

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: P332771-830

Luminaire Tested: **S124DIW-S575D1560U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332771-830
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-S575D1560U830-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1560 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8116.7 lumens
Efficiency: N/A
Efficacy: 133.9 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

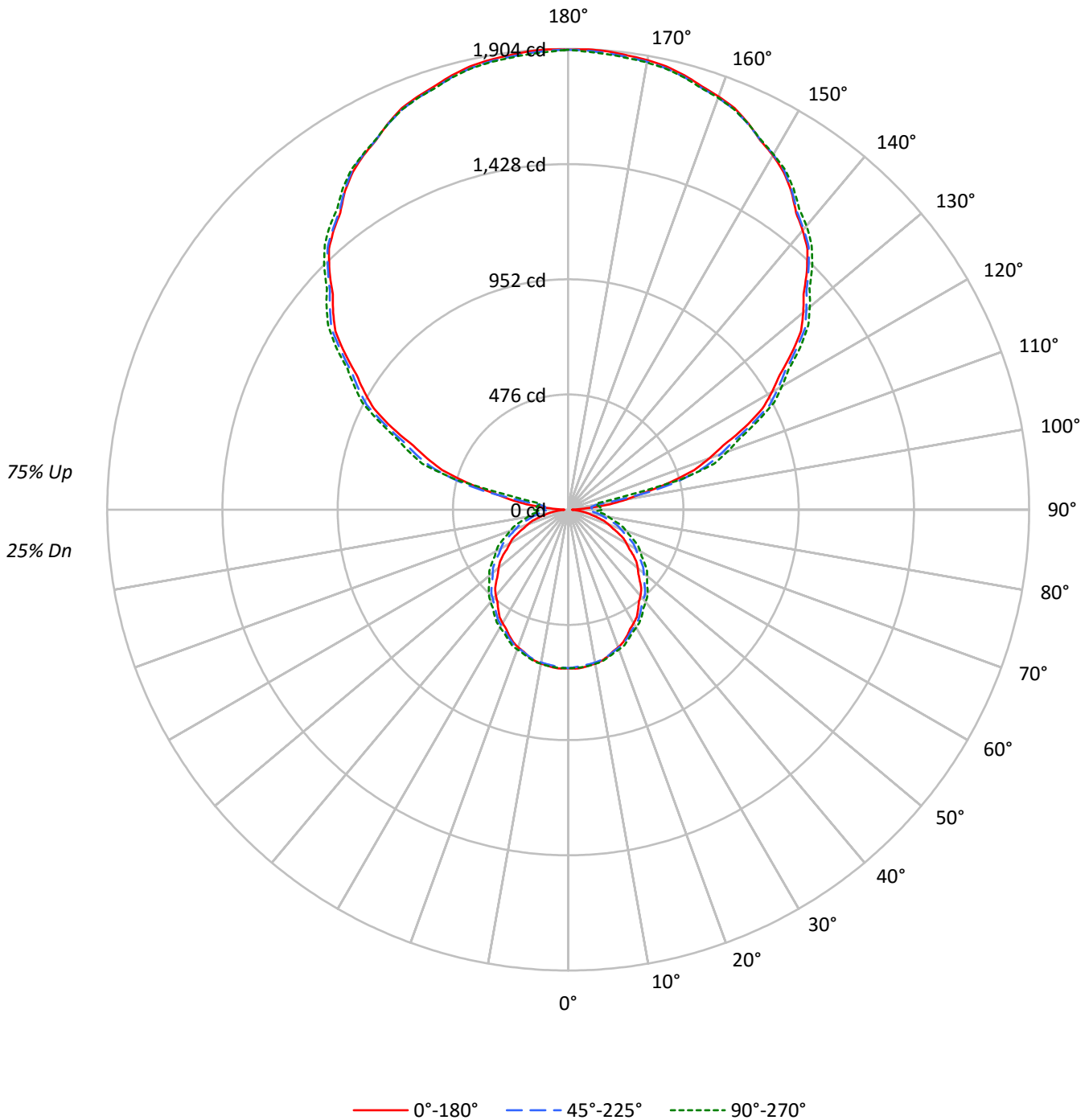
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	25
1	92	87	83	80	82	78	75	72	60	58	56	44	42	41	29	28	27	20
2	83	76	70	65	74	68	63	58	52	49	46	38	36	34	25	24	23	17
3	76	66	59	54	67	59	53	48	46	42	38	34	31	28	22	20	19	14
4	69	59	51	45	61	52	46	41	41	36	32	30	27	24	20	18	16	12
5	63	52	44	38	56	46	40	35	36	31	28	26	23	21	17	15	14	10
6	58	46	38	33	51	42	35	30	32	27	24	24	20	18	16	14	12	9
7	54	42	34	28	47	37	31	26	29	24	21	22	18	16	14	12	11	8
8	50	38	30	25	44	34	27	23	26	22	18	20	16	14	13	11	9	7
9	46	34	27	22	41	31	24	20	24	19	16	18	15	12	12	10	8	6
10	43	31	24	20	38	28	22	18	22	18	14	16	13	11	11	9	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5288	5288	5288
5°	5304	5168	5182
10°	5272	5083	5079
15°	5225	4985	4958
20°	5153	4877	4840
25°	5073	4756	4710
30°	4986	4636	4576
35°	4887	4512	4460
40°	4809	4395	4338
45°	4692	4287	4233
50°	4593	4163	4123
55°	4491	4045	3993
60°	4332	3894	3876
65°	4156	3735	3731
70°	3945	3551	3561
75°	3649	3349	3408
80°	3322	3156	3259
85°	2903	2980	3172



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.0	0.8
10°-20°	177.7	2.2
20°-30°	268.7	3.3
30°-40°	325.1	4.0
40°-50°	343.7	4.2
50°-60°	323.5	4.0
60°-70°	268.4	3.3
70°-80°	188.5	2.3
80°-90°	112.1	1.4
90°-100°	128.3	1.6
100°-110°	461.3	5.7
110°-120°	824.2	10.2
120°-130°	1024.1	12.6
130°-140°	1084.4	13.4
140°-150°	1008.5	12.4
150°-160°	812.0	10.0
160°-170°	523.7	6.5
170°-180°	180.5	2.2
0°-30°	508.4	6.3
0°-40°	833.5	10.3
0°-60°	1500.7	18.5
0°-90°	2069.6	25.5
90°-120°	1413.8	17.4
90°-150°	4530.8	55.8
90°-180°	6047.0	74.5
0°-180°	8116.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	656	653	648	654	654	62
15°	629	629	627	633	633	177
25°	575	579	582	589	590	265
35°	503	512	519	529	532	315
45°	420	433	447	459	464	324
55°	329	344	366	380	385	293
65°	227	251	276	293	300	225
75°	126	153	184	204	211	134
85°	39	70	103	124	132	41
90°	16	61	104	133	142	11
95°	88	67	95	122	131	108
105°	434	458	492	519	478	455
115°	803	815	836	854	860	790
125°	1126	1131	1146	1164	1170	1005
135°	1394	1394	1404	1418	1426	1074
145°	1607	1610	1610	1616	1622	1004
155°	1761	1762	1758	1763	1760	812
165°	1858	1851	1851	1861	1849	525
175°	1900	1892	1893	1904	1889	181
180°	1900	1900	1900	1900	1900	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	657.3	657.0	656.6	656.1	655.7	655.1	654.0	653.0	651.9	650.8	651.8
5°	655.7	655.3	654.7	654.2	653.7	652.9	651.8	650.6	649.5	648.4	649.7
7.5°	650.2	649.8	649.5	649.2	648.9	648.4	647.4	646.5	645.5	644.5	646.0
10°	645.5	645.3	645.1	645.0	644.8	644.3	643.5	642.6	641.9	641.0	642.5
12.5°	638.9	638.9	638.9	638.9	638.9	638.6	638.0	637.4	636.9	636.3	637.6
15°	628.6	628.8	628.9	629.1	629.2	629.1	628.6	628.1	627.5	627.1	628.6
17.5°	614.3	614.8	615.3	615.8	616.3	616.5	616.4	616.3	616.2	616.1	617.6
20°	604.4	604.8	605.3	605.9	606.3	606.6	606.8	607.0	607.1	607.3	608.9
22.5°	593.2	593.8	594.5	595.0	595.7	596.2	596.4	596.7	597.0	597.3	599.0
25°	575.0	576.0	577.0	578.0	578.9	579.7	580.1	580.6	581.2	581.6	583.4
27.5°	554.8	556.2	557.6	559.1	560.5	561.6	562.3	563.1	563.8	564.6	566.3
30°	541.3	542.6	543.8	545.2	546.5	547.7	548.8	550.0	551.1	552.3	554.1
32.5°	526.6	528.2	529.7	531.3	532.9	534.3	535.6	536.9	538.1	539.4	541.4
35°	503.1	505.1	507.1	509.0	511.0	512.7	514.3	516.0	517.6	519.2	521.6
37.5°	479.6	481.7	484.0	486.3	488.5	490.7	492.7	494.7	496.7	498.7	501.1
40°	464.3	466.4	468.5	470.6	472.8	474.9	477.2	479.5	481.8	484.1	486.5
42.5°	446.7	449.0	451.4	453.8	456.2	458.7	461.4	464.0	466.7	469.4	472.1
45°	419.5	422.6	425.7	428.9	431.9	435.0	438.1	441.2	444.3	447.4	450.2
47.5°	393.6	396.7	399.9	403.1	406.3	409.7	413.3	416.9	420.5	424.0	427.0
50°	374.8	378.3	381.9	385.6	389.2	392.8	396.3	399.9	403.5	407.1	410.3
52.5°	356.0	359.6	363.2	366.7	370.3	374.2	378.3	382.4	386.5	390.6	393.9
55°	328.6	332.0	335.5	338.8	342.2	346.4	351.3	356.2	361.1	366.0	369.3
57.5°	297.9	302.2	306.4	310.7	314.9	319.4	324.2	329.1	334.0	338.8	342.7
60°	278.0	282.2	286.4	290.7	294.9	299.7	305.1	310.5	315.8	321.2	325.0
62.5°	258.6	263.3	267.9	272.5	277.1	282.1	287.5	292.8	298.3	303.7	307.4
65°	227.3	232.6	237.8	243.0	248.3	253.6	259.1	264.7	270.2	275.8	279.8
67.5°	197.3	202.8	208.4	214.0	219.4	225.2	231.1	237.0	243.0	248.9	253.1
70°	176.7	182.3	187.8	193.4	199.0	204.8	210.9	217.2	223.4	229.6	233.9
72.5°	156.8	162.5	168.1	173.8	179.5	185.6	192.2	198.8	205.4	212.0	216.2
75°	126.1	132.1	138.2	144.2	150.2	156.7	163.5	170.4	177.3	184.1	188.7
77.5°	97.6	104.0	110.4	116.7	123.1	129.9	137.0	144.2	151.4	158.5	163.2
80°	79.9	86.4	93.0	99.5	106.0	112.8	120.1	127.2	134.4	141.6	146.5
82.5°	62.3	69.1	75.9	82.7	89.4	96.4	103.6	110.7	117.9	125.2	130.2
85°	38.8	45.7	52.6	59.4	66.3	73.3	80.7	88.0	95.4	102.6	107.5
87.5°	22.5	29.9	37.2	44.6	51.9	59.5	67.1	74.7	82.4	90.0	95.1
90°	16.0	26.0	36.0	46.0	56.0	65.7	75.3	84.8	94.3	103.9	110.5
92.5°	29.0	35.2	41.2	47.2	53.3	61.1	70.6	80.1	89.7	99.2	105.8
95°	87.8	82.4	77.0	71.6	66.3	67.1	74.1	81.1	88.1	95.1	101.4
97.5°	174.7	186.0	197.4	208.7	220.0	211.3	182.7	154.0	125.5	96.8	101.2
100°	241.2	251.1	261.0	271.0	280.9	267.2	230.0	192.7	155.5	118.3	117.3
102.5°	316.2	324.1	332.0	339.9	347.8	351.9	352.5	353.1	353.6	354.1	300.5
105°	434.4	439.6	444.8	449.9	455.1	461.5	469.0	476.6	484.3	491.9	498.8
107.5°	545.4	549.0	552.7	556.3	560.0	565.6	573.5	581.4	589.2	597.1	602.5
110°	619.9	623.1	626.4	629.6	632.8	638.2	645.8	653.5	661.0	668.6	673.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	692.1	695.8	699.6	703.2	707.0	712.0	718.4	724.7	731.0	737.4	740.8
115°	803.2	805.6	808.0	810.5	812.8	816.5	821.4	826.3	831.2	836.1	840.4
117.5°	904.0	906.2	908.3	910.4	912.6	916.4	922.0	927.6	933.1	938.6	941.9
120°	971.7	973.4	975.2	976.9	978.6	981.8	986.2	990.5	994.9	999.4	1003.2
122.5°	1035.3	1036.1	1037.0	1037.9	1038.8	1041.6	1046.5	1051.4	1056.3	1061.2	1064.9
125°	1125.9	1126.9	1128.0	1129.2	1130.2	1132.5	1136.0	1139.4	1142.8	1146.3	1150.3
127.5°	1212.1	1212.3	1212.4	1212.6	1212.7	1215.1	1219.7	1224.3	1228.8	1233.4	1236.1
130°	1267.2	1267.4	1267.5	1267.7	1267.8	1269.7	1273.3	1276.8	1280.3	1283.9	1287.1
132.5°	1318.4	1318.8	1319.2	1319.7	1320.0	1321.9	1325.1	1328.4	1331.7	1335.0	1338.1
135°	1394.4	1394.1	1393.8	1393.5	1393.2	1394.2	1396.7	1399.0	1401.5	1403.8	1407.0
137.5°	1462.4	1462.4	1462.3	1462.3	1462.3	1463.2	1465.1	1467.1	1469.0	1470.9	1474.0
140°	1506.7	1507.2	1507.7	1508.2	1508.6	1509.2	1510.0	1510.8	1511.6	1512.4	1515.5
142.5°	1546.0	1547.0	1548.1	1549.3	1550.4	1551.0	1551.3	1551.6	1551.9	1552.2	1554.7
145°	1606.9	1607.7	1608.4	1609.3	1610.1	1610.4	1610.4	1610.4	1610.4	1610.4	1611.7
147.5°	1655.5	1657.1	1658.7	1660.3	1662.0	1662.6	1662.3	1662.0	1661.6	1661.3	1661.7
150°	1690.7	1691.9	1693.0	1694.0	1695.2	1695.5	1695.3	1695.0	1694.6	1694.3	1694.3
152.5°	1719.8	1720.7	1721.7	1722.7	1723.6	1723.9	1723.3	1722.7	1722.1	1721.6	1722.1
155°	1761.1	1761.4	1761.7	1762.1	1762.4	1762.1	1761.1	1760.2	1759.3	1758.2	1759.5
157.5°	1796.1	1795.9	1795.7	1795.5	1795.4	1794.7	1793.6	1792.5	1791.5	1790.4	1792.1
160°	1816.6	1815.6	1814.7	1813.7	1812.8	1812.1	1811.8	1811.5	1811.2	1810.8	1812.8
162.5°	1834.8	1833.5	1832.3	1831.2	1829.9	1829.2	1828.8	1828.5	1828.2	1827.9	1829.8
165°	1857.8	1856.1	1854.6	1853.0	1851.4	1850.7	1850.7	1850.7	1850.7	1850.7	1853.1
167.5°	1875.9	1874.3	1872.6	1871.0	1869.3	1868.5	1868.3	1868.1	1867.9	1867.7	1870.5
170°	1886.2	1884.3	1882.4	1880.5	1878.6	1877.8	1878.1	1878.5	1878.8	1879.1	1881.6
172.5°	1893.0	1891.1	1889.2	1887.3	1885.5	1884.6	1885.0	1885.3	1885.6	1885.9	1888.4
175°	1900.4	1898.5	1896.6	1894.7	1892.8	1892.1	1892.3	1892.6	1893.0	1893.3	1896.1
177.5°	1903.8	1902.1	1900.3	1898.5	1896.8	1896.1	1896.6	1897.1	1897.6	1898.1	1900.2
180°	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	652.7	653.6	654.5	654.9	654.8	654.6	654.5	654.4
5°	651.0	652.2	653.6	654.1	654.0	653.8	653.7	653.5
7.5°	647.5	648.9	650.4	651.1	650.9	650.7	650.5	650.4
10°	643.9	645.5	646.9	647.5	647.4	647.2	647.1	646.9
12.5°	639.0	640.4	641.7	642.3	642.3	642.2	642.2	642.2
15°	630.0	631.5	632.9	633.6	633.5	633.3	633.1	632.9
17.5°	619.1	620.6	622.1	622.7	622.6	622.5	622.4	622.3
20°	610.6	612.2	613.8	614.6	614.6	614.6	614.6	614.6
22.5°	600.6	602.2	603.8	604.8	605.0	605.3	605.6	605.9
25°	585.2	587.0	588.8	589.7	589.9	590.1	590.2	590.4
27.5°	568.0	569.6	571.3	572.2	572.4	572.6	572.8	573.0
30°	555.9	557.7	559.5	560.5	560.8	561.2	561.5	561.8
32.5°	543.5	545.5	547.6	548.7	549.1	549.4	549.8	550.1
35°	523.9	526.1	528.4	529.8	530.3	530.7	531.2	531.8
37.5°	503.4	505.7	508.0	509.4	509.9	510.5	511.0	511.5
40°	489.0	491.4	493.9	495.4	496.1	496.7	497.4	498.0
42.5°	474.9	477.5	480.2	481.8	482.4	482.9	483.4	483.9
45°	453.0	455.7	458.5	460.2	461.1	461.9	462.7	463.5
47.5°	429.8	432.7	435.5	437.4	438.5	439.4	440.5	441.4
50°	413.6	416.9	420.1	422.3	423.2	424.1	425.2	426.1
52.5°	397.2	400.4	403.7	405.8	406.8	407.7	408.7	409.7
55°	372.5	375.8	379.0	381.2	382.1	383.1	384.1	385.0
57.5°	346.6	350.5	354.4	356.8	357.7	358.5	359.5	360.4
60°	328.8	332.5	336.2	338.7	340.1	341.4	342.7	344.0
62.5°	311.1	314.9	318.7	321.1	322.4	323.8	325.1	326.4
65°	283.9	288.0	292.1	294.7	296.1	297.4	298.7	300.0
67.5°	257.2	261.4	265.5	268.2	269.5	270.7	272.0	273.2
70°	238.4	242.8	247.1	250.0	251.1	252.2	253.4	254.5
72.5°	220.5	224.8	229.0	231.8	233.1	234.3	235.6	236.9
75°	193.2	197.7	202.4	205.4	206.8	208.3	209.8	211.2
77.5°	167.9	172.5	177.1	180.2	181.7	183.3	184.8	186.4
80°	151.4	156.2	161.1	164.2	165.5	166.8	168.1	169.5
82.5°	135.2	140.2	145.2	148.5	149.9	151.3	152.7	154.2
85°	112.4	117.3	122.2	125.5	127.1	128.8	130.4	132.1
87.5°	100.2	105.4	110.5	113.8	115.4	116.9	118.5	120.0
90°	117.2	123.8	130.4	134.7	136.6	138.6	140.4	142.4
92.5°	112.2	118.7	125.2	129.1	130.5	132.1	133.5	134.9
95°	107.6	114.0	120.3	124.3	126.1	127.9	129.7	131.4
97.5°	105.8	110.2	114.6	117.7	119.4	121.1	122.9	124.6
100°	116.3	115.4	114.4	114.6	116.1	117.5	119.0	120.5
102.5°	246.9	193.1	139.5	113.4	114.7	116.0	117.3	118.7
105°	505.7	512.6	519.5	518.0	507.9	497.9	487.8	477.7
107.5°	607.8	613.3	618.7	622.5	624.9	627.3	629.7	632.1
110°	677.4	681.7	686.2	689.5	691.7	694.0	696.3	698.5



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CATALOG NUMBER: S124DIW-S575D1560U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	744.3	747.8	751.3	754.3	756.9	759.3	761.9	764.3
115°	844.6	848.8	853.0	855.6	856.9	858.0	859.1	860.3
117.5°	945.2	948.4	951.7	953.9	955.1	956.2	957.4	958.6
120°	1007.1	1011.1	1014.9	1017.2	1017.9	1018.6	1019.3	1019.9
122.5°	1068.6	1072.1	1075.8	1077.9	1078.5	1079.0	1079.5	1080.1
125°	1154.3	1158.4	1162.4	1165.2	1166.4	1167.7	1169.0	1170.3
127.5°	1238.9	1241.6	1244.4	1246.2	1247.1	1247.9	1248.8	1249.6
130°	1290.4	1293.6	1296.9	1299.0	1300.0	1301.0	1301.9	1303.0
132.5°	1341.2	1344.3	1347.5	1349.4	1350.2	1350.9	1351.6	1352.4
135°	1410.3	1413.5	1416.8	1419.2	1420.8	1422.4	1424.1	1425.7
137.5°	1477.1	1480.2	1483.3	1485.1	1485.7	1486.4	1487.0	1487.6
140°	1518.5	1521.6	1524.7	1526.7	1527.9	1529.0	1530.1	1531.3
142.5°	1557.3	1559.8	1562.4	1564.1	1564.8	1565.6	1566.3	1567.0
145°	1613.1	1614.3	1615.6	1616.9	1618.2	1619.5	1620.8	1622.0
147.5°	1662.1	1662.5	1662.8	1663.5	1664.3	1665.1	1665.9	1666.8
150°	1694.3	1694.3	1694.3	1694.5	1694.8	1695.1	1695.4	1695.7
152.5°	1722.6	1723.1	1723.6	1723.7	1723.5	1723.3	1723.2	1723.0
155°	1760.8	1762.1	1763.3	1763.5	1762.6	1761.6	1760.7	1759.7
157.5°	1793.7	1795.4	1797.0	1797.0	1795.4	1793.7	1792.1	1790.4
160°	1814.7	1816.6	1818.4	1818.4	1816.6	1814.7	1812.8	1810.8
162.5°	1831.7	1833.6	1835.5	1835.3	1833.2	1831.1	1828.9	1826.7
165°	1855.7	1858.2	1860.8	1860.6	1857.8	1854.9	1852.1	1849.3
167.5°	1873.3	1876.0	1878.9	1878.7	1875.5	1872.4	1869.2	1866.0
170°	1884.1	1886.7	1889.2	1888.9	1885.7	1882.5	1879.4	1876.2
172.5°	1890.9	1893.5	1896.0	1895.5	1892.2	1888.8	1885.4	1881.9
175°	1898.9	1901.9	1904.7	1904.2	1900.4	1896.6	1892.8	1889.0
177.5°	1902.1	1904.2	1906.2	1905.7	1902.7	1899.6	1896.6	1893.6
180°	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4

(END OF REPORT)