6
130°	913.0	913.0	913.1	913.1	913.2	914.9	918.5	921.9	925.3	928.9	932.2
132.5°	949.8	950.1	950.3	950.5	950.8	952.4	955.5	958.7	961.7	964.8	968.1
135°	1004.3	1004.0	1003.8	1003.6	1003.4	1004.3	1006.4	1008.6	1010.7	1012.9	1016.1
137.5°	1053.2	1053.1	1053.0	1053.0	1052.9	1053.6	1055.2	1056.8	1058.4	1060.0	1063.1
140°	1085.1	1085.4	1085.7	1085.9	1086.2	1086.7	1087.3	1087.9	1088.5	1089.2	1092.2
142.5°	1113.2	1113.9	1114.7	1115.5	1116.3	1116.7	1116.9	1117.1	1117.2	1117.4	1119.9
145°	1157.0	1157.5	1158.0	1158.5	1159.0	1159.2	1159.2	1159.2	1159.2	1159.2	1160.5
147.5°	1191.9	1193.1	1194.2	1195.3	1196.4	1196.8	1196.6	1196.4	1196.1	1195.9	1196.2
150°	1217.3	1218.1	1218.8	1219.5	1220.3	1220.5	1220.3	1220.1	1219.8	1219.6	1219.6
152.5°	1238.0	1238.7	1239.4	1240.1	1240.7	1240.9	1240.5	1240.1	1239.7	1239.3	1239.6
155°	1267.7	1268.0	1268.2	1268.4	1268.6	1268.4	1267.7	1267.1	1266.4	1265.7	1266.6
157.5°	1292.9	1292.7	1292.6	1292.4	1292.3	1291.9	1291.1	1290.3	1289.6	1288.8	1290.0
160°	1307.6	1307.0	1306.3	1305.6	1304.8	1304.4	1304.2	1303.9	1303.7	1303.5	1304.8
162.5°	1320.7	1319.9	1319.0	1318.1	1317.3	1316.7	1316.5	1316.3	1316.1	1315.8	1317.2
165°	1337.3	1336.2	1335.0	1333.8	1332.7	1332.2	1332.2	1332.2	1332.2	1332.2	1334.0
167.5°	1350.4	1349.2	1348.1	1346.9	1345.6	1345.0	1344.8	1344.7	1344.6	1344.4	1346.5
170°	1357.8	1356.3	1355.0	1353.6	1352.3	1351.7	1351.9	1352.2	1352.4	1352.6	1354.4
172.5°	1362.6	1361.3	1359.9	1358.6	1357.2	1356.7	1356.9	1357.1	1357.4	1357.6	1359.4
175°	1368.0	1366.7	1365.2	1363.9	1362.5	1362.0	1362.2	1362.4	1362.6	1362.9	1364.9
177.5°	1370.4	1369.2	1367.9	1366.7	1365.3	1364.9	1365.2	1365.6	1365.9	1366.3	1367.8
180°	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0



TEST NUMBER: P332759-840

CATALOG NUMBER: S124DIW-S575D1050U840-4F0-1E-UDD-D

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°	104.9	110.3	115.6	119.1	120.7	122.3	123.9	125.6
90°	113.2	119.6	126.0	130.2	132.0	133.9	135.7	137.5
92.5°	108.3	114.6	120.9	124.7	126.2	127.7	129.3	130.7
95°	103.0	109.1	115.2	119.2	121.0	122.7	124.5	126.3
97.5°	100.0	104.6	109.4	112.6	114.3	116.0	117.8	119.5
100°	106.4	107.2	108.2	109.3	110.8	112.2	113.6	115.1
102.5°	199.2	162.1	125.0	107.1	108.6	110.0	111.4	112.8
105°	384.0	390.3	396.8	396.6	389.8	382.9	376.2	369.4
107.5°	456.0	461.2	466.5	470.2	472.3	474.4	476.6	478.7
110°	504.9	509.4	513.9	517.2	519.3	521.3	523.4	525.5



TEST NUMBER: P332759-840

CATALOG NUMBER: S124DIW-S575D1050U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	552.0	555.8	559.6	562.6	564.8	567.1	569.4	571.7
115°	622.6	626.9	631.2	634.0	635.2	636.4	637.6	638.8
117.5°	693.3	696.8	700.4	702.9	704.1	705.4	706.7	708.0
120°	736.8	740.7	744.7	747.2	748.1	749.0	750.0	750.9
122.5°	780.0	783.8	787.5	789.8	790.6	791.4	792.2	792.9
125°	840.3	844.3	848.4	851.0	852.2	853.5	854.9	856.1
127.5°	899.6	902.5	905.5	907.6	908.6	909.6	910.6	911.6
130°	935.6	939.0	942.3	944.5	945.6	946.6	947.7	948.8
132.5°	971.3	974.5	977.8	979.8	980.7	981.5	982.4	983.2
135°	1019.4	1022.6	1025.8	1028.2	1029.8	1031.3	1032.7	1034.2
137.5°	1066.1	1069.1	1072.2	1074.1	1074.8	1075.5	1076.3	1077.0
140°	1095.1	1098.0	1101.1	1103.1	1104.2	1105.2	1106.3	1107.4
142.5°	1122.4	1124.9	1127.4	1129.0	1129.8	1130.5	1131.4	1132.2
145°	1161.8	1163.1	1164.4	1165.6	1166.7	1167.9	1169.0	1170.2
147.5°	1196.5	1196.9	1197.2	1197.7	1198.5	1199.3	1200.1	1200.8
150°	1219.6	1219.6	1219.6	1219.7	1219.9	1220.2	1220.4	1220.6
152.5°	1240.0	1240.3	1240.7	1240.8	1240.7	1240.5	1240.4	1240.3
155°	1267.5	1268.4	1269.3	1269.4	1268.7	1268.1	1267.4	1266.7
157.5°	1291.1	1292.3	1293.5	1293.5	1292.3	1291.1	1290.0	1288.8
160°	1306.3	1307.6	1309.0	1309.0	1307.6	1306.3	1304.8	1303.5
162.5°	1318.5	1319.9	1321.2	1321.2	1319.6	1318.1	1316.6	1314.9
165°	1335.8	1337.7	1339.5	1339.3	1337.3	1335.2	1333.2	1331.1
167.5°	1348.5	1350.5	1352.4	1352.3	1350.1	1347.8	1345.5	1343.2
170°	1356.2	1358.1	1359.9	1359.7	1357.4	1355.1	1352.8	1350.6
172.5°	1361.2	1363.0	1364.8	1364.5	1362.0	1359.6	1357.2	1354.6
175°	1367.0	1369.0	1371.1	1370.7	1368.0	1365.2	1362.5	1359.8
177.5°	1369.3	1370.7	1372.2	1371.8	1369.6	1367.5	1365.2	1363.1
180°	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0

(END OF REPORT)