

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: P333054-830

Luminaire Tested: **S124RDIW-S575D1560U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333054-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIW-S575D1560U830-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7316.9 lumens
Efficiency: N/A
Efficacy: 120.7 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

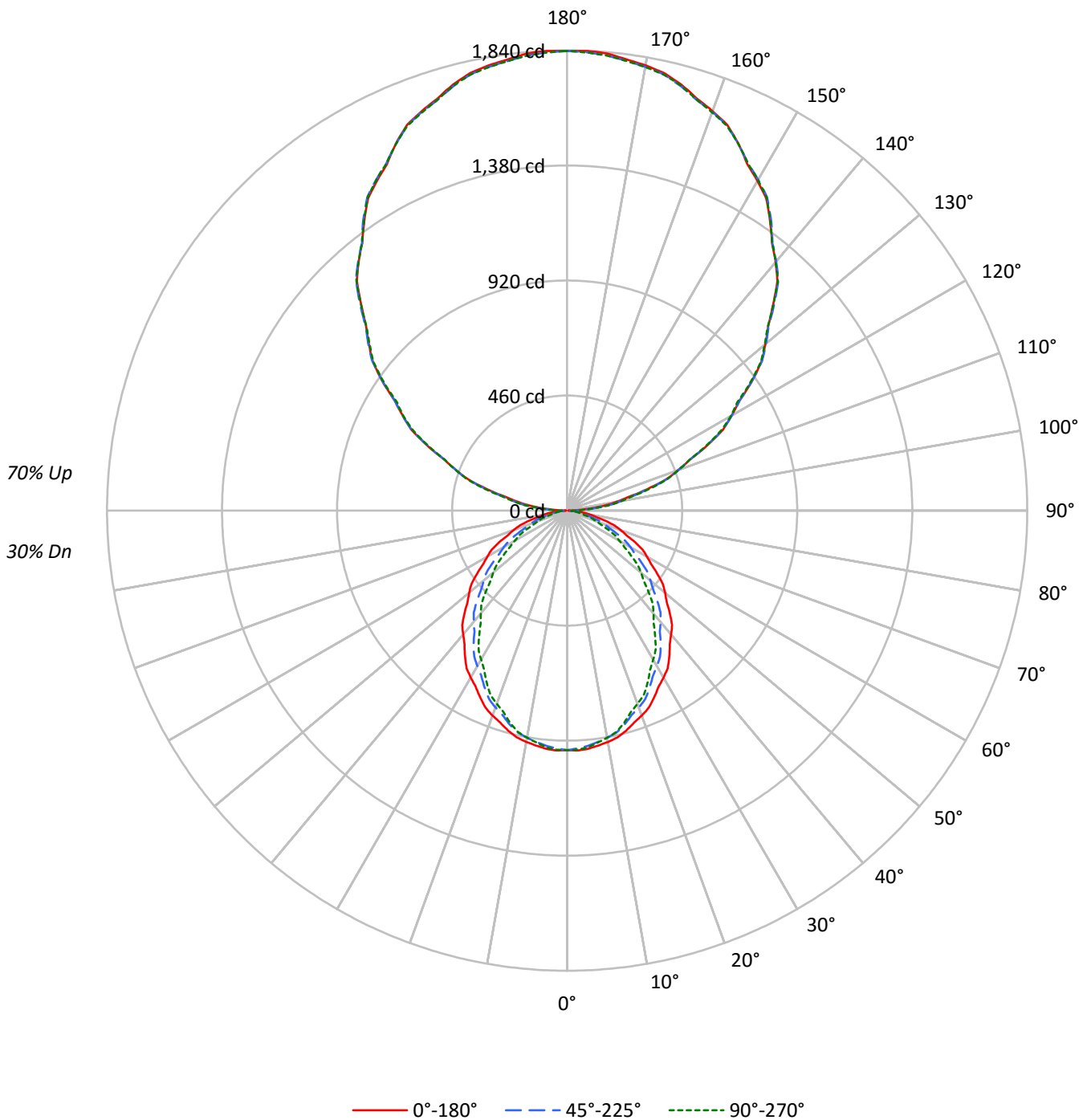
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	102	102	102	102	92	92	92	92	72	72	72	54	54	54	38	38	38
1	94	89	86	82	84	80	77	74	64	61	60	48	47	46	34	33	32
2	85	78	72	67	76	70	65	61	56	52	50	42	40	38	30	29	27
3	78	69	62	56	70	62	56	51	49	45	42	38	35	32	27	25	24
4	71	61	53	48	64	55	49	44	44	39	36	34	30	28	24	22	20
5	65	54	46	41	58	49	42	37	39	34	31	30	27	24	22	19	18
6	60	48	41	35	54	44	37	32	35	30	27	27	24	21	20	17	16
7	55	44	36	31	50	40	33	28	32	27	23	25	21	19	18	16	14
8	51	40	32	27	46	36	29	25	29	24	21	23	19	17	16	14	13
9	48	36	29	24	43	33	26	22	27	22	18	21	17	15	15	13	11
10	45	33	26	21	40	30	24	20	24	20	17	19	16	13	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7733	7733	7733
5°	7750	7656	7703
10°	7702	7564	7564
15°	7614	7405	7350
20°	7491	7196	7064
25°	7337	6951	6774
30°	7185	6693	6413
35°	7019	6427	6050
40°	6817	6122	5658
45°	6632	5819	5259
50°	6420	5471	4835
55°	6194	5111	4376
60°	5945	4713	3907
65°	5717	4216	3446
70°	5384	3670	2924
75°	4966	3044	2380
80°	4328	2320	2180
85°	3668	2103	1973



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.0	1.2
10°-20°	250.9	3.4
20°-30°	362.3	5.0
30°-40°	410.7	5.6
40°-50°	396.6	5.4
50°-60°	329.8	4.5
60°-70°	227.7	3.1
70°-80°	115.4	1.6
80°-90°	35.1	0.5
90°-100°	121.2	1.7
100°-110°	359.1	4.9
110°-120°	609.4	8.3
120°-130°	803.6	11.0
130°-140°	902.4	12.3
140°-150°	886.8	12.1
150°-160°	745.9	10.2
160°-170°	496.2	6.8
170°-180°	173.8	2.4
0°-30°	703.2	9.6
0°-40°	1113.9	15.2
0°-60°	1840.3	25.2
0°-90°	2218.6	30.3
90°-120°	1089.7	14.9
90°-150°	3682.5	50.3
90°-180°	5098.0	69.7
0°-180°	7316.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	956	953	945	952	951	91
15°	911	904	886	884	879	257
25°	824	810	780	768	760	379
35°	712	688	652	628	614	445
45°	581	553	510	475	461	448
55°	440	410	363	326	311	394
65°	299	267	221	190	180	295
75°	159	132	98	81	76	168
85°	40	26	23	21	21	45
90°	4	20	31	40	43	7
95°	85	98	108	112	112	95
105°	331	333	338	342	347	351
115°	620	619	617	615	614	611
125°	902	902	901	898	895	804
135°	1164	1172	1172	1170	1165	900
145°	1414	1420	1421	1420	1416	885
155°	1620	1620	1619	1624	1619	745
165°	1764	1760	1757	1764	1759	497
175°	1835	1828	1826	1835	1826	174
180°	1838	1838	1838	1838	1838	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	960.3	959.7	959.2	958.7	958.2	957.2	955.7	954.3	952.8	951.4	952.8
5°	956.4	955.7	955.1	954.4	953.9	952.5	950.6	948.6	946.6	944.7	946.3
7.5°	947.7	947.1	946.4	945.7	945.0	943.4	940.8	938.3	935.8	933.2	934.2
10°	939.5	938.8	937.9	937.1	936.3	934.4	931.5	928.5	925.6	922.7	923.3
12.5°	929.0	928.0	927.1	926.1	925.2	923.0	919.5	916.1	912.7	909.2	909.6
15°	911.0	909.5	908.0	906.5	905.0	902.3	898.2	894.2	890.0	886.0	885.7
17.5°	889.1	886.9	884.9	882.7	880.6	877.1	872.2	867.3	862.4	857.5	856.7
20°	872.0	870.0	867.8	865.7	863.6	859.8	854.2	848.7	843.1	837.6	836.3
22.5°	853.3	850.9	848.6	846.1	843.8	839.6	833.7	827.7	821.8	815.9	813.9
25°	823.7	820.8	817.7	814.8	811.9	807.1	800.4	793.7	787.0	780.4	777.6
27.5°	792.6	788.9	785.2	781.6	777.8	772.4	765.3	758.2	751.0	743.9	740.5
30°	770.8	766.8	762.7	758.7	754.6	748.7	741.0	733.4	725.7	718.0	714.0
32.5°	748.0	743.4	738.8	734.1	729.6	723.3	715.4	707.5	699.6	691.6	686.9
35°	712.2	707.0	701.7	696.5	691.4	684.7	676.5	668.4	660.2	652.1	646.5
37.5°	673.9	668.5	663.2	657.8	652.3	645.2	636.1	627.1	618.1	609.1	602.9
40°	646.9	641.5	636.1	630.7	625.4	618.0	608.8	599.5	590.2	580.9	574.0
42.5°	621.0	615.5	609.8	604.2	598.5	590.9	581.2	571.5	561.8	552.1	545.2
45°	580.9	574.9	568.8	562.8	556.8	548.8	539.0	529.3	519.5	509.7	501.7
47.5°	539.4	533.2	526.9	520.7	514.4	506.2	496.1	486.0	475.8	465.6	457.3
50°	511.2	504.8	498.5	492.1	485.8	477.4	466.9	456.6	446.1	435.6	427.5
52.5°	482.5	476.3	470.0	463.8	457.5	449.1	438.4	427.7	417.0	406.3	398.0
55°	440.1	433.6	427.1	420.5	414.0	405.4	394.8	384.3	373.6	363.1	354.6
57.5°	398.1	391.3	384.6	377.8	371.0	362.4	351.9	341.5	331.1	320.7	312.1
60°	368.2	361.7	355.2	348.6	342.1	333.7	323.2	312.7	302.4	291.9	283.4
62.5°	341.2	334.4	327.6	320.8	314.1	305.4	294.6	284.0	273.2	262.6	254.8
65°	299.3	292.3	285.2	278.2	271.2	262.5	252.0	241.7	231.2	220.7	213.8
67.5°	255.7	248.9	242.2	235.5	228.8	220.6	210.9	201.2	191.6	181.9	175.9
70°	228.1	221.2	214.4	207.5	200.8	192.7	183.3	174.1	164.8	155.5	150.1
72.5°	198.8	192.6	186.3	180.2	174.0	166.5	157.8	149.0	140.2	131.4	126.9
75°	159.2	153.2	147.1	141.1	135.1	128.2	120.6	112.8	105.2	97.6	93.8
77.5°	118.9	113.9	108.8	103.6	98.5	92.8	86.6	80.5	74.3	68.1	65.9
80°	93.1	88.4	83.7	79.0	74.3	69.5	64.6	59.7	54.8	49.9	49.4
82.5°	70.9	66.5	62.2	57.9	53.5	50.0	47.1	44.3	41.6	38.7	38.4
85°	39.6	36.4	33.1	29.8	26.6	24.7	24.2	23.8	23.2	22.7	22.4
87.5°	14.3	14.0	13.7	13.3	12.9	13.0	13.4	13.8	14.1	14.4	14.7
90°	4.2	7.7	11.2	14.7	18.2	21.2	23.7	26.2	28.7	31.3	33.2
92.5°	30.4	34.4	38.4	42.3	46.4	49.2	51.0	52.8	54.5	56.3	57.4
95°	85.3	88.1	91.0	93.8	96.6	99.2	101.4	103.6	105.8	108.0	109.0
97.5°	148.9	151.2	153.4	155.8	158.1	160.5	163.1	165.6	168.2	170.8	171.9
100°	199.0	200.2	201.5	202.7	204.1	206.0	209.0	211.8	214.6	217.4	218.1
102.5°	251.3	251.8	252.3	252.8	253.3	254.9	257.4	260.0	262.6	265.2	266.1
105°	331.1	331.5	331.8	332.1	332.4	333.2	334.4	335.7	337.0	338.3	339.2
107.5°	415.0	415.4	415.8	416.1	416.5	416.8	417.0	417.2	417.4	417.5	418.4
110°	471.8	472.5	473.1	473.7	474.4	474.6	474.2	473.9	473.5	473.3	472.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	530.9	531.1	531.2	531.3	531.5	531.2	530.7	530.1	529.5	529.0	528.9
115°	619.6	619.6	619.6	619.6	619.6	619.3	618.7	618.0	617.5	616.8	616.5
117.5°	703.2	703.4	703.7	704.0	704.3	704.2	703.7	703.2	702.8	702.4	701.3
120°	758.9	760.2	761.5	762.7	763.9	764.1	763.2	762.2	761.3	760.3	758.7
122.5°	816.9	817.4	817.9	818.4	818.9	819.0	818.5	818.0	817.7	817.2	816.1
125°	902.5	902.5	902.5	902.5	902.5	902.3	902.0	901.6	901.4	901.1	900.4
127.5°	980.1	981.0	981.9	982.9	983.8	984.1	983.5	983.1	982.6	982.0	981.4
130°	1034.6	1035.6	1036.5	1037.5	1038.4	1038.9	1038.9	1038.9	1038.9	1038.9	1038.3
132.5°	1090.3	1091.1	1091.7	1092.4	1093.2	1093.3	1093.1	1092.9	1092.6	1092.3	1091.7
135°	1163.9	1165.8	1167.7	1169.7	1171.6	1172.5	1172.5	1172.5	1172.5	1172.5	1171.9
137.5°	1244.2	1245.0	1245.9	1246.8	1247.6	1248.4	1248.9	1249.3	1249.9	1250.4	1249.5
140°	1297.6	1298.2	1298.8	1299.5	1300.0	1300.4	1300.4	1300.4	1300.4	1300.4	1300.0
142.5°	1346.4	1347.1	1347.7	1348.3	1349.0	1349.2	1348.9	1348.7	1348.4	1348.1	1348.1
145°	1414.1	1415.3	1416.6	1417.9	1419.2	1419.9	1420.2	1420.6	1420.9	1421.2	1420.9
147.5°	1481.2	1482.7	1484.2	1485.7	1487.2	1487.9	1487.6	1487.3	1487.1	1486.9	1486.6
150°	1522.1	1523.3	1524.7	1525.9	1527.2	1527.8	1527.8	1527.8	1527.8	1527.8	1527.8
152.5°	1560.8	1561.5	1562.3	1563.0	1563.8	1564.3	1564.5	1564.8	1565.1	1565.3	1566.0
155°	1620.1	1620.1	1620.1	1620.1	1620.1	1620.0	1619.7	1619.4	1619.1	1618.7	1620.0
157.5°	1670.2	1669.6	1669.1	1668.5	1667.9	1667.6	1667.5	1667.5	1667.5	1667.4	1668.3
160°	1699.8	1699.4	1699.1	1698.8	1698.5	1698.2	1697.9	1697.5	1697.2	1697.0	1697.9
162.5°	1727.0	1726.3	1725.4	1724.6	1723.7	1723.2	1722.9	1722.6	1722.2	1721.9	1723.6
165°	1763.7	1762.7	1761.8	1760.9	1759.9	1759.2	1758.5	1757.8	1757.3	1756.6	1758.5
167.5°	1791.9	1790.5	1789.2	1787.9	1786.6	1785.9	1786.0	1786.0	1786.1	1786.2	1788.1
170°	1807.8	1806.2	1804.6	1803.0	1801.5	1800.8	1801.1	1801.5	1801.8	1802.0	1803.9
172.5°	1819.1	1817.8	1816.5	1815.1	1813.8	1813.2	1813.3	1813.4	1813.4	1813.5	1815.6
175°	1834.8	1833.2	1831.6	1830.0	1828.4	1827.5	1827.2	1826.8	1826.6	1826.3	1828.4
177.5°	1839.8	1838.6	1837.4	1836.1	1834.8	1834.2	1834.2	1834.2	1834.2	1834.2	1836.0
180°	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	954.3	955.7	957.2	957.8	957.7	957.5	957.4	957.3
5°	947.9	949.6	951.2	951.9	951.5	951.2	950.8	950.6
7.5°	935.3	936.3	937.5	937.6	937.2	936.6	936.1	935.6
10°	924.0	924.6	925.3	925.3	924.6	924.0	923.3	922.7
12.5°	909.9	910.3	910.8	910.5	909.6	908.7	907.8	906.8
15°	885.3	885.0	884.7	884.0	882.8	881.7	880.5	879.4
17.5°	855.7	854.8	853.8	852.5	850.8	849.1	847.3	845.6
20°	835.0	833.7	832.4	830.7	828.6	826.4	824.3	822.2
22.5°	812.0	810.0	808.0	806.3	804.5	802.8	801.1	799.3
25°	774.9	772.0	769.3	767.1	765.4	763.8	762.2	760.5
27.5°	737.0	733.6	730.2	727.3	724.9	722.6	720.3	717.9
30°	709.9	705.8	701.7	698.4	695.8	693.1	690.6	688.0
32.5°	682.2	677.5	672.7	669.1	666.7	664.2	661.7	659.2
35°	640.9	635.4	629.9	625.7	622.7	619.7	616.8	613.9
37.5°	596.6	590.5	584.3	579.8	576.7	573.8	570.9	568.0
40°	567.2	560.3	553.5	548.7	545.6	542.7	539.8	536.9
42.5°	538.2	531.2	524.2	519.2	516.1	513.1	510.0	507.0
45°	493.8	485.8	477.8	472.3	469.4	466.5	463.5	460.6
47.5°	449.0	440.7	432.4	426.7	423.5	420.3	417.1	413.8
50°	419.3	411.2	403.0	397.5	394.4	391.2	388.1	385.0
52.5°	389.7	381.4	373.2	367.5	364.2	361.0	357.8	354.6
55°	346.1	337.6	329.1	323.4	320.3	317.2	314.1	310.9
57.5°	303.4	294.8	286.3	280.8	278.4	276.1	273.7	271.4
60°	274.9	266.5	258.0	252.5	249.9	247.2	244.7	242.0
62.5°	246.9	239.1	231.3	226.3	224.2	222.2	220.1	218.0
65°	206.8	199.7	192.7	188.2	186.3	184.4	182.4	180.4
67.5°	169.8	163.8	157.8	153.7	151.6	149.4	147.2	145.1
70°	144.8	139.4	133.9	130.4	128.8	127.2	125.5	123.9
72.5°	122.2	117.6	113.0	110.0	108.5	107.0	105.5	104.0
75°	90.0	86.3	82.6	80.2	79.2	78.2	77.3	76.3
77.5°	63.7	61.5	59.3	58.1	57.8	57.5	57.2	56.9
80°	48.9	48.4	47.9	47.6	47.4	47.2	47.1	46.9
82.5°	38.0	37.6	37.3	37.0	36.9	36.7	36.6	36.4
85°	22.1	21.8	21.4	21.3	21.3	21.3	21.3	21.3
87.5°	15.0	15.2	15.5	15.7	15.9	16.2	16.5	16.8
90°	35.1	36.9	38.8	40.2	40.7	41.4	42.0	42.6
92.5°	58.5	59.7	60.8	61.5	61.9	62.3	62.7	63.1
95°	109.9	110.8	111.8	112.3	112.3	112.3	112.3	112.3
97.5°	173.1	174.3	175.4	176.0	176.0	176.0	176.0	176.0
100°	218.7	219.3	220.0	220.3	220.3	220.3	220.3	220.3
102.5°	266.9	267.9	268.7	269.3	269.6	269.8	270.0	270.3
105°	340.2	341.1	342.0	343.0	343.9	344.9	345.8	346.8
107.5°	419.3	420.2	421.1	421.5	421.4	421.4	421.3	421.2
110°	472.0	471.4	470.7	470.9	471.8	472.8	473.7	474.7



TEST NUMBER: P333054-830

CATALOG NUMBER: S124RDIW-S575D1560U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	528.7	528.6	528.5	528.5	528.7	528.9	529.0	529.2
115°	616.1	615.9	615.6	615.2	614.9	614.6	614.3	614.0
117.5°	700.2	699.2	698.0	697.2	696.5	696.0	695.3	694.7
120°	757.1	755.6	754.0	753.6	754.2	754.8	755.4	756.1
122.5°	815.0	814.0	812.9	811.8	810.7	809.5	808.4	807.3
125°	899.8	899.2	898.5	897.9	897.2	896.6	896.0	895.3
127.5°	980.8	980.1	979.5	978.9	978.5	978.0	977.4	976.9
130°	1037.6	1037.0	1036.3	1035.4	1034.2	1032.9	1031.6	1030.4
132.5°	1091.1	1090.4	1089.8	1089.2	1088.7	1088.3	1087.7	1087.2
135°	1171.2	1170.6	1170.0	1169.1	1168.2	1167.2	1166.3	1165.4
137.5°	1248.8	1247.9	1247.1	1246.8	1247.0	1247.2	1247.4	1247.5
140°	1299.8	1299.5	1299.1	1298.8	1298.5	1298.2	1297.9	1297.6
142.5°	1348.0	1347.9	1347.9	1347.8	1347.7	1347.7	1347.6	1347.6
145°	1420.6	1420.2	1419.9	1419.3	1418.3	1417.4	1416.5	1415.5
147.5°	1486.4	1486.1	1485.8	1485.5	1485.3	1485.0	1484.6	1484.3
150°	1527.8	1527.8	1527.8	1527.7	1527.3	1527.0	1526.7	1526.4
152.5°	1566.8	1567.5	1568.3	1568.3	1567.4	1566.7	1565.8	1565.0
155°	1621.3	1622.5	1623.8	1623.8	1622.5	1621.3	1620.0	1618.7
157.5°	1669.2	1670.2	1671.1	1671.0	1670.0	1669.0	1667.8	1666.8
160°	1698.8	1699.8	1700.7	1700.3	1698.8	1697.2	1695.6	1694.0
162.5°	1725.3	1727.0	1728.7	1728.8	1727.2	1725.7	1724.1	1722.5
165°	1760.4	1762.3	1764.2	1764.5	1763.2	1762.0	1760.7	1759.4
167.5°	1790.0	1791.9	1793.8	1793.8	1791.8	1789.8	1787.8	1785.8
170°	1805.9	1807.8	1809.7	1809.5	1807.3	1805.1	1802.9	1800.6
172.5°	1817.8	1819.9	1822.0	1822.0	1819.8	1817.6	1815.3	1813.2
175°	1830.7	1832.9	1835.1	1835.1	1832.9	1830.7	1828.4	1826.3
177.5°	1837.8	1839.5	1841.3	1841.2	1839.1	1837.1	1835.1	1833.1
180°	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6

(END OF REPORT)