

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: P332761-840

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332761-840
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-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6752.2 lumens
Efficiency: N/A
Efficacy: 149.4 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

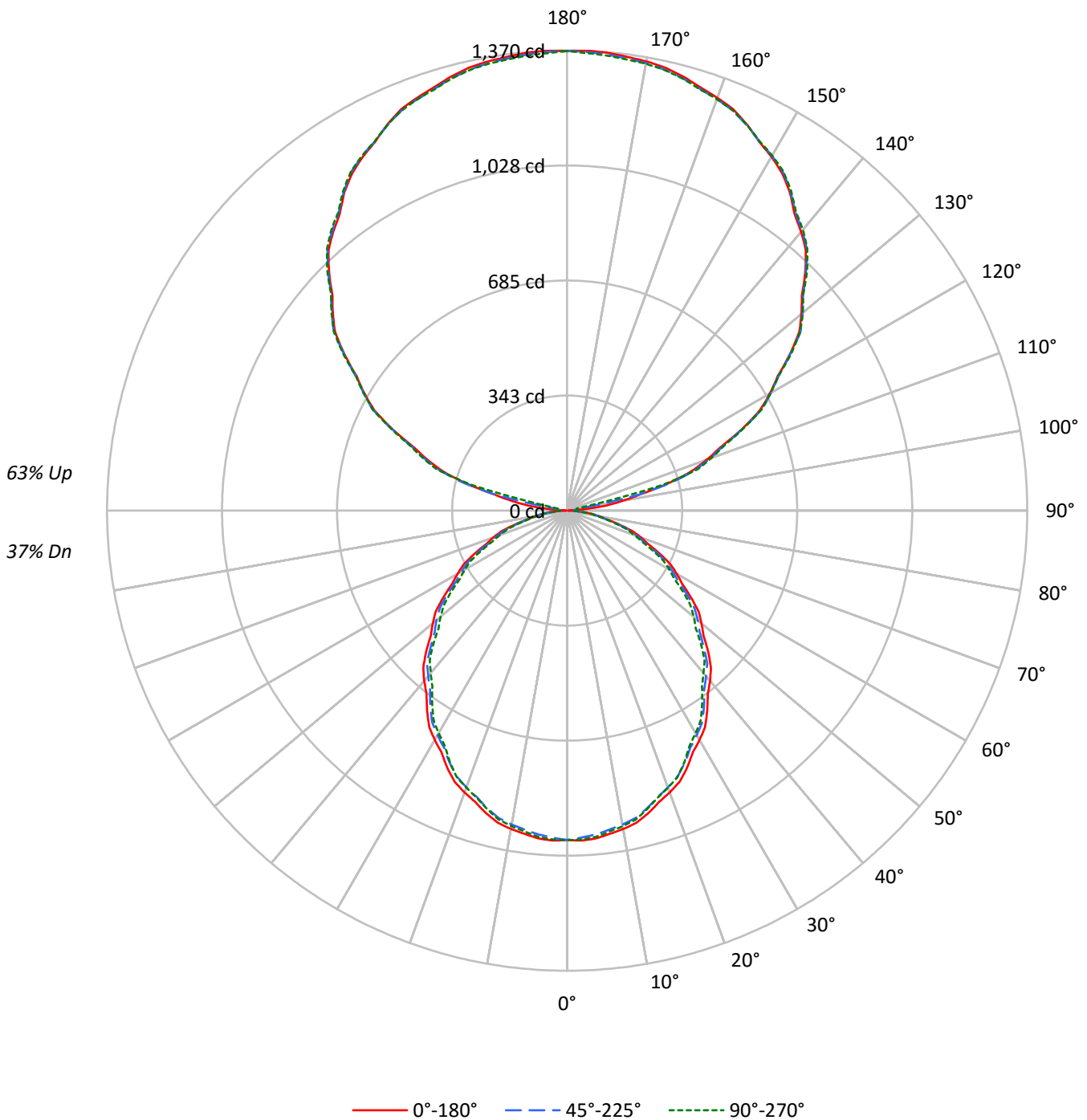
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	76	76	76	60	60	60	44	44	44	37
1	95	91	87	83	86	82	79	76	67	64	62	52	51	50	39	38	37	31
2	86	79	73	68	78	72	67	62	58	55	52	46	44	41	35	33	32	26
3	79	69	62	57	71	63	57	52	52	47	43	41	38	35	31	29	27	22
4	72	61	54	48	65	56	49	44	46	41	37	36	33	30	27	25	23	19
5	66	55	47	41	60	50	43	38	41	36	32	32	29	26	25	22	20	17
6	61	49	41	35	55	45	38	33	37	31	28	29	25	23	22	20	18	15
7	56	44	36	31	51	40	33	29	33	28	24	27	23	20	20	18	16	13
8	52	40	32	27	47	37	30	25	30	25	21	24	20	18	19	16	14	12
9	48	36	29	24	44	33	27	22	28	23	19	22	19	16	17	15	13	10
10	45	33	26	22	41	31	24	20	25	21	17	21	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7917	7917	7917
5°	7942	7846	7903
10°	7891	7782	7820
15°	7796	7672	7691
20°	7669	7534	7541
25°	7525	7378	7357
30°	7347	7194	7127
35°	7164	7001	6908
40°	6973	6783	6658
45°	6774	6567	6441
50°	6553	6376	6178
55°	6315	6128	5928
60°	6077	5848	5670
65°	5809	5585	5358
70°	5509	5231	5028
75°	5050	4803	4682
80°	4491	4310	4203
85°	3927	3788	3714



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.4	1.4
10°-20°	260.2	3.9
20°-30°	383.0	5.7
30°-40°	445.3	6.6
40°-50°	445.3	6.6
50°-60°	389.5	5.8
60°-70°	289.3	4.3
70°-80°	164.3	2.4
80°-90°	51.4	0.8
90°-100°	46.8	0.7
100°-110°	298.3	4.4
110°-120°	570.7	8.5
120°-130°	724.4	10.7
130°-140°	775.1	11.5
140°-150°	724.8	10.7
150°-160°	584.5	8.7
160°-170°	377.0	5.6
170°-180°	129.9	1.9
0°-30°	735.6	10.9
0°-40°	1180.9	17.5
0°-60°	2015.7	29.9
0°-90°	2520.6	37.3
90°-120°	915.8	13.6
90°-150°	3140.1	46.5
90°-180°	4232.0	62.7
0°-180°	6752.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	981	981	981	981	981	
5°	980	976	968	976	975	93
15°	933	929	918	922	920	263
25°	845	839	828	829	826	388
35°	727	721	710	705	701	454
45°	593	587	575	567	564	457
55°	449	446	435	426	421	402
65°	304	300	292	285	280	301
75°	162	158	154	151	150	172
85°	42	42	41	41	40	47
90°	3	14	22	28	31	5
95°	56	23	22	28	30	72
105°	308	314	319	326	292	322
115°	575	578	577	579	579	566
125°	808	812	810	813	814	721
135°	1003	1002	1006	1008	1010	772
145°	1156	1159	1159	1160	1162	722
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	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7
2.5°	983.2	982.8	982.4	982.0	981.6	980.6	979.1	977.5	975.9	974.4	975.8
5°	980.0	979.3	978.6	977.9	977.1	975.8	973.9	972.0	970.1	968.2	970.1
7.5°	970.8	970.1	969.5	968.8	968.1	966.6	964.5	962.4	960.2	958.1	959.7
10°	962.6	962.0	961.3	960.6	959.9	958.4	956.1	953.8	951.6	949.3	950.7
12.5°	952.0	951.3	950.6	949.9	949.2	947.7	945.2	942.8	940.4	938.0	939.5
15°	932.8	932.1	931.4	930.7	930.0	928.4	925.7	923.1	920.5	917.9	918.9
17.5°	909.7	908.8	908.0	907.1	906.2	904.5	902.0	899.6	897.1	894.6	895.2
20°	892.7	891.8	891.0	890.1	889.2	887.5	884.8	882.2	879.6	877.0	877.5
22.5°	874.4	873.3	872.2	871.0	869.9	868.0	865.4	862.7	860.1	857.5	858.5
25°	844.8	843.5	842.3	841.1	839.9	838.1	835.6	833.1	830.7	828.3	828.5
27.5°	810.8	809.6	808.3	807.1	805.8	804.1	801.7	799.5	797.2	795.0	794.6
30°	788.2	786.8	785.4	784.0	782.6	780.7	778.5	776.2	774.0	771.7	771.0
32.5°	764.3	763.1	761.7	760.5	759.3	757.4	755.1	752.7	750.2	747.8	747.0
35°	726.9	725.7	724.5	723.3	722.1	720.1	717.7	715.3	712.9	710.4	709.1
37.5°	687.4	686.3	685.2	684.1	683.0	681.2	678.5	675.9	673.3	670.7	669.3
40°	661.7	660.2	658.8	657.5	656.1	654.1	651.5	648.8	646.2	643.6	641.9
42.5°	634.0	633.2	632.4	631.5	630.7	628.7	625.9	623.0	620.1	617.2	615.2
45°	593.3	592.1	590.9	589.7	588.4	586.4	583.6	580.8	578.0	575.2	573.3
47.5°	550.7	549.9	549.1	548.2	547.3	545.6	543.1	540.5	537.9	535.3	533.1
50°	521.8	521.1	520.4	519.7	519.0	517.5	515.0	512.5	510.1	507.7	505.2
52.5°	493.5	492.7	491.8	491.0	490.2	488.5	485.8	483.3	480.7	478.1	475.9
55°	448.7	448.2	447.7	447.2	446.7	445.1	442.7	440.2	437.8	435.4	433.2
57.5°	406.0	405.4	404.8	404.1	403.5	402.1	399.7	397.3	394.9	392.4	390.4
60°	376.4	375.6	374.7	373.8	372.9	371.3	369.1	366.8	364.6	362.2	360.7
62.5°	347.5	346.8	346.0	345.3	344.6	343.0	340.6	338.2	335.8	333.4	331.9
65°	304.1	303.3	302.4	301.5	300.6	299.3	297.6	295.8	294.1	292.4	290.5
67.5°	260.4	259.6	258.8	258.0	257.2	256.0	254.3	252.7	251.0	249.2	247.6
70°	233.4	232.2	231.0	229.7	228.5	227.2	225.8	224.4	223.0	221.6	220.3
72.5°	204.5	203.3	202.1	200.8	199.5	198.4	197.3	196.2	195.1	193.9	192.8
75°	161.9	161.0	160.2	159.3	158.3	157.5	156.6	155.7	154.9	154.0	153.3
77.5°	121.2	120.8	120.4	120.1	119.7	119.1	118.3	117.5	116.7	116.0	115.7
80°	96.6	96.1	95.6	95.1	94.5	94.1	93.8	93.4	93.1	92.7	92.4
82.5°	72.8	72.5	72.3	72.0	71.8	71.6	71.6	71.5	71.4	71.4	71.1
85°	42.4	42.4	42.4	42.4	42.4	42.2	41.9	41.6	41.2	40.9	40.9
87.5°	17.0	17.4	17.7	18.1	18.4	18.7	18.9	19.2	19.4	19.6	19.9
90°	3.0	5.6	8.1	10.6	13.0	15.2	17.1	18.9	20.7	22.5	23.8
92.5°	12.9	13.0	13.1	13.3	13.4	14.4	16.3	18.1	19.9	21.7	23.0
95°	56.2	48.6	40.8	33.1	25.3	21.6	21.8	22.0	22.3	22.5	23.8
97.5°	119.5	124.3	129.2	134.0	138.8	128.6	103.1	77.8	52.4	27.0	27.2
100°	167.8	171.9	176.0	180.1	184.2	170.6	139.2	107.8	76.4	45.0	41.2
102.5°	221.9	224.8	227.8	230.9	233.8	233.3	229.2	225.1	221.0	216.9	175.2
105°	308.0	309.3	310.7	312.0	313.5	314.7	315.8	317.0	318.1	319.2	321.2
107.5°	388.0	388.7	389.3	390.0	390.7	391.8	393.3	395.0	396.5	398.0	399.0
110°	442.0	442.7	443.3	444.0	444.7	445.8	447.2	448.5	449.9	451.2	451.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	494.4	495.6	496.9	498.1	499.3	500.3	500.9	501.5	502.1	502.8	502.7
115°	575.0	575.7	576.4	577.0	577.7	577.9	577.7	577.5	577.3	577.0	577.5
117.5°	647.6	648.5	649.4	650.4	651.3	652.0	652.5	653.0	653.5	654.0	653.9
120°	696.8	697.7	698.6	699.5	700.4	700.7	700.5	700.3	700.0	699.8	700.3
122.5°	742.7	743.2	743.7	744.3	744.8	745.3	745.6	745.9	746.2	746.5	746.8
125°	808.3	809.2	810.1	811.0	811.9	812.1	811.7	811.2	810.8	810.3	811.0
127.5°	870.5	870.7	871.0	871.2	871.4	872.0	873.1	874.1	875.1	876.3	876.2
130°	910.6	910.9	911.1	911.3	911.5	912.0	912.7	913.3	914.0	914.7	914.9
132.5°	947.5	947.9	948.3	948.7	949.1	949.8	950.6	951.5	952.3	953.2	953.4
135°	1002.7	1002.5	1002.3	1002.0	1001.8	1002.2	1003.1	1004.0	1004.9	1005.8	1006.2
137.5°	1051.6	1051.7	1051.8	1051.9	1052.0	1052.5	1053.5	1054.5	1055.5	1056.5	1057.0
140°	1083.6	1084.0	1084.5	1084.9	1085.4	1085.8	1086.3	1086.7	1087.2	1087.6	1088.3
142.5°	1112.2	1113.0	1113.8	1114.7	1115.5	1116.0	1116.3	1116.5	1116.8	1117.1	1117.6
145°	1156.2	1156.9	1157.5	1158.2	1158.9	1159.2	1159.2	1159.2	1159.2	1159.2	1159.5
147.5°	1191.1	1192.4	1193.8	1195.0	1196.3	1196.8	1196.6	1196.4	1196.1	1195.9	1196.1
150°	1216.6	1217.5	1218.4	1219.3	1220.2	1220.5	1220.3	1220.1	1219.8	1219.6	1219.6
152.5°	1237.8	1238.6	1239.3	1240.0	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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7
2.5°	977.2	978.7	980.1	980.7	980.5	980.4	980.3	980.1
5°	972.0	973.9	975.8	976.6	976.2	975.9	975.5	975.2
7.5°	961.2	962.7	964.2	964.9	964.7	964.5	964.3	964.0
10°	952.1	953.5	954.9	955.4	955.0	954.7	954.3	954.0
12.5°	941.1	942.6	944.1	944.6	944.1	943.6	943.2	942.7
15°	920.0	921.0	922.0	922.3	921.8	921.3	920.7	920.2
17.5°	896.0	896.6	897.3	897.4	897.1	896.7	896.4	896.1
20°	878.1	878.6	879.1	879.2	878.8	878.5	878.2	877.8
22.5°	859.4	860.3	861.3	861.4	860.8	860.2	859.6	858.9
25°	828.6	828.8	829.0	828.7	828.0	827.3	826.6	825.9
27.5°	794.2	793.7	793.2	792.6	791.7	790.9	790.0	789.1
30°	770.3	769.6	768.9	768.1	767.2	766.4	765.5	764.6
32.5°	746.1	745.3	744.5	743.6	742.8	741.8	740.9	740.1
35°	707.9	706.7	705.5	704.5	703.6	702.7	701.9	700.9
37.5°	668.0	666.6	665.3	664.1	663.0	661.8	660.7	659.4
40°	640.2	638.3	636.6	635.3	634.4	633.6	632.7	631.8
42.5°	613.2	611.1	609.0	607.7	607.2	606.6	606.0	605.4
45°	571.4	569.5	567.5	566.3	565.8	565.3	564.7	564.2
47.5°	531.0	528.8	526.6	524.9	523.6	522.2	520.9	519.6
50°	502.7	500.3	497.9	496.1	495.0	494.0	493.0	491.9
52.5°	473.7	471.6	469.5	467.7	466.4	465.0	463.7	462.4
55°	431.2	429.1	427.0	425.4	424.3	423.3	422.2	421.2
57.5°	388.5	386.5	384.5	382.9	381.9	380.9	379.9	378.9
60°	359.1	357.6	356.0	354.8	353.9	353.0	352.1	351.2
62.5°	330.5	329.0	327.6	326.5	325.6	324.8	323.9	323.0
65°	288.8	287.1	285.4	284.1	283.2	282.3	281.4	280.5
67.5°	245.9	244.3	242.6	241.6	241.4	241.2	240.9	240.7
70°	218.8	217.4	216.0	215.1	214.5	214.0	213.5	213.0
72.5°	191.7	190.6	189.5	188.6	188.1	187.6	187.1	186.5
75°	152.6	151.9	151.3	150.8	150.6	150.5	150.3	150.1
77.5°	115.5	115.3	115.1	114.8	114.3	113.9	113.4	113.0
80°	92.0	91.7	91.3	91.1	90.9	90.7	90.6	90.4
82.5°	70.9	70.7	70.5	70.3	70.2	70.0	69.8	69.6
85°	40.9	40.9	40.9	40.8	40.6	40.4	40.3	40.1
87.5°	20.1	20.4	20.7	20.9	20.9	21.0	21.1	21.2
90°	25.2	26.6	28.0	28.9	29.3	29.8	30.2	30.7
92.5°	24.4	25.8	27.2	27.9	28.0	28.1	28.2	28.3
95°	25.2	26.6	28.0	28.8	29.0	29.2	29.5	29.7
97.5°	27.3	27.5	27.6	27.8	28.0	28.2	28.4	28.7
100°	37.3	33.4	29.6	27.8	28.0	28.2	28.4	28.7
102.5°	133.5	91.8	50.1	29.3	29.3	29.4	29.4	29.5
105°	323.4	325.4	327.4	324.4	316.2	308.0	299.8	291.6
107.5°	400.0	401.0	402.0	402.9	403.8	404.7	405.6	406.4
110°	452.1	452.6	453.0	453.6	454.3	454.9	455.7	456.4



TEST NUMBER: P332761-840

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	502.6	502.5	502.4	502.8	503.7	504.5	505.4	506.2
115°	577.9	578.5	578.9	579.2	579.2	579.2	579.2	579.2
117.5°	653.8	653.8	653.7	653.6	653.5	653.4	653.3	653.2
120°	700.7	701.3	701.7	701.7	701.3	700.7	700.3	699.8
122.5°	747.1	747.3	747.6	747.5	747.1	746.6	746.2	745.7
125°	811.7	812.4	813.0	813.5	813.7	814.0	814.3	814.5
127.5°	876.0	875.9	875.7	875.6	875.4	875.1	874.9	874.8
130°	915.1	915.4	915.6	915.7	915.7	915.7	915.7	915.7
132.5°	953.6	953.9	954.1	954.1	953.9	953.7	953.6	953.4
135°	1006.7	1007.1	1007.6	1008.0	1008.6	1009.0	1009.5	1009.9
137.5°	1057.5	1058.0	1058.5	1058.7	1058.5	1058.4	1058.3	1058.1
140°	1089.0	1089.6	1090.4	1090.9	1091.1	1091.3	1091.5	1091.8
142.5°	1118.1	1118.6	1119.1	1119.3	1119.4	1119.4	1119.5	1119.5
145°	1159.7	1159.9	1160.1	1160.5	1160.9	1161.4	1161.8	1162.4
147.5°	1196.3	1196.4	1196.6	1196.8	1197.1	1197.3	1197.5	1197.7
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)