

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: P333398

Luminaire Tested: **S125DIW-S610D1560U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333398  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-7,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIW-S610D1560U835-4F0-1E-UDD-F  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 610 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1560 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8739.3 lumens  
Efficiency: N/A  
Efficacy: 144.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

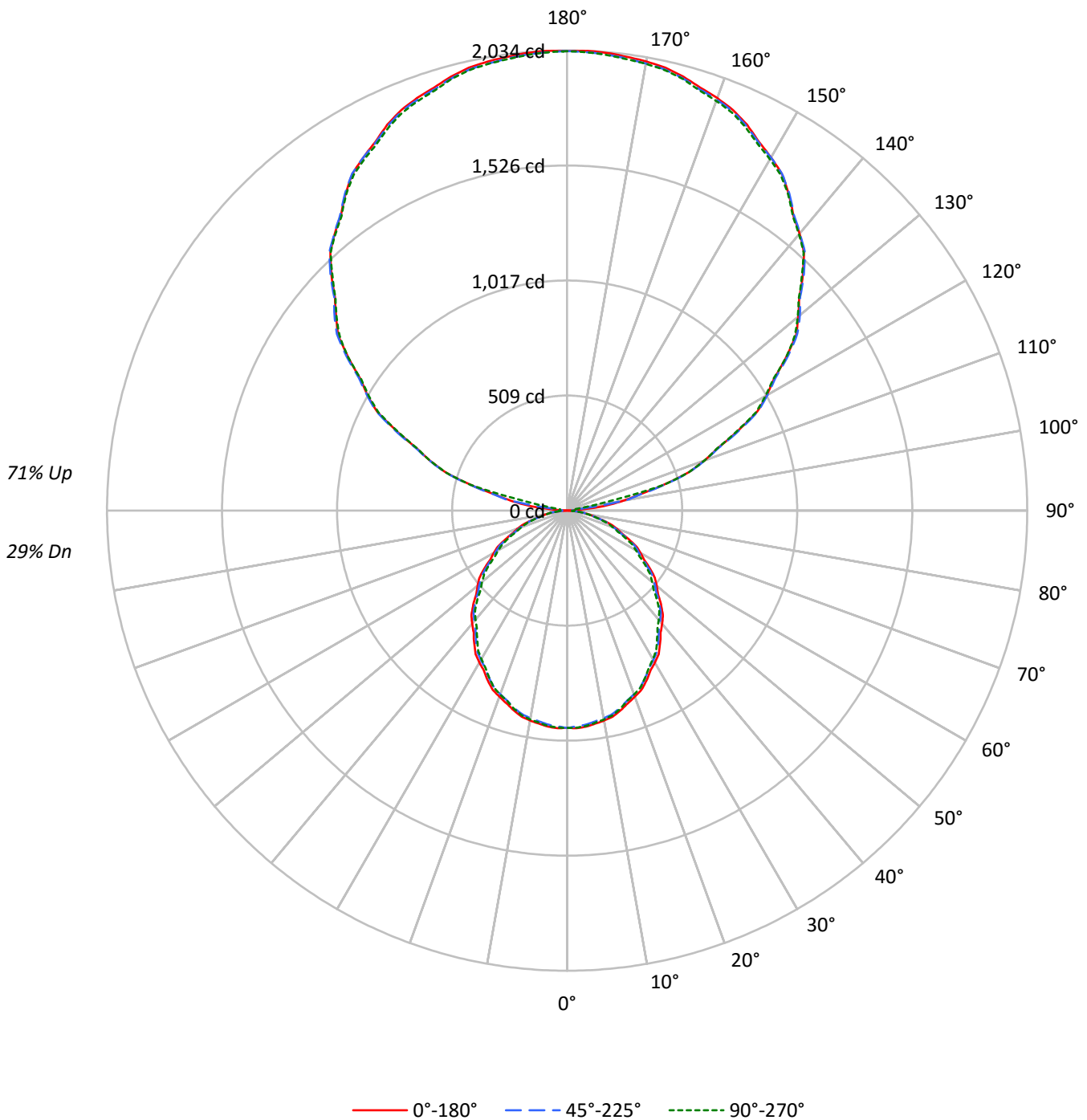
Input Watts (W): 60.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	37	37	37	29
1	93	89	85	82	83	80	76	74	62	60	58	47	45	44	32	31	31	24
2	85	77	71	67	75	70	65	60	55	51	48	41	39	37	28	27	26	20
3	77	68	61	55	69	61	55	50	48	44	40	36	33	31	25	23	22	17
4	70	60	52	47	63	54	48	42	43	38	34	32	29	26	22	20	19	15
5	65	53	46	40	58	48	41	36	38	33	29	29	25	23	20	18	16	13
6	59	48	40	34	53	43	36	31	34	29	26	26	23	20	18	16	14	11
7	55	43	35	30	49	39	32	27	31	26	22	23	20	18	17	14	13	10
8	51	39	31	26	45	35	29	24	28	23	20	21	18	16	15	13	11	9
9	47	35	28	23	42	32	26	21	26	21	18	20	16	14	14	12	10	8
10	44	32	25	21	39	29	23	19	24	19	16	18	15	12	13	11	9	7

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6203	6203	6203
5°	6217	6157	6196
10°	6178	6114	6149
15°	6111	6040	6066
20°	6016	5937	5948
25°	5912	5815	5810
30°	5785	5683	5655
35°	5649	5541	5463
40°	5509	5387	5311
45°	5358	5246	5142
50°	5191	5077	4924
55°	5031	4884	4748
60°	4839	4691	4525
65°	4609	4459	4308
70°	4390	4190	4047
75°	4000	3868	3735
80°	3559	3503	3418
85°	3097	3149	2986



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.6	1.0
10°-20°	255.8	2.9
20°-30°	377.7	4.3
30°-40°	440.7	5.0
40°-50°	442.6	5.1
50°-60°	388.5	4.4
60°-70°	289.5	3.3
70°-80°	165.5	1.9
80°-90°	52.4	0.6
90°-100°	73.8	0.8
100°-110°	454.8	5.2
110°-120°	824.9	9.4
120°-130°	1058.6	12.1
130°-140°	1138.6	13.0
140°-150°	1068.8	12.2
150°-160°	864.5	9.9
160°-170°	559.1	6.4
170°-180°	192.9	2.2
0°-30°	724.0	8.3
0°-40°	1164.7	13.3
0°-60°	1995.9	22.8
0°-90°	2503.3	28.6
90°-120°	1353.5	15.5
90°-150°	4619.5	52.9
90°-180°	6236.0	71.4
0°-180°	8739.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	960	960	960	960	960	
5°	959	957	950	956	956	91
15°	914	911	903	907	907	257
25°	830	826	816	817	815	382
35°	716	713	703	699	693	448
45°	587	583	574	566	563	452
55°	447	444	434	427	422	399
65°	302	300	292	285	282	299
75°	160	159	155	153	150	171
85°	42	42	42	42	40	47
90°	2	13	24	31	36	6
95°	86	78	24	31	32	109
105°	443	448	449	448	447	469
115°	831	838	840	834	825	823
125°	1182	1192	1192	1186	1182	1055
135°	1474	1482	1480	1476	1468	1136
145°	1709	1711	1712	1712	1704	1068
155°	1882	1873	1876	1879	1868	867
165°	1986	1977	1978	1986	1975	561
175°	2031	2022	2023	2034	2022	193
180°	2031	2031	2031	2031	2031	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4
2.5°	962.8	962.4	962.0	961.6	961.2	960.3	959.0	957.6	956.3	954.9	956.3
5°	958.9	958.5	958.2	957.8	957.5	956.5	954.8	953.1	951.4	949.7	951.3
7.5°	950.0	949.7	949.4	949.0	948.7	947.6	945.7	943.9	942.0	940.2	941.6
10°	942.1	941.8	941.5	941.1	940.8	939.7	937.8	936.0	934.1	932.3	933.6
12.5°	932.4	931.8	931.2	930.6	930.0	928.8	927.1	925.4	923.6	921.9	923.0
15°	914.0	913.5	913.0	912.5	912.0	910.8	909.0	907.1	905.2	903.4	904.2
17.5°	892.9	892.2	891.4	890.7	889.9	888.6	886.7	884.7	882.8	880.9	881.9
20°	875.3	874.9	874.6	874.3	873.9	872.7	870.5	868.3	866.1	863.9	865.1
22.5°	857.6	857.0	856.4	855.8	855.2	853.9	851.8	849.8	847.7	845.6	846.4
25°	829.7	828.8	828.0	827.2	826.3	824.8	822.6	820.4	818.2	816.0	816.4
27.5°	797.0	796.5	796.0	795.5	795.0	793.6	791.3	789.1	786.8	784.6	784.6
30°	775.7	775.2	774.7	774.2	773.7	772.2	769.7	767.1	764.6	762.1	761.7
32.5°	752.6	751.9	751.1	750.3	749.5	748.0	745.8	743.5	741.2	739.0	738.4
35°	716.5	715.8	715.1	714.5	713.8	712.3	709.9	707.5	705.2	702.8	702.0
37.5°	678.9	678.1	677.3	676.4	675.6	674.0	671.8	669.6	667.3	665.1	663.9
40°	653.4	652.6	651.7	650.9	650.0	648.4	646.1	643.7	641.3	639.0	637.5
42.5°	626.1	625.4	624.6	623.9	623.2	621.7	619.3	617.0	614.6	612.2	610.9
45°	586.6	585.9	585.2	584.5	583.9	582.5	580.5	578.5	576.4	574.4	572.4
47.5°	544.0	544.0	544.1	544.1	544.1	542.9	540.5	538.1	535.7	533.2	531.2
50°	516.7	516.1	515.6	515.1	514.6	513.4	511.3	509.3	507.3	505.3	503.1
52.5°	488.7	488.3	488.0	487.6	487.2	485.9	483.8	481.6	479.5	477.3	475.4
55°	446.8	446.2	445.7	445.2	444.7	443.3	440.9	438.6	436.2	433.8	432.3
57.5°	402.5	402.3	402.0	401.7	401.5	400.3	398.3	396.3	394.3	392.4	390.4
60°	374.6	373.9	373.2	372.5	371.9	370.6	368.8	366.9	365.0	363.2	361.5
62.5°	345.4	344.9	344.3	343.8	343.2	342.2	340.6	339.0	337.4	335.8	334.0
65°	301.6	301.3	301.0	300.6	300.3	299.2	297.3	295.5	293.6	291.8	290.2
67.5°	259.2	258.5	257.8	257.1	256.4	255.4	254.0	252.6	251.2	249.8	248.5
70°	232.5	231.7	230.8	230.0	229.1	227.9	226.4	224.9	223.4	221.9	220.8
72.5°	203.3	202.7	202.2	201.6	201.0	200.2	199.3	198.3	197.3	196.3	195.2
75°	160.3	160.0	159.6	159.3	159.0	158.4	157.5	156.7	155.8	155.0	154.5
77.5°	120.7	120.5	120.4	120.2	120.1	119.8	119.3	118.9	118.4	117.9	117.6
80°	95.7	95.7	95.7	95.7	95.7	95.6	95.2	94.9	94.6	94.2	94.0
82.5°	73.9	73.6	73.3	73.0	72.8	72.6	72.5	72.5	72.4	72.3	72.0
85°	41.8	42.0	42.1	42.3	42.5	42.5	42.5	42.5	42.5	42.5	42.4
87.5°	16.7	17.2	17.8	18.3	18.9	19.3	19.6	20.0	20.3	20.6	21.0
90°	1.5	4.2	6.9	9.5	12.2	14.7	17.1	19.4	21.7	24.1	25.8
92.5°	23.2	21.3	19.4	17.6	15.7	15.8	17.9	19.9	22.0	24.1	25.8
95°	85.8	84.8	83.8	82.8	81.8	74.9	62.2	49.5	36.8	24.1	25.8
97.5°	179.1	180.9	182.7	184.6	186.4	174.7	149.5	124.4	99.2	74.1	64.6
100°	251.4	252.4	253.4	254.4	255.4	256.6	257.9	259.3	260.6	261.9	212.1
102.5°	324.9	326.1	327.4	328.7	329.9	331.0	331.8	332.6	333.4	334.2	324.8
105°	442.6	443.9	445.3	446.6	447.9	448.6	448.6	448.6	448.6	448.6	448.6
107.5°	564.8	564.8	564.8	564.8	564.8	565.1	565.8	566.5	567.2	567.8	567.9
110°	644.3	644.3	644.3	644.3	644.3	644.6	645.3	646.0	646.6	647.3	646.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	719.0	719.8	720.6	721.4	722.2	722.8	723.2	723.6	724.0	724.4	723.1
115°	831.0	832.6	834.3	836.0	837.6	838.6	839.0	839.3	839.7	840.0	838.6
117.5°	946.9	946.8	946.7	946.7	946.6	947.2	948.5	949.7	951.0	952.3	950.5
120°	1019.1	1018.8	1018.5	1018.1	1017.8	1018.1	1019.1	1020.1	1021.1	1022.1	1021.5
122.5°	1083.0	1084.2	1085.5	1086.8	1088.0	1088.9	1089.4	1089.8	1090.3	1090.8	1090.1
125°	1181.7	1184.0	1186.4	1188.7	1191.1	1192.2	1192.2	1192.2	1192.2	1192.2	1190.9
127.5°	1275.9	1277.6	1279.3	1281.0	1282.6	1283.4	1283.2	1283.0	1282.8	1282.6	1281.8
130°	1333.7	1335.4	1337.1	1338.8	1340.4	1341.4	1341.8	1342.1	1342.4	1342.8	1341.8
132.5°	1391.5	1393.5	1395.4	1397.4	1399.3	1399.9	1399.2	1398.4	1397.7	1397.0	1396.8
135°	1473.7	1475.7	1477.8	1479.8	1481.8	1482.4	1481.8	1481.1	1480.4	1479.8	1479.1
137.5°	1549.3	1551.0	1552.8	1554.5	1556.3	1556.8	1556.2	1555.6	1555.0	1554.4	1554.6
140°	1598.7	1599.4	1600.0	1600.7	1601.4	1601.5	1601.2	1600.9	1600.5	1600.2	1600.9
142.5°	1643.2	1643.6	1644.0	1644.4	1644.8	1645.3	1645.8	1646.2	1646.7	1647.2	1647.3
145°	1708.6	1709.2	1709.9	1710.6	1711.3	1711.6	1711.6	1711.6	1711.6	1711.6	1711.9
147.5°	1765.8	1765.6	1765.5	1765.4	1765.2	1765.4	1765.8	1766.2	1766.6	1767.0	1767.4
150°	1801.9	1801.2	1800.6	1799.9	1799.2	1799.2	1799.9	1800.6	1801.2	1801.9	1802.6
152.5°	1836.8	1835.4	1833.9	1832.4	1830.9	1830.5	1831.2	1831.9	1832.6	1833.2	1833.9
155°	1881.7	1879.7	1877.7	1875.7	1873.7	1873.0	1873.7	1874.3	1875.0	1875.7	1876.7
157.5°	1916.3	1915.1	1913.9	1912.7	1911.5	1910.9	1911.0	1911.1	1911.1	1911.2	1912.3
160°	1940.4	1938.4	1936.4	1934.4	1932.4	1931.5	1931.9	1932.2	1932.5	1932.9	1934.2
162.5°	1959.7	1957.7	1955.7	1953.6	1951.6	1950.8	1951.1	1951.5	1951.8	1952.1	1954.0
165°	1985.6	1983.6	1981.5	1979.5	1977.5	1976.7	1977.0	1977.4	1977.7	1978.0	1980.0
167.5°	2004.8	2002.8	2000.7	1998.6	1996.5	1995.7	1996.0	1996.3	1996.7	1997.0	1999.4
170°	2015.7	2013.3	2011.0	2008.6	2006.3	2005.3	2005.6	2006.0	2006.3	2006.6	2009.3
172.5°	2022.9	2020.6	2018.2	2015.9	2013.5	2012.7	2013.3	2013.9	2014.5	2015.1	2017.5
175°	2030.7	2028.7	2026.7	2024.7	2022.7	2021.9	2022.2	2022.5	2022.9	2023.2	2025.9
177.5°	2034.3	2032.7	2031.1	2029.5	2027.9	2027.2	2027.5	2027.8	2028.0	2028.3	2030.2
180°	2030.7	2030.7	2030.7	2030.7	2030.7	2030.7	2030.7	2030.7	2030.7	2030.7	2030.7



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CATALOG NUMBER: S125DIW-S610D1560U835-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4
2.5°	957.6	959.0	960.3	960.9	960.8	960.6	960.5	960.4
5°	952.8	954.3	955.8	956.5	956.3	956.2	956.0	955.8
7.5°	943.1	944.6	946.1	946.8	946.6	946.4	946.3	946.1
10°	935.0	936.3	937.7	938.3	938.1	937.9	937.7	937.6
12.5°	924.1	925.2	926.2	926.8	926.7	926.7	926.7	926.6
15°	905.1	905.9	906.8	907.2	907.2	907.2	907.2	907.2
17.5°	883.0	884.0	885.1	885.2	884.3	883.5	882.7	881.8
20°	866.2	867.4	868.6	868.8	867.9	867.1	866.2	865.4
22.5°	847.2	848.0	848.8	848.9	848.3	847.7	847.1	846.6
25°	816.7	817.0	817.4	817.3	816.8	816.3	815.8	815.3
27.5°	784.7	784.8	784.8	784.6	784.1	783.6	783.1	782.6
30°	761.4	761.1	760.7	760.3	759.8	759.3	758.8	758.3
32.5°	737.8	737.1	736.5	735.8	734.9	734.0	733.0	732.1
35°	701.1	700.3	699.4	698.3	697.0	695.6	694.3	692.9
37.5°	662.6	661.4	660.1	659.1	658.3	657.6	656.8	656.0
40°	635.9	634.4	632.9	631.9	631.4	630.9	630.4	629.9
42.5°	609.5	608.1	606.7	605.6	604.8	604.1	603.3	602.5
45°	570.3	568.3	566.3	565.0	564.5	564.0	563.5	563.0
47.5°	529.1	527.0	525.0	523.4	522.2	521.0	519.8	518.6
50°	500.9	498.7	496.5	494.8	493.6	492.4	491.2	490.1
52.5°	473.4	471.5	469.6	468.0	466.7	465.3	464.0	462.7
55°	430.8	429.3	427.8	426.4	425.2	424.0	422.9	421.7
57.5°	388.4	386.5	384.5	383.2	382.6	381.9	381.3	380.7
60°	359.8	358.1	356.4	355.0	353.8	352.6	351.4	350.3
62.5°	332.2	330.4	328.5	327.2	326.3	325.3	324.4	323.5
65°	288.7	287.2	285.7	284.6	283.9	283.2	282.6	281.9
67.5°	247.3	246.0	244.7	243.8	243.4	243.0	242.6	242.2
70°	219.8	218.8	217.8	217.0	216.3	215.6	214.9	214.3
72.5°	194.0	192.9	191.7	190.8	190.1	189.5	188.8	188.1
75°	154.0	153.5	153.0	152.4	151.7	151.0	150.4	149.7
77.5°	117.3	117.0	116.7	116.3	115.8	115.4	114.9	114.4
80°	93.9	93.7	93.5	93.3	92.9	92.6	92.3	91.9
82.5°	71.7	71.4	71.1	70.9	70.9	70.8	70.7	70.7
85°	42.2	42.0	41.9	41.6	41.3	40.9	40.6	40.3
87.5°	21.3	21.6	22.0	22.1	22.0	22.0	21.9	21.8
90°	27.4	29.1	30.8	32.1	33.1	34.1	35.1	36.1
92.5°	27.4	29.1	30.8	31.8	32.3	32.8	33.3	33.7
95°	27.4	29.1	30.8	31.6	31.6	31.6	31.6	31.6
97.5°	55.2	45.8	36.3	31.6	31.6	31.6	31.6	31.6
100°	162.2	112.4	62.6	37.0	35.6	34.3	33.0	31.6
102.5°	315.3	305.9	296.5	280.4	257.6	234.9	212.1	189.4
105°	448.6	448.6	448.6	448.4	448.1	447.8	447.4	447.1
107.5°	568.0	568.0	568.1	567.6	566.6	565.6	564.6	563.6
110°	645.3	644.3	643.3	643.0	643.3	643.6	644.0	644.3





TEST NUMBER: P333398

CATALOG NUMBER: S125DIW-S610D1560U835-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	721.8	720.6	719.3	718.4	718.0	717.5	717.0	716.5
115°	837.3	836.0	834.6	833.0	831.0	828.9	826.9	824.9
117.5°	948.8	947.1	945.3	944.0	943.2	942.3	941.4	940.5
120°	1020.8	1020.1	1019.5	1018.3	1016.6	1014.9	1013.3	1011.6
122.5°	1089.4	1088.8	1088.1	1086.8	1084.9	1082.9	1081.0	1079.0
125°	1189.6	1188.2	1186.9	1185.7	1184.7	1183.7	1182.7	1181.7
127.5°	1281.1	1280.4	1279.6	1278.0	1275.5	1273.1	1270.6	1268.1
130°	1340.8	1339.8	1338.8	1337.4	1335.8	1334.1	1332.4	1330.7
132.5°	1396.6	1396.4	1396.2	1395.2	1393.6	1391.9	1390.2	1388.5
135°	1478.4	1477.8	1477.1	1475.7	1473.7	1471.7	1469.7	1467.7
137.5°	1554.7	1554.8	1555.0	1554.2	1552.4	1550.7	1548.9	1547.2
140°	1601.5	1602.2	1602.9	1602.2	1600.2	1598.2	1596.2	1594.2
142.5°	1647.4	1647.6	1647.7	1646.8	1644.7	1642.7	1640.7	1638.7
145°	1712.3	1712.6	1712.9	1712.1	1710.1	1708.1	1706.1	1704.1
147.5°	1767.8	1768.2	1768.6	1767.6	1765.2	1762.8	1760.4	1758.0
150°	1803.2	1803.9	1804.6	1803.6	1800.9	1798.2	1795.6	1792.9
152.5°	1834.6	1835.2	1835.9	1835.0	1832.6	1830.2	1827.8	1825.4
155°	1877.7	1878.7	1879.7	1878.8	1876.2	1873.5	1870.8	1868.1
157.5°	1913.3	1914.4	1915.5	1914.7	1912.0	1909.3	1906.6	1904.0
160°	1935.5	1936.9	1938.2	1937.6	1934.9	1932.2	1929.5	1926.9
162.5°	1955.9	1957.8	1959.6	1959.1	1956.2	1953.2	1950.3	1947.3
165°	1982.0	1984.1	1986.1	1985.7	1983.1	1980.4	1977.7	1975.0
167.5°	2001.8	2004.2	2006.6	2006.3	2003.3	2000.3	1997.3	1994.3
170°	2012.0	2014.7	2017.3	2017.2	2014.2	2011.2	2008.1	2005.1
172.5°	2019.9	2022.3	2024.7	2024.4	2021.4	2018.4	2015.4	2012.4
175°	2028.5	2031.2	2033.9	2033.7	2030.7	2027.7	2024.7	2021.7
177.5°	2032.1	2033.9	2035.8	2035.7	2033.5	2031.4	2029.2	2027.1
180°	2030.7	2030.7	2030.7	2030.7	2030.7	2030.7	2030.7	2030.7

(END OF REPORT)