

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: P333049

Luminaire Tested: **S124RDIW-S575D1340U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333049
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-S575D1340U835-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1340 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7717.3 lumens
Efficiency: N/A
Efficacy: 143.4 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

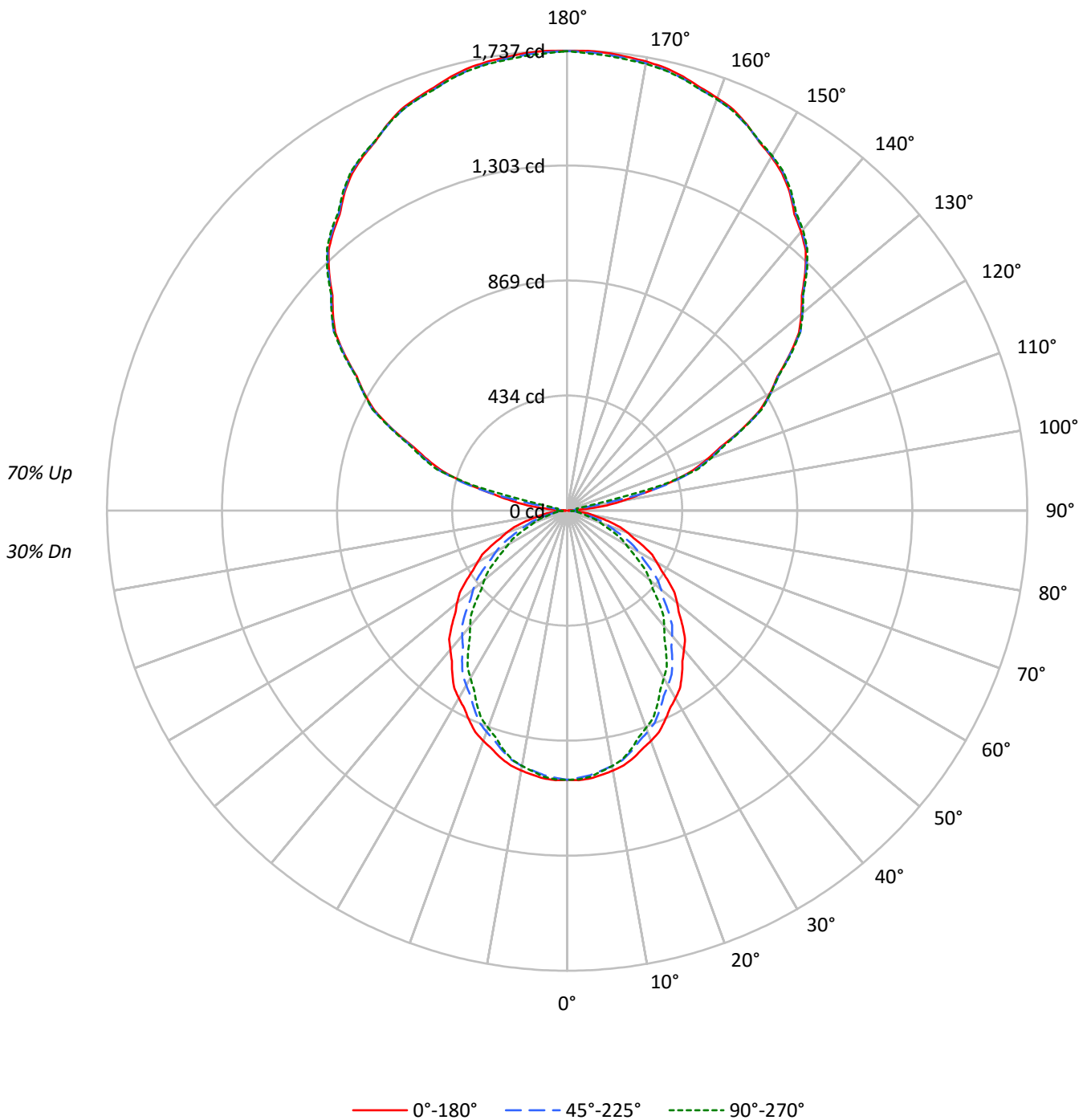
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	102	102	102	102	92	92	92	92	72	72	72	55	55	55	38	38	38	30
1	94	89	86	82	84	80	77	75	64	62	60	48	47	46	34	33	33	26
2	85	78	72	67	76	70	66	61	56	53	50	42	40	38	30	29	28	22
3	78	69	62	56	70	62	56	51	49	45	42	38	35	33	27	25	24	19
4	71	61	53	48	64	55	49	44	44	39	36	34	30	28	24	22	20	16
5	65	54	46	41	58	49	42	37	39	34	31	30	27	24	22	20	18	14
6	60	49	41	35	54	44	37	32	35	30	27	27	24	21	20	17	16	13
7	56	44	36	31	50	40	33	28	32	27	23	25	21	19	18	16	14	11
8	51	40	32	27	46	36	29	25	29	24	21	23	19	17	16	14	13	10
9	48	36	29	24	43	33	26	22	27	22	19	21	17	15	15	13	11	9
10	45	33	26	21	40	30	24	20	24	20	17	19	16	13	14	12	10	8

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	1.2
10°-20°	266.2	3.4
20°-30°	384.4	5.0
30°-40°	435.7	5.6
40°-50°	420.8	5.5
50°-60°	349.9	4.5
60°-70°	241.6	3.1
70°-80°	122.5	1.6
80°-90°	36.4	0.5
90°-100°	59.3	0.8
100°-110°	378.2	4.9
110°-120°	723.4	9.4
120°-130°	918.4	11.9
130°-140°	982.6	12.7
140°-150°	918.8	11.9
150°-160°	741.0	9.6
160°-170°	477.9	6.2
170°-180°	164.7	2.1
0°-30°	746.1	9.7
0°-40°	1181.8	15.3
0°-60°	1952.5	25.3
0°-90°	2353.0	30.5
90°-120°	1160.9	15.0
90°-150°	3980.7	51.6
90°-180°	5364.0	69.5
0°-180°	7717.3	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°	4	18	28	36	39	5
95°	71	30	28	36	38	92
105°	390	398	405	413	370	408
115°	729	733	732	734	734	717
125°	1025	1029	1027	1031	1032	914
135°	1271	1270	1275	1278	1280	979
145°	1466	1469	1470	1471	1474	916
155°	1607	1608	1604	1609	1606	741
165°	1695	1689	1689	1698	1688	479
175°	1734	1727	1728	1738	1724	165
180°	1734	1734	1734	1734	1734	



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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°	15.1	14.6	14.2	13.7	13.2	13.1	13.5	13.8	14.1	14.4	14.6
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°	16.3	16.5	16.7	16.9	17.0	18.3	20.6	22.9	25.2	27.5	29.2
95°	71.3	61.5	51.7	41.9	32.1	27.4	27.7	28.0	28.2	28.5	30.3
97.5°	151.5	157.6	163.7	169.8	175.9	162.9	130.7	98.6	66.4	34.2	34.4
100°	212.7	217.9	223.1	228.3	233.5	216.2	176.4	136.6	96.8	57.1	52.2
102.5°	281.2	285.0	288.8	292.6	296.4	295.7	290.5	285.4	280.2	275.0	222.1
105°	390.4	392.1	393.9	395.6	397.3	398.9	400.4	401.8	403.2	404.7	407.3
107.5°	491.8	492.7	493.6	494.4	495.3	496.7	498.7	500.6	502.6	504.6	505.8
110°	560.3	561.2	562.1	562.9	563.8	565.1	566.8	568.5	570.3	572.0	572.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	626.7	628.3	629.9	631.4	633.0	634.1	635.0	635.8	636.6	637.4	637.3
115°	728.9	729.8	730.7	731.5	732.4	732.7	732.4	732.1	731.8	731.5	732.1
117.5°	821.0	822.2	823.3	824.5	825.6	826.5	827.2	827.8	828.4	829.1	829.0
120°	883.3	884.4	885.6	886.8	887.9	888.3	888.1	887.8	887.5	887.2	887.8
122.5°	941.4	942.1	942.8	943.5	944.2	944.7	945.1	945.5	945.9	946.3	946.7
125°	1024.7	1025.8	1027.0	1028.1	1029.3	1029.6	1029.0	1028.4	1027.8	1027.3	1028.1
127.5°	1103.5	1103.8	1104.1	1104.4	1104.7	1105.5	1106.8	1108.1	1109.5	1110.8	1110.6
130°	1154.4	1154.7	1155.0	1155.2	1155.5	1156.1	1157.0	1157.8	1158.7	1159.6	1159.9
132.5°	1201.1	1201.6	1202.1	1202.6	1203.1	1204.0	1205.1	1206.1	1207.2	1208.3	1208.6
135°	1271.1	1270.8	1270.5	1270.3	1270.0	1270.4	1271.5	1272.7	1273.9	1275.0	1275.6
137.5°	1333.1	1333.2	1333.3	1333.5	1333.6	1334.3	1335.5	1336.8	1338.1	1339.3	1340.0
140°	1373.6	1374.2	1374.7	1375.3	1375.9	1376.5	1377.0	1377.6	1378.2	1378.8	1379.6
142.5°	1409.9	1410.9	1412.0	1413.0	1414.1	1414.7	1415.1	1415.4	1415.8	1416.1	1416.8
145°	1465.7	1466.5	1467.4	1468.3	1469.1	1469.6	1469.6	1469.6	1469.6	1469.6	1469.9
147.5°	1510.0	1511.6	1513.3	1514.9	1516.5	1517.2	1516.9	1516.6	1516.3	1516.0	1516.2
150°	1542.2	1543.4	1544.5	1545.7	1546.8	1547.2	1547.0	1546.7	1546.4	1546.1	1546.1
152.5°	1569.2	1570.1	1571.0	1571.9	1572.9	1573.1	1572.6	1572.0	1571.5	1571.0	1571.5
155°	1607.1	1607.3	1607.6	1607.9	1608.2	1607.9	1607.1	1606.2	1605.3	1604.5	1605.6
157.5°	1639.0	1638.8	1638.6	1638.4	1638.3	1637.7	1636.7	1635.7	1634.8	1633.8	1635.3
160°	1657.6	1656.8	1655.9	1655.0	1654.2	1653.6	1653.3	1653.0	1652.7	1652.5	1654.2
162.5°	1674.2	1673.1	1672.1	1671.0	1669.9	1669.2	1668.9	1668.6	1668.3	1668.0	1669.7
165°	1695.3	1693.8	1692.4	1690.9	1689.5	1688.8	1688.8	1688.8	1688.8	1688.8	1691.1
167.5°	1711.9	1710.4	1708.9	1707.4	1705.9	1705.0	1704.9	1704.7	1704.5	1704.3	1706.9
170°	1721.2	1719.5	1717.7	1716.0	1714.3	1713.6	1713.8	1714.1	1714.4	1714.7	1717.0
172.5°	1727.4	1725.7	1724.0	1722.2	1720.5	1719.8	1720.1	1720.4	1720.6	1720.9	1723.2
175°	1734.2	1732.4	1730.7	1729.0	1727.2	1726.5	1726.8	1727.1	1727.4	1727.7	1730.3
177.5°	1737.3	1735.7	1734.0	1732.4	1730.8	1730.2	1730.7	1731.2	1731.6	1732.1	1733.9
180°	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2



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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°	14.8	15.0	15.3	15.5	15.7	16.0	16.2	16.5
90°	32.0	33.7	35.5	36.6	37.2	37.8	38.3	38.9
92.5°	31.0	32.7	34.4	35.3	35.5	35.6	35.7	35.8
95°	32.0	33.7	35.5	36.5	36.7	37.0	37.3	37.6
97.5°	34.6	34.8	34.9	35.2	35.5	35.7	36.0	36.3
100°	47.3	42.4	37.5	35.2	35.5	35.7	36.0	36.3
102.5°	169.3	116.4	63.5	37.1	37.2	37.2	37.3	37.4
105°	409.9	412.5	415.1	411.2	400.8	390.4	380.0	369.7
107.5°	507.1	508.4	509.6	510.8	511.9	513.0	514.1	515.2
110°	573.2	573.7	574.3	575.0	575.9	576.8	577.6	578.5



TEST NUMBER: P333049

CATALOG NUMBER: S124RDIW-S575D1340U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	637.1	637.0	636.9	637.4	638.5	639.6	640.7	641.8
115°	732.7	733.3	733.8	734.1	734.1	734.1	734.1	734.1
117.5°	828.8	828.7	828.6	828.5	828.4	828.3	828.2	828.0
120°	888.3	888.9	889.5	889.5	888.9	888.3	887.8	887.2
122.5°	947.0	947.4	947.7	947.6	947.0	946.4	945.9	945.3
125°	1029.0	1029.9	1030.7	1031.3	1031.6	1031.9	1032.2	1032.5
127.5°	1110.5	1110.3	1110.1	1109.9	1109.7	1109.4	1109.2	1109.0
130°	1160.1	1160.4	1160.7	1160.9	1160.9	1160.9	1160.9	1160.9
132.5°	1208.9	1209.2	1209.5	1209.5	1209.3	1209.1	1208.8	1208.6
135°	1276.2	1276.7	1277.3	1277.9	1278.5	1279.0	1279.6	1280.2
137.5°	1340.6	1341.2	1341.9	1342.1	1341.9	1341.8	1341.6	1341.4
140°	1380.5	1381.4	1382.2	1382.8	1383.1	1383.4	1383.7	1384.0
142.5°	1417.4	1418.0	1418.7	1419.0	1419.1	1419.1	1419.2	1419.2
145°	1470.1	1470.4	1470.7	1471.2	1471.7	1472.3	1472.9	1473.5
147.5°	1516.5	1516.7	1516.9	1517.2	1517.5	1517.8	1518.0	1518.3
150°	1546.1	1546.1	1546.1	1546.2	1546.5	1546.8	1547.1	1547.4
152.5°	1571.9	1572.4	1572.8	1573.0	1572.8	1572.6	1572.5	1572.3
155°	1606.8	1607.9	1609.1	1609.2	1608.4	1607.5	1606.6	1605.8
157.5°	1636.8	1638.3	1639.8	1639.8	1638.3	1636.8	1635.3	1633.8
160°	1655.9	1657.6	1659.4	1659.4	1657.6	1655.9	1654.2	1652.5
162.5°	1671.5	1673.2	1674.9	1674.8	1672.9	1670.9	1668.9	1667.0
165°	1693.4	1695.7	1698.0	1697.8	1695.3	1692.7	1690.1	1687.5
167.5°	1709.4	1711.9	1714.5	1714.3	1711.4	1708.5	1705.7	1702.8
170°	1719.3	1721.6	1723.9	1723.6	1720.8	1717.9	1715.0	1712.1
172.5°	1725.5	1727.9	1730.2	1729.8	1726.6	1723.5	1720.4	1717.3
175°	1732.9	1735.5	1738.1	1737.6	1734.2	1730.7	1727.2	1723.8
177.5°	1735.8	1737.6	1739.5	1739.0	1736.2	1733.5	1730.7	1727.9
180°	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2

(END OF REPORT)