

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: P333045

Luminaire Tested: **S124RDIW-S575D1050U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333045
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: S124RDIW-S575D1050U835-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1050 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6542.2 lumens
Efficiency: N/A
Efficacy: 144.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

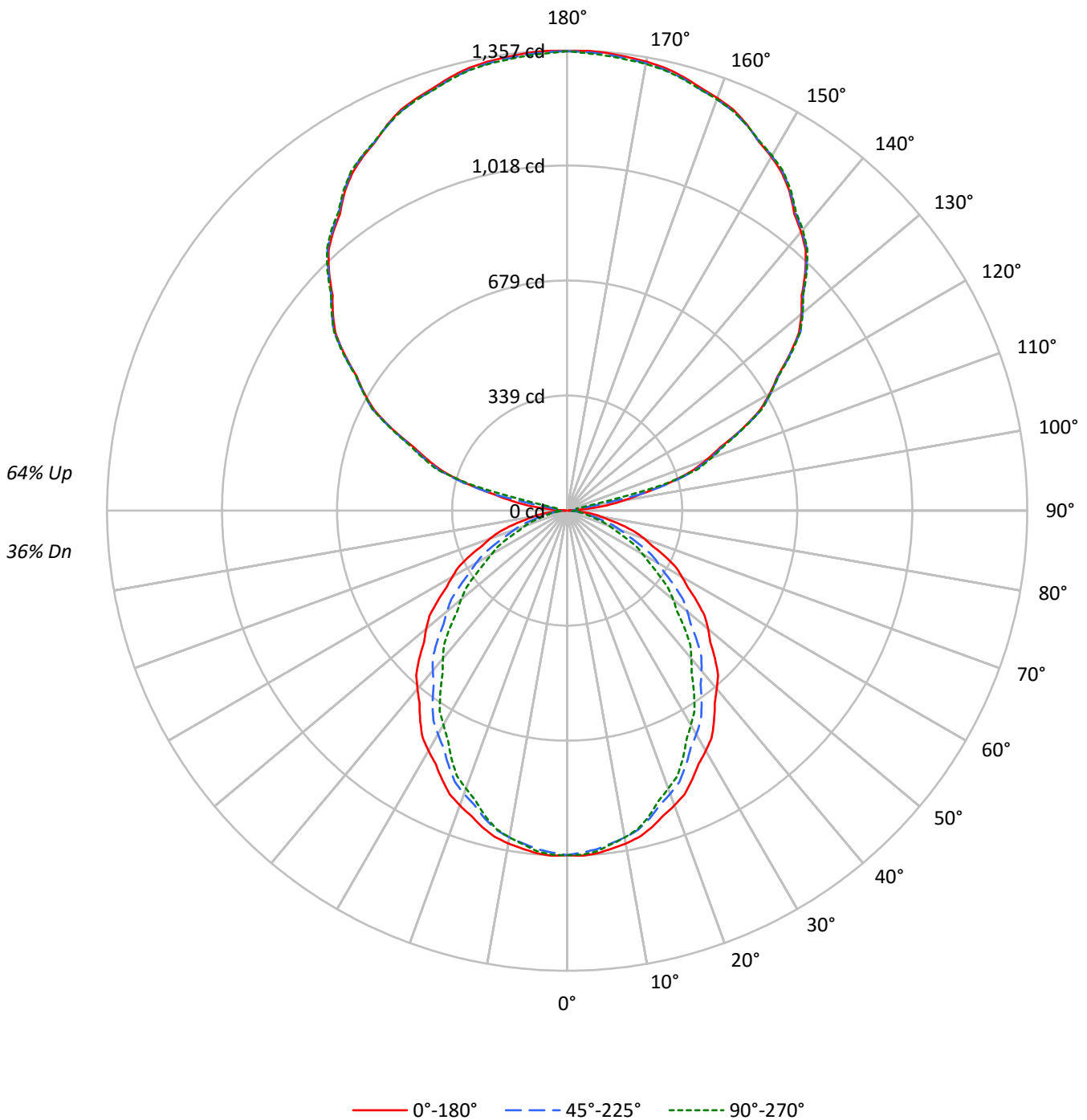
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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		59	59	59		43	43	43	36
1	95	91	87	84	86	82	79	76	66	64	62		52	50	49		38	38	37	31
2	86	79	73	69	78	72	67	63	58	55	52		46	43	41		34	33	31	26
3	79	70	63	57	71	64	57	53	52	47	44		41	38	35		30	28	27	22
4	72	62	54	48	65	56	50	45	46	41	37		36	33	30		27	25	23	19
5	66	55	47	41	60	50	43	38	41	36	32		33	29	26		25	22	20	17
6	61	49	42	36	55	45	38	33	37	32	28		29	26	23		22	20	18	15
7	56	45	37	31	51	41	34	29	34	28	25		27	23	20		20	18	16	13
8	52	40	33	28	47	37	30	26	31	25	22		24	21	18		19	16	14	12
9	49	37	30	25	44	34	27	23	28	23	20		22	19	16		17	15	13	11
10	45	34	27	22	41	31	25	21	26	21	18		21	17	15		16	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8205	8205	8205
5°	8223	8122	8173
10°	8171	8025	8025
15°	8078	7856	7798
20°	7948	7635	7494
25°	7784	7375	7187
30°	7623	7101	6804
35°	7447	6818	6419
40°	7233	6495	6003
45°	7036	6174	5579
50°	6812	5805	5130
55°	6572	5422	4643
60°	6307	5000	4146
65°	6065	4474	3656
70°	5712	3895	3104
75°	5268	3228	2523
80°	4593	2459	2315
85°	3890	2232	2093



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.5	1.5
10°-20°	266.2	4.1
20°-30°	384.4	5.9
30°-40°	435.7	6.7
40°-50°	420.8	6.4
50°-60°	349.9	5.3
60°-70°	241.6	3.7
70°-80°	122.5	1.9
80°-90°	35.3	0.5
90°-100°	46.3	0.7
100°-110°	295.4	4.5
110°-120°	565.1	8.6
120°-130°	717.4	11.0
130°-140°	767.5	11.7
140°-150°	717.7	11.0
150°-160°	578.8	8.8
160°-170°	373.3	5.7
170°-180°	128.7	2.0
0°-30°	746.1	11.4
0°-40°	1181.8	18.1
0°-60°	1952.5	29.8
0°-90°	2351.9	36.0
90°-120°	906.8	13.9
90°-150°	3109.5	47.5
90°-180°	4190.0	64.0
0°-180°	6542.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1016	1016	1016	1016	1016	
5°	1015	1011	1002	1010	1008	96
15°	966	959	940	938	933	272
25°	874	859	828	815	807	402
35°	756	730	692	666	651	472
45°	616	586	541	504	489	475
55°	467	435	385	346	330	418
65°	318	283	234	202	191	313
75°	169	140	104	86	81	178
85°	42	27	24	23	23	47
90°	3	14	22	28	30	5
95°	56	23	22	28	29	72
105°	305	311	316	323	289	319
115°	569	572	571	573	574	560
125°	800	804	802	805	806	714
135°	993	992	996	998	1000	765
145°	1145	1148	1148	1149	1151	715
155°	1255	1256	1253	1257	1254	579
165°	1324	1319	1319	1326	1318	374
175°	1355	1349	1350	1358	1346	129
180°	1355	1355	1355	1355	1355	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3
2.5°	1018.8	1018.2	1017.7	1017.1	1016.6	1015.5	1014.0	1012.5	1010.9	1009.4	1010.9
5°	1014.7	1014.0	1013.3	1012.6	1012.0	1010.6	1008.5	1006.4	1004.3	1002.3	1004.0
7.5°	1005.5	1004.8	1004.1	1003.4	1002.6	1000.9	998.2	995.5	992.8	990.1	991.2
10°	996.8	996.0	995.1	994.2	993.4	991.4	988.3	985.1	982.0	978.9	979.6
12.5°	985.6	984.6	983.6	982.6	981.6	979.3	975.6	971.9	968.3	964.6	965.0
15°	966.5	964.9	963.4	961.8	960.2	957.3	953.0	948.7	944.3	940.0	939.7
17.5°	943.3	941.0	938.8	936.5	934.3	930.6	925.4	920.2	915.0	909.8	908.9
20°	925.2	923.0	920.7	918.5	916.2	912.2	906.3	900.4	894.5	888.7	887.3
22.5°	905.3	902.8	900.3	897.7	895.2	890.8	884.5	878.2	871.9	865.6	863.5
25°	873.9	870.8	867.6	864.5	861.4	856.3	849.2	842.1	835.0	828.0	825.0
27.5°	840.9	837.0	833.1	829.2	825.2	819.5	811.9	804.4	796.8	789.2	785.6
30°	817.8	813.5	809.2	804.9	800.6	794.3	786.2	778.1	769.9	761.8	757.5
32.5°	793.6	788.7	783.8	778.9	774.1	767.4	759.0	750.6	742.2	733.8	728.8
35°	755.6	750.1	744.5	739.0	733.5	726.4	717.7	709.1	700.4	691.8	685.9
37.5°	715.0	709.3	703.6	697.9	692.1	684.5	674.9	665.3	655.8	646.2	639.6
40°	686.3	680.6	674.9	669.2	663.5	655.7	645.9	636.0	626.2	616.3	609.0
42.5°	658.9	653.0	647.0	641.0	635.0	626.9	616.6	606.3	596.1	585.8	578.4
45°	616.3	609.9	603.5	597.1	590.7	582.3	571.9	561.6	551.2	540.8	532.3
47.5°	572.3	565.7	559.0	552.4	545.8	537.1	526.3	515.6	504.8	494.0	485.2
50°	542.4	535.6	528.9	522.1	515.4	506.5	495.4	484.4	473.3	462.2	453.6
52.5°	511.9	505.3	498.7	492.1	485.4	476.5	465.1	453.8	442.4	431.1	422.3
55°	466.9	460.0	453.1	446.1	439.2	430.1	418.9	407.7	396.4	385.2	376.2
57.5°	422.4	415.2	408.0	400.8	393.6	384.5	373.4	362.3	351.3	340.2	331.1
60°	390.6	383.7	376.8	369.9	363.0	354.0	342.9	331.8	320.8	309.7	300.7
62.5°	362.0	354.8	347.6	340.4	333.2	324.0	312.6	301.3	289.9	278.6	270.3
65°	317.5	310.1	302.6	295.2	287.7	278.5	267.4	256.4	245.3	234.2	226.8
67.5°	271.3	264.1	257.0	249.9	242.8	234.1	223.8	213.5	203.3	193.0	186.6
70°	242.0	234.7	227.5	220.2	213.0	204.4	194.5	184.7	174.8	165.0	159.3
72.5°	210.9	204.3	197.7	191.2	184.6	176.7	167.4	158.1	148.7	139.4	134.6
75°	168.9	162.5	156.1	149.7	143.3	136.0	127.9	119.7	111.6	103.5	99.5
77.5°	126.2	120.8	115.4	109.9	104.5	98.5	91.9	85.4	78.8	72.2	69.9
80°	98.8	93.8	88.8	83.8	78.8	73.7	68.5	63.3	58.1	52.9	52.4
82.5°	75.2	70.6	66.0	61.4	56.8	53.0	50.0	47.0	44.1	41.1	40.7
85°	42.0	38.6	35.1	31.6	28.2	26.2	25.7	25.2	24.6	24.1	23.8
87.5°	14.9	14.3	13.7	13.1	12.5	12.3	12.5	12.7	13.0	13.2	13.3
90°	3.0	5.5	8.0	10.5	12.9	15.1	16.9	18.7	20.5	22.3	23.6
92.5°	12.8	12.9	13.0	13.2	13.3	14.3	16.1	17.9	19.7	21.5	22.8
95°	55.7	48.1	40.4	32.8	25.1	21.4	21.6	21.8	22.1	22.3	23.6
97.5°	118.3	123.1	127.9	132.7	137.4	127.3	102.1	77.0	51.9	26.7	26.9
100°	166.2	170.2	174.3	178.3	182.4	168.9	137.8	106.7	75.7	44.6	40.8
102.5°	219.7	222.6	225.6	228.6	231.5	231.0	227.0	222.9	218.8	214.8	173.5
105°	305.0	306.3	307.7	309.0	310.4	311.6	312.7	313.9	315.0	316.1	318.1
107.5°	384.2	384.9	385.5	386.2	386.9	388.0	389.5	391.1	392.6	394.1	395.1
110°	437.7	438.4	439.0	439.7	440.4	441.4	442.8	444.1	445.5	446.8	447.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	489.6	490.8	492.0	493.2	494.4	495.4	496.0	496.6	497.2	497.9	497.8
115°	569.4	570.1	570.8	571.4	572.1	572.3	572.1	571.9	571.7	571.4	571.9
117.5°	641.3	642.2	643.1	644.0	644.9	645.6	646.1	646.6	647.1	647.6	647.5
120°	690.0	690.9	691.8	692.7	693.6	693.9	693.7	693.5	693.2	693.0	693.5
122.5°	735.4	735.9	736.4	737.0	737.5	738.0	738.3	738.6	738.9	739.2	739.5
125°	800.4	801.3	802.2	803.1	804.0	804.2	803.8	803.3	802.9	802.4	803.1
127.5°	862.0	862.2	862.5	862.7	862.9	863.5	864.6	865.6	866.6	867.7	867.6
130°	901.7	902.0	902.2	902.4	902.6	903.1	903.8	904.4	905.1	905.8	906.0
132.5°	938.2	938.6	939.0	939.4	939.8	940.5	941.3	942.2	943.0	943.9	944.1
135°	992.9	992.7	992.5	992.2	992.0	992.4	993.3	994.2	995.1	996.0	996.4
137.5°	1041.3	1041.4	1041.5	1041.6	1041.7	1042.2	1043.2	1044.2	1045.2	1046.2	1046.7
140°	1073.0	1073.4	1073.9	1074.3	1074.8	1075.2	1075.7	1076.1	1076.6	1077.0	1077.7
142.5°	1101.3	1102.1	1102.9	1103.8	1104.6	1105.1	1105.4	1105.6	1105.9	1106.2	1106.7
145°	1144.9	1145.6	1146.2	1146.9	1147.6	1147.9	1147.9	1147.9	1147.9	1147.9	1148.2
147.5°	1179.5	1180.8	1182.1	1183.3	1184.6	1185.1	1184.9	1184.7	1184.4	1184.2	1184.4
150°	1204.7	1205.6	1206.5	1207.4	1208.3	1208.6	1208.4	1208.2	1207.9	1207.7	1207.7
152.5°	1225.7	1226.5	1227.2	1227.9	1228.6	1228.8	1228.4	1228.0	1227.6	1227.2	1227.5
155°	1255.3	1255.6	1255.8	1256.0	1256.2	1256.0	1255.3	1254.7	1254.0	1253.3	1254.2
157.5°	1280.3	1280.1	1280.0	1279.8	1279.7	1279.3	1278.5	1277.7	1277.0	1276.2	1277.4
160°	1294.8	1294.2	1293.5	1292.8	1292.1	1291.7	1291.5	1291.2	1291.0	1290.8	1292.1
162.5°	1307.8	1307.0	1306.1	1305.2	1304.4	1303.8	1303.6	1303.4	1303.2	1302.9	1304.3
165°	1324.2	1323.1	1322.0	1320.8	1319.7	1319.2	1319.2	1319.2	1319.2	1319.2	1321.0
167.5°	1337.2	1336.0	1334.9	1333.7	1332.5	1331.9	1331.7	1331.6	1331.5	1331.3	1333.3
170°	1344.5	1343.1	1341.8	1340.4	1339.1	1338.5	1338.7	1339.0	1339.2	1339.4	1341.2
172.5°	1349.3	1348.0	1346.6	1345.3	1343.9	1343.4	1343.6	1343.8	1344.1	1344.3	1346.1
175°	1354.6	1353.3	1351.9	1350.6	1349.2	1348.7	1348.9	1349.1	1349.3	1349.6	1351.6
177.5°	1357.0	1355.8	1354.5	1353.3	1352.0	1351.6	1351.9	1352.3	1352.6	1353.0	1354.4
180°	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3
2.5°	1012.5	1014.0	1015.5	1016.2	1016.1	1015.9	1015.8	1015.7
5°	1005.7	1007.5	1009.2	1009.9	1009.5	1009.2	1008.8	1008.5
7.5°	992.3	993.4	994.6	994.8	994.3	993.7	993.2	992.6
10°	980.3	981.0	981.7	981.7	981.0	980.3	979.6	978.9
12.5°	965.4	965.8	966.3	966.0	965.0	964.1	963.1	962.1
15°	939.3	939.0	938.6	937.9	936.6	935.4	934.2	933.0
17.5°	907.9	906.9	905.9	904.5	902.7	900.9	899.0	897.2
20°	885.9	884.5	883.1	881.3	879.1	876.8	874.6	872.3
22.5°	861.5	859.4	857.3	855.4	853.5	851.7	849.9	848.0
25°	822.1	819.1	816.2	813.9	812.1	810.4	808.7	806.9
27.5°	781.9	778.3	774.7	771.6	769.1	766.6	764.2	761.7
30°	753.2	748.8	744.5	741.0	738.2	735.4	732.7	729.9
32.5°	723.8	718.8	713.7	709.9	707.3	704.7	702.0	699.4
35°	680.0	674.1	668.3	663.8	660.7	657.5	654.4	651.3
37.5°	633.0	626.5	619.9	615.1	611.9	608.8	605.7	602.6
40°	601.8	594.5	587.2	582.1	578.9	575.8	572.7	569.6
42.5°	571.0	563.6	556.2	550.9	547.6	544.4	541.1	537.9
45°	523.9	515.4	506.9	501.1	498.0	494.9	491.8	488.7
47.5°	476.4	467.6	458.8	452.7	449.3	445.9	442.5	439.0
50°	444.9	436.3	427.6	421.7	418.4	415.1	411.8	408.5
52.5°	413.5	404.7	396.0	389.9	386.4	383.0	379.6	376.2
55°	367.2	358.2	349.2	343.1	339.8	336.5	333.2	329.9
57.5°	321.9	312.8	303.7	297.9	295.4	292.9	290.4	287.9
60°	291.7	282.7	273.7	267.9	265.1	262.3	259.6	256.8
62.5°	262.0	253.7	245.4	240.1	237.9	235.7	233.5	231.3
65°	219.4	211.9	204.5	199.7	197.7	195.6	193.5	191.4
67.5°	180.2	173.8	167.4	163.1	160.8	158.5	156.2	153.9
70°	153.6	147.9	142.1	138.4	136.7	135.0	133.2	131.5
72.5°	129.7	124.8	119.9	116.7	115.1	113.5	111.9	110.3
75°	95.5	91.6	87.6	85.1	84.0	83.0	82.0	80.9
77.5°	67.6	65.3	62.9	61.6	61.3	61.0	60.7	60.4
80°	51.9	51.4	50.8	50.5	50.3	50.1	50.0	49.8
82.5°	40.3	39.9	39.6	39.3	39.1	38.9	38.8	38.6
85°	23.4	23.1	22.7	22.6	22.6	22.6	22.6	22.6
87.5°	13.4	13.6	13.7	13.9	14.1	14.3	14.6	14.8
90°	25.0	26.3	27.7	28.6	29.0	29.5	29.9	30.4
92.5°	24.2	25.5	26.9	27.6	27.7	27.8	27.9	28.0
95°	25.0	26.3	27.7	28.5	28.7	28.9	29.2	29.4
97.5°	27.0	27.2	27.3	27.5	27.7	27.9	28.1	28.4
100°	36.9	33.1	29.3	27.5	27.7	27.9	28.1	28.4
102.5°	132.2	90.9	49.6	29.0	29.0	29.1	29.1	29.2
105°	320.2	322.2	324.2	321.2	313.1	305.0	296.9	288.8
107.5°	396.1	397.1	398.1	399.0	399.9	400.7	401.6	402.4
110°	447.7	448.2	448.6	449.2	449.9	450.5	451.2	451.9



TEST NUMBER: P333045

CATALOG NUMBER: S124RDIW-S575D1050U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	497.7	497.6	497.5	497.9	498.8	499.6	500.5	501.3
115°	572.3	572.8	573.2	573.5	573.5	573.5	573.5	573.5
117.5°	647.4	647.4	647.3	647.2	647.1	647.0	646.9	646.8
120°	693.9	694.4	694.8	694.8	694.4	693.9	693.5	693.0
122.5°	739.8	740.0	740.3	740.2	739.8	739.3	738.9	738.4
125°	803.8	804.5	805.1	805.6	805.8	806.0	806.3	806.5
127.5°	867.4	867.3	867.1	867.0	866.8	866.6	866.4	866.3
130°	906.2	906.5	906.7	906.8	906.8	906.8	906.8	906.8
132.5°	944.3	944.6	944.8	944.8	944.6	944.4	944.3	944.1
135°	996.9	997.3	997.8	998.2	998.7	999.1	999.6	1000.0
137.5°	1047.2	1047.7	1048.2	1048.4	1048.2	1048.1	1048.0	1047.8
140°	1078.4	1079.0	1079.7	1080.2	1080.4	1080.6	1080.8	1081.1
142.5°	1107.2	1107.7	1108.2	1108.4	1108.5	1108.5	1108.6	1108.6
145°	1148.4	1148.6	1148.8	1149.2	1149.6	1150.1	1150.5	1151.0
147.5°	1184.6	1184.7	1184.9	1185.1	1185.4	1185.6	1185.8	1186.0
150°	1207.7	1207.7	1207.7	1207.8	1208.0	1208.3	1208.5	1208.7
152.5°	1227.9	1228.2	1228.6	1228.7	1228.6	1228.4	1228.3	1228.2
155°	1255.1	1256.0	1256.9	1257.0	1256.3	1255.7	1255.0	1254.3
157.5°	1278.5	1279.7	1280.9	1280.9	1279.7	1278.5	1277.4	1276.2
160°	1293.5	1294.8	1296.2	1296.2	1294.8	1293.5	1292.1	1290.8
162.5°	1305.6	1307.0	1308.3	1308.3	1306.7	1305.2	1303.7	1302.1
165°	1322.8	1324.6	1326.4	1326.2	1324.2	1322.2	1320.2	1318.1
167.5°	1335.3	1337.3	1339.2	1339.1	1336.9	1334.6	1332.4	1330.1
170°	1343.0	1344.8	1346.6	1346.4	1344.1	1341.9	1339.6	1337.4
172.5°	1347.9	1349.7	1351.5	1351.2	1348.7	1346.3	1343.9	1341.4
175°	1353.6	1355.6	1357.7	1357.3	1354.6	1351.9	1349.2	1346.5
177.5°	1355.9	1357.3	1358.8	1358.4	1356.2	1354.1	1351.9	1349.8
180°	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6

(END OF REPORT)