

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: P242929

Luminaire Tested: **S125RDR-S610D935-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242929  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-32)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125RDR-S610D935-X4F0-XX-UDD-A-W  
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

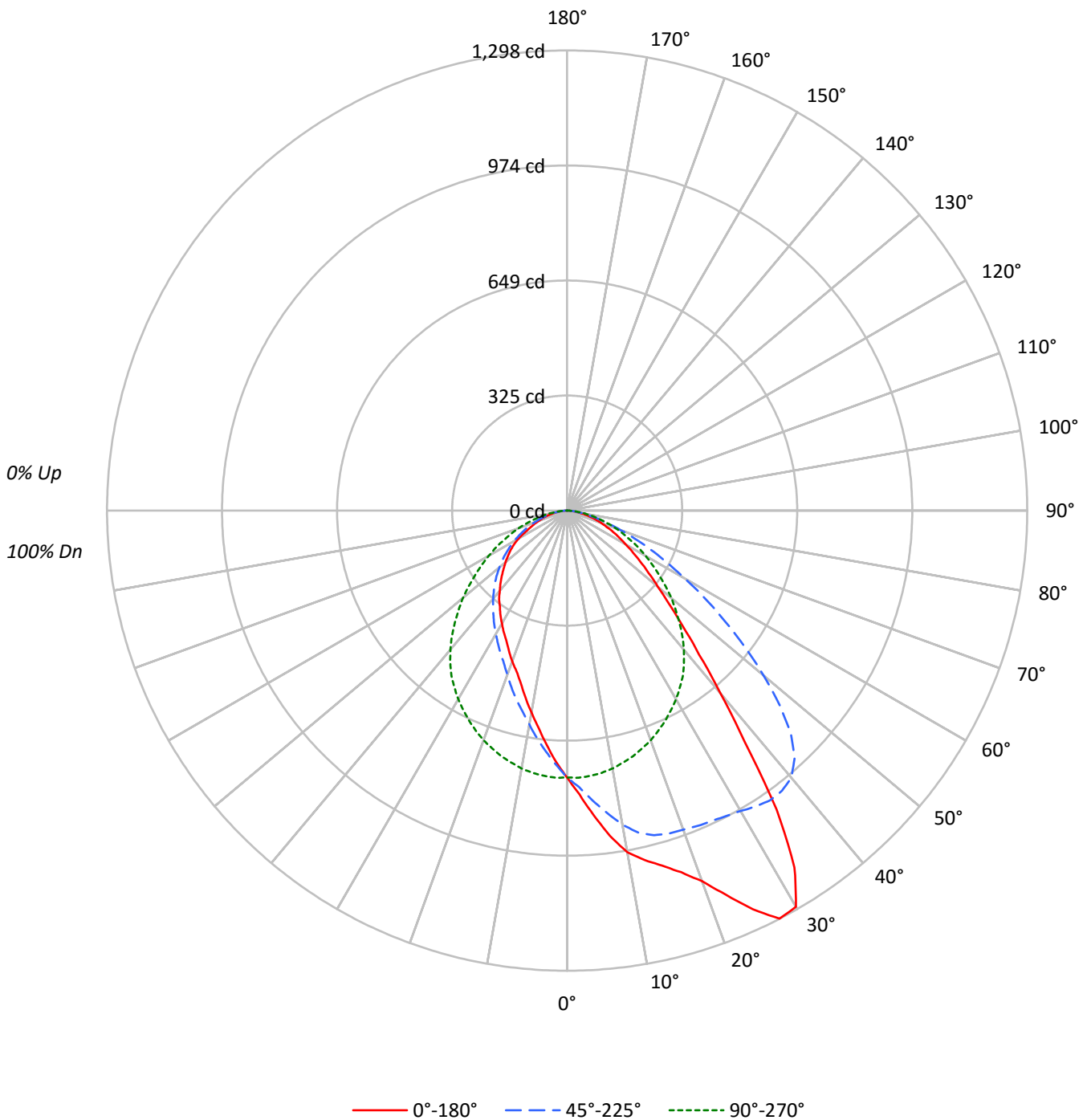
Lumens per Lamp: N/A  
Luminaire Lumens: 1950.8 lumens  
Efficiency: N/A  
Efficacy: 103.8 lumens/watt  
Spacing Criteria (0/90/45): 1.4 / 1.21 / 1.48  
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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



TEST NUMBER: P242929

CATALOG NUMBER: S125RDR-S610D935-X4F0-XX-UDD-A-W

### Luminous Intensity Polar Plot





TEST NUMBER: P242929

CATALOG NUMBER: S125RDR-S610D935-X4F0-XX-UDD-A-W

**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	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88					86				
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75					73				
3	92	83	75	69	90	81	74	69	78	72	67	76	70	66	73	69	65					63				
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57					55				
5	79	66	58	52	77	65	57	51	63	56	51	61	55	50	60	54	50					48				
6	73	60	52	45	71	59	51	45	57	50	45	56	49	44	54	49	44					42				
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	50	44	39					37				
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35					34				
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32					30				
10	55	42	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29					28				

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

	0°	90°	180°
0°	5351	5351	5351
5°	6157	5359	4732
10°	7063	5331	4176
15°	7628	5276	3711
20°	8411	5214	3427
25°	9734	5129	3180
30°	10593	5041	3018
35°	8936	4937	2869
40°	6240	4752	2742
45°	4629	4502	2616
50°	3691	4241	2509
55°	3133	3918	2413
60°	2706	3629	2259
65°	2412	3316	1944
70°	2120	3038	1773
75°	1834	2631	1664
80°	1392	2214	1392
85°	1158	1737	1313



TEST NUMBER: P242929

CATALOG NUMBER: S125RDR-S610D935-X4F0-XX-UDD-A-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.2	3.7
10°-20°	211.7	10.9
20°-30°	335.6	17.2
30°-40°	405.6	20.8
40°-50°	361.2	18.5
50°-60°	276.9	14.2
60°-70°	179.8	9.2
70°-80°	87.3	4.5
80°-90°	20.5	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	619.5	31.8
0°-40°	1025.1	52.5
0°-60°	1663.2	85.3
0°-90°	1950.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1950.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	753	753	753	753	753	
5°	863	820	751	682	663	86
15°	1037	948	717	552	504	297
25°	1241	966	654	445	406	571
35°	1030	998	569	362	331	624
45°	460	893	448	287	260	365
55°	253	542	316	211	195	229
65°	143	258	197	135	116	142
75°	67	91	96	67	61	71
85°	14	16	21	17	16	17
90°	0	0	0	0	0	



TEST NUMBER: P242929

CATALOG NUMBER: S125RDR-S610D935-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9
2.5°	801.8	801.2	802.4	799.0	799.3	794.1	794.1	790.0	784.8	780.8	778.9
5°	863.0	863.6	862.4	857.7	854.6	850.0	844.7	835.5	827.7	820.3	814.5
7.5°	925.4	926.0	922.0	921.1	913.1	908.1	896.4	884.3	873.8	859.9	850.0
10°	978.6	978.3	973.9	970.5	963.7	955.1	943.7	928.8	914.9	899.5	884.6
12.5°	1009.5	1008.6	1007.9	1003.6	997.4	990.0	980.7	966.2	948.3	931.0	913.1
15°	1036.7	1034.5	1030.5	1025.3	1016.3	1007.3	996.5	983.5	967.1	948.0	931.9
17.5°	1069.5	1069.8	1063.6	1058.0	1046.3	1031.4	1015.4	995.6	974.6	955.1	939.0
20°	1112.1	1111.2	1105.0	1090.8	1076.9	1057.1	1037.9	1012.3	985.1	957.6	936.2
22.5°	1173.3	1170.5	1164.0	1144.3	1120.8	1093.9	1062.0	1029.3	995.0	962.8	933.1
25°	1241.3	1239.5	1226.8	1205.1	1174.9	1135.6	1097.3	1054.3	1007.0	965.9	931.9
27.5°	1297.6	1293.9	1282.4	1262.0	1232.3	1190.0	1137.1	1081.5	1025.3	971.2	924.5
30°	1290.8	1295.4	1294.2	1285.8	1264.8	1227.7	1179.8	1115.2	1045.0	978.6	920.2
32.5°	1193.7	1197.7	1211.6	1234.2	1241.0	1231.7	1199.0	1140.5	1067.3	989.4	916.8
35°	1029.9	1035.5	1056.5	1089.5	1132.8	1169.0	1176.4	1144.3	1079.0	997.7	913.4
37.5°	821.6	857.7	871.9	905.6	973.6	1039.5	1096.7	1109.6	1074.4	995.9	909.3
40°	672.6	680.0	711.5	750.8	805.8	875.0	966.2	1032.1	1034.2	983.5	896.4
42.5°	551.4	561.3	580.5	609.8	655.0	724.2	819.1	911.2	961.0	949.5	879.4
45°	460.5	467.7	483.4	507.5	543.7	600.9	681.9	782.3	862.1	893.3	846.3
47.5°	389.5	393.2	407.7	427.2	455.0	498.3	564.1	655.0	749.9	813.2	800.9
50°	333.8	338.1	348.7	362.6	385.1	420.4	470.4	543.1	641.7	723.6	740.0
52.5°	290.5	293.9	299.5	312.5	330.1	355.1	393.2	457.1	543.4	631.8	675.1
55°	252.8	255.3	260.6	268.0	282.8	302.3	337.2	382.7	454.4	542.1	597.8
57.5°	220.7	221.9	225.0	232.4	243.3	257.8	284.4	325.8	377.7	460.2	521.4
60°	190.4	191.6	196.0	200.6	208.6	221.6	241.4	268.3	317.7	383.0	445.1
62.5°	166.3	166.9	168.1	172.8	179.6	188.9	203.4	224.1	260.9	316.2	374.0
65°	143.4	143.7	144.3	148.1	152.4	159.8	170.0	185.5	215.1	258.4	310.3
67.5°	120.5	121.2	123.3	124.6	129.8	133.5	140.0	152.4	175.3	206.2	248.2
70°	102.0	101.7	103.9	105.4	106.9	111.6	115.6	125.2	138.2	160.4	194.1
72.5°	84.7	83.8	84.4	84.7	86.9	89.6	93.7	98.6	107.9	121.5	145.3
75°	66.8	67.1	67.1	67.7	69.2	70.5	71.7	74.8	80.4	90.6	104.5
77.5°	50.1	49.5	51.0	51.0	52.2	53.8	54.7	55.9	58.1	62.7	71.1
80°	34.0	34.0	34.3	35.2	34.9	35.5	37.1	38.3	41.1	43.6	46.1
82.5°	24.1	23.8	24.1	24.1	24.1	24.7	25.0	25.0	25.7	26.6	28.1
85°	14.2	14.2	14.5	14.5	14.8	14.8	15.1	15.1	15.1	15.5	15.8
87.5°	6.8	6.5	6.2	6.2	6.5	7.1	6.8	6.5	6.5	6.5	6.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P242929

CATALOG NUMBER: S125RDR-S610D935-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9
2.5°	778.9	776.7	772.7	769.0	764.4	760.4	757.6	754.2	749.9	744.6	740.3
5°	808.0	801.2	792.2	784.5	774.6	766.9	758.8	751.1	743.4	733.5	724.8
7.5°	840.1	826.8	814.5	798.4	783.9	771.2	758.8	746.1	734.1	720.5	707.8
10°	869.2	852.2	833.3	811.7	791.9	773.0	755.7	738.7	720.8	705.0	688.0
12.5°	896.4	873.2	850.9	822.2	797.5	773.3	750.2	727.9	708.4	686.8	668.3
15°	910.6	888.9	864.8	831.5	798.4	770.6	744.6	717.1	693.3	670.4	650.0
17.5°	918.9	896.1	868.2	835.8	800.2	765.6	732.9	703.5	676.3	650.0	627.5
20°	915.2	893.3	864.5	833.9	795.3	758.8	722.7	689.3	658.1	629.9	605.5
22.5°	906.3	883.4	855.9	823.1	786.9	747.7	708.4	672.3	639.2	609.8	582.6
25°	897.3	866.4	837.9	806.4	771.5	733.2	693.3	654.0	619.1	589.4	560.4
27.5°	888.6	851.2	816.0	785.7	748.3	713.7	674.7	634.3	597.8	567.8	538.1
30°	876.0	832.7	792.8	757.3	722.3	689.9	653.4	614.2	576.5	545.2	514.9
32.5°	860.2	813.5	768.7	726.4	693.0	660.8	628.7	591.6	555.1	522.7	491.8
35°	847.5	788.8	741.2	697.6	660.2	629.0	599.3	569.0	532.3	498.9	468.9
37.5°	829.9	765.3	711.5	663.9	625.0	594.1	570.3	541.5	507.2	474.8	446.9
40°	814.1	739.3	679.1	632.1	590.7	557.6	535.7	512.2	481.6	451.6	423.8
42.5°	793.1	715.5	646.3	596.9	555.1	523.6	501.3	481.6	457.1	429.3	399.0
45°	764.4	683.4	612.6	560.1	518.0	486.8	466.1	447.9	428.4	402.4	376.5
47.5°	730.1	652.8	578.3	520.5	480.0	450.7	430.3	415.1	400.9	378.3	352.1
50°	687.1	613.2	540.9	485.3	441.4	413.9	395.0	383.6	370.9	350.8	329.8
52.5°	636.4	572.4	502.0	444.8	404.0	378.6	360.7	349.3	339.4	323.9	304.1
55°	582.6	524.8	459.9	408.3	370.3	344.3	327.0	316.2	310.0	296.1	280.3
57.5°	521.7	477.2	418.5	368.1	333.8	307.9	294.9	285.3	278.2	268.0	256.2
60°	457.5	428.4	377.1	329.8	298.9	274.5	263.0	255.3	248.8	240.5	231.8
62.5°	392.2	373.1	330.1	291.2	263.3	243.9	233.4	226.6	218.8	213.9	205.5
65°	335.4	316.5	285.6	253.8	227.5	211.1	203.4	197.2	192.6	186.4	180.5
67.5°	272.3	263.7	240.8	217.0	197.8	182.1	175.3	170.3	165.1	161.3	157.0
70°	215.1	211.4	196.3	181.7	164.1	154.2	148.1	146.2	139.4	135.7	132.9
72.5°	164.4	163.2	156.1	147.1	136.0	127.7	122.1	119.9	116.2	113.4	111.9
75°	119.6	120.2	118.7	112.2	107.6	102.0	97.1	95.8	92.7	90.3	88.7
77.5°	81.6	84.7	84.1	83.8	81.6	77.6	75.4	74.5	71.1	70.2	69.9
80°	51.9	55.3	58.4	58.1	57.5	56.6	55.0	54.1	52.5	51.6	51.0
82.5°	30.3	33.4	35.9	38.0	38.0	37.1	36.2	35.9	35.9	35.2	35.2
85°	16.4	17.0	17.9	20.1	21.6	21.9	21.6	21.3	20.4	20.7	21.0
87.5°	7.1	7.1	7.4	7.4	7.1	8.7	9.6	9.9	9.3	8.7	8.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P242929

CATALOG NUMBER: S125RDR-S610D935-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9
2.5°	737.2	732.9	729.8	723.6	719.3	717.4	714.0	713.1	716.5	714.0	713.7
5°	718.3	709.4	702.3	695.1	687.4	682.5	675.1	673.8	672.0	669.2	668.6
7.5°	696.4	685.3	676.9	665.2	655.6	647.9	638.6	634.9	633.0	629.6	624.1
10°	674.1	660.2	647.9	636.1	623.4	613.2	604.0	596.9	592.2	587.9	586.0
12.5°	652.2	638.0	621.3	606.4	591.9	580.2	569.7	565.6	560.4	555.1	550.2
15°	629.3	610.5	593.1	576.8	564.7	552.3	542.5	535.7	527.9	525.8	517.4
17.5°	604.9	587.3	566.9	549.3	535.7	522.7	511.9	503.8	497.9	489.6	485.6
20°	582.3	560.4	540.6	524.8	509.4	493.3	482.2	475.7	470.1	463.6	460.5
22.5°	558.2	536.9	516.5	497.3	481.6	465.8	458.7	451.9	445.4	439.5	435.2
25°	534.7	513.1	491.8	472.6	456.2	444.8	435.5	427.8	424.4	418.5	414.2
27.5°	511.2	488.4	466.7	446.6	434.0	422.5	415.1	408.9	402.4	397.2	393.2
30°	488.7	465.2	441.1	425.9	412.3	401.5	393.2	387.3	382.7	378.0	375.2
32.5°	466.1	441.7	421.0	404.3	391.6	382.7	374.0	368.4	363.5	358.2	354.8
35°	441.7	417.0	399.7	383.6	370.9	362.3	356.4	348.3	344.3	340.6	337.2
37.5°	419.7	396.3	377.1	363.2	351.4	343.1	335.4	331.3	326.1	323.0	320.2
40°	395.0	374.0	357.0	342.2	334.1	324.5	317.4	311.9	308.2	303.8	300.7
42.5°	372.8	353.6	337.2	324.2	313.7	306.0	299.2	293.6	288.7	285.9	283.4
45°	352.1	332.6	316.5	304.1	294.9	287.1	280.0	277.3	271.1	267.4	266.1
47.5°	330.4	312.8	297.0	285.6	276.0	268.9	262.1	255.9	252.8	249.1	247.3
50°	308.5	291.8	277.3	266.1	256.9	248.8	242.6	238.9	234.3	230.9	228.4
52.5°	286.5	271.4	256.9	246.3	238.6	230.6	223.5	219.8	215.4	213.6	212.0
55°	265.8	249.4	237.1	226.6	218.2	210.8	204.3	200.6	197.8	195.7	195.0
57.5°	242.0	228.7	217.0	207.7	198.7	191.6	185.8	182.4	179.9	179.6	177.4
60°	218.8	207.1	196.6	186.4	179.0	172.5	167.5	163.5	161.0	160.7	160.1
62.5°	195.7	184.5	174.9	166.3	159.8	153.6	149.0	144.3	143.1	141.3	139.7
65°	172.8	162.6	154.5	147.4	140.3	135.1	130.4	127.7	124.3	122.4	119.0
67.5°	150.2	141.9	134.1	128.3	122.4	117.1	113.1	109.1	106.6	105.1	102.3
70°	128.0	121.8	114.1	107.6	103.2	99.2	96.1	91.5	89.9	88.7	87.5
72.5°	106.9	101.7	95.5	90.6	86.2	82.5	78.8	77.3	75.7	74.5	73.9
75°	87.5	82.2	76.7	72.9	69.9	66.8	64.9	63.4	62.7	62.4	61.2
77.5°	68.0	64.9	60.3	56.9	54.7	53.5	51.6	51.0	51.3	49.8	49.5
80°	49.1	47.6	43.9	42.7	41.1	39.9	38.9	37.4	35.9	35.2	34.3
82.5°	33.4	31.8	30.9	28.7	27.5	26.9	26.0	25.7	26.3	25.3	25.0
85°	19.5	17.9	17.3	17.0	16.4	17.0	16.7	16.4	16.1	15.8	16.1
87.5°	7.7	7.7	7.4	8.0	7.1	7.4	7.4	7.1	7.1	7.1	6.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





TEST NUMBER: P242929

CATALOG NUMBER: S125RDR-S610D935-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	752.9	752.9	752.9	752.9
2.5°	713.4	710.0	709.1	710.3
5°	665.5	662.4	663.9	663.3
7.5°	625.0	621.0	616.3	617.6
10°	582.0	578.9	577.1	578.6
12.5°	545.9	544.3	542.8	541.5
15°	513.7	510.0	508.5	504.4
17.5°	482.8	481.6	477.5	474.8
20°	455.9	454.7	450.7	453.1
22.5°	433.7	430.6	429.9	428.4
25°	412.9	408.9	407.4	405.5
27.5°	391.9	389.8	387.6	387.0
30°	371.5	369.4	367.8	367.8
32.5°	353.3	351.7	350.2	349.9
35°	335.7	333.2	332.6	330.7
37.5°	317.1	315.0	315.0	315.3
40°	299.5	298.0	297.7	295.5
42.5°	280.7	280.0	278.8	278.2
45°	264.0	261.8	261.8	260.3
47.5°	246.3	244.5	244.8	242.9
50°	228.7	227.8	227.5	226.9
52.5°	211.1	210.8	212.3	210.8
55°	195.7	194.7	196.6	194.7
57.5°	177.4	176.8	178.7	177.4
60°	159.5	157.6	158.6	158.9
62.5°	138.2	137.2	137.9	136.0
65°	118.4	117.5	116.2	115.6
67.5°	102.9	100.1	100.1	100.8
70°	85.6	85.6	85.3	85.3
72.5°	73.6	73.3	72.6	72.3
75°	61.2	61.5	60.9	60.6
77.5°	47.9	46.4	47.0	46.4
80°	34.3	34.0	34.9	34.0
82.5°	25.3	25.0	25.3	24.7
85°	16.4	16.1	15.8	16.1
87.5°	7.1	6.8	6.8	6.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)