

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: P242919

Luminaire Tested: **S125RDR-S610D840-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242919
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-S610D840-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2288.1 lumens
Efficiency: N/A
Efficacy: 121.7 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

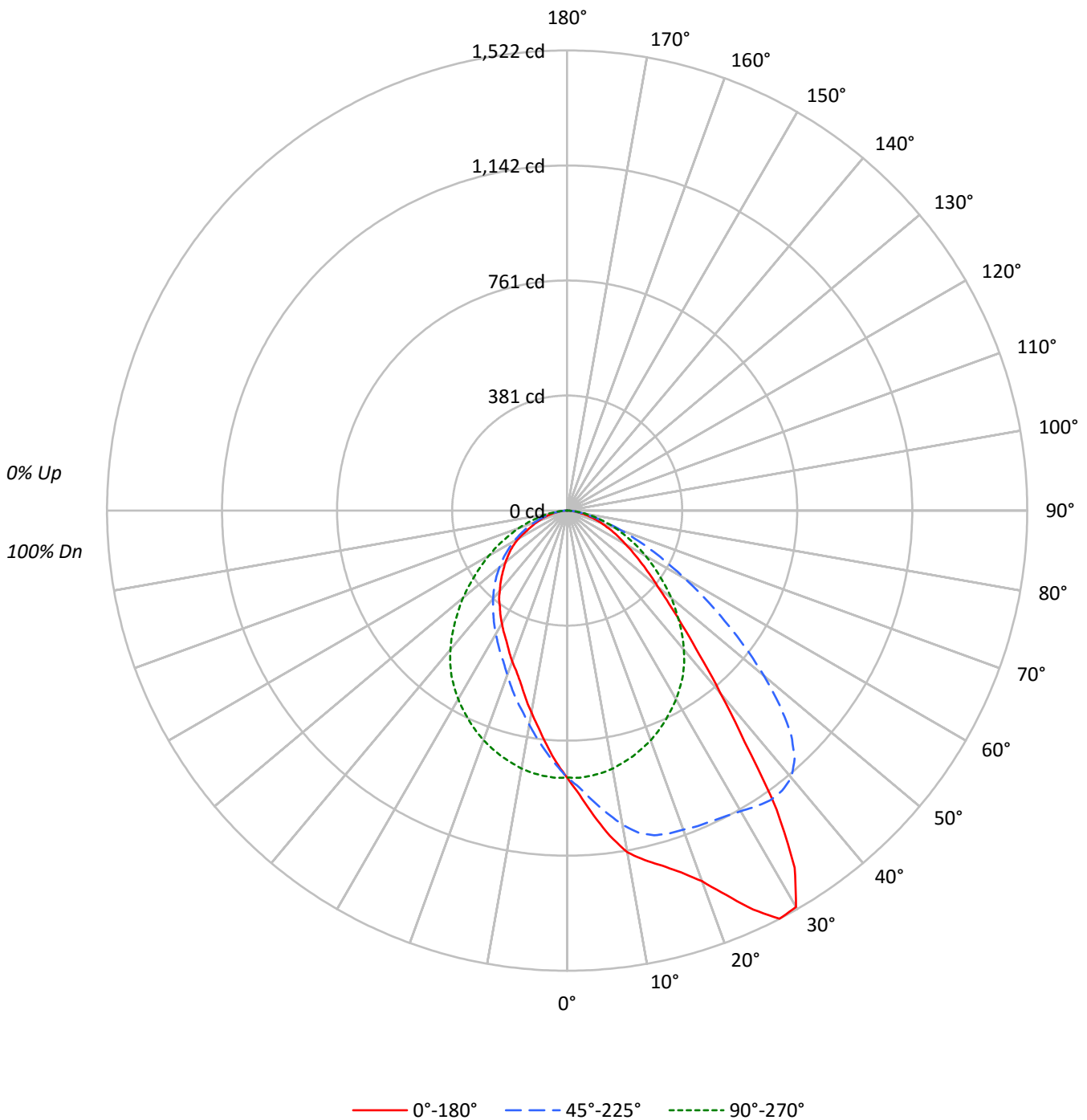
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242919

CATALOG NUMBER: S125RDR-S610D840-X4F0-XX-UDD-A-W

Luminous Intensity Polar Plot





TEST NUMBER: P242919

CATALOG NUMBER: S125RDR-S610D840-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°	6276	6276	6276
5°	7222	6285	5551
10°	8284	6254	4898
15°	8947	6189	4354
20°	9866	6114	4020
25°	11417	6016	3730
30°	12424	5912	3540
35°	10481	5791	3366
40°	7319	5573	3216
45°	5430	5280	3069
50°	4329	4975	2942
55°	3675	4596	2830
60°	3174	4257	2648
65°	2829	3890	2280
70°	2485	3564	2080
75°	2150	3087	1952
80°	1633	2595	1633
85°	1362	2039	1541



TEST NUMBER: P242919

CATALOG NUMBER: S125RDR-S610D840-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.7	3.7
10°-20°	248.3	10.9
20°-30°	393.7	17.2
30°-40°	475.7	20.8
40°-50°	423.6	18.5
50°-60°	324.8	14.2
60°-70°	210.9	9.2
70°-80°	102.4	4.5
80°-90°	24.1	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°	726.6	31.8
0°-40°	1202.4	52.5
0°-60°	1950.8	85.3
0°-90°	2288.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2288.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	883	883	883	883	883	
5°	1012	962	881	800	778	101
15°	1216	1112	841	648	592	348
25°	1456	1133	767	522	476	670
35°	1208	1170	667	425	388	732
45°	540	1048	525	337	305	428
55°	297	636	371	247	228	269
65°	168	303	231	158	136	167
75°	78	106	112	78	71	83
85°	17	18	25	20	19	20
90°	0	0	0	0	0	



TEST NUMBER: P242919

CATALOG NUMBER: S125RDR-S610D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	883.1	883.1	883.1	883.1	883.1	883.1	883.1	883.1	883.1	883.1	883.1
2.5°	940.4	939.7	941.1	937.1	937.5	931.3	931.3	926.6	920.5	915.8	913.6
5°	1012.2	1012.9	1011.5	1006.0	1002.4	997.0	990.8	979.9	970.9	962.2	955.3
7.5°	1085.4	1086.1	1081.4	1080.3	1070.9	1065.1	1051.3	1037.2	1024.9	1008.6	997.0
10°	1147.8	1147.4	1142.3	1138.4	1130.4	1120.2	1106.8	1089.4	1073.1	1055.0	1037.6
12.5°	1184.0	1182.9	1182.2	1177.1	1169.9	1161.2	1150.3	1133.3	1112.3	1091.9	1070.9
15°	1215.9	1213.4	1208.7	1202.5	1192.0	1181.5	1168.8	1153.6	1134.4	1111.9	1093.0
17.5°	1254.4	1254.7	1247.5	1241.0	1227.2	1209.8	1190.9	1167.7	1143.1	1120.2	1101.4
20°	1304.4	1303.3	1296.1	1279.4	1263.1	1239.9	1217.4	1187.3	1155.4	1123.1	1098.1
22.5°	1376.2	1372.9	1365.3	1342.1	1314.5	1283.0	1245.7	1207.2	1167.0	1129.3	1094.5
25°	1455.9	1453.8	1438.9	1413.5	1378.0	1331.9	1287.0	1236.6	1181.1	1132.9	1093.0
27.5°	1521.9	1517.6	1504.1	1480.2	1445.4	1395.8	1333.8	1268.5	1202.5	1139.1	1084.3
30°	1513.9	1519.4	1517.9	1508.1	1483.5	1440.0	1383.8	1308.0	1225.7	1147.8	1079.3
32.5°	1400.1	1404.8	1421.1	1447.6	1455.6	1444.7	1406.3	1337.7	1251.8	1160.5	1075.3
35°	1208.0	1214.5	1239.1	1277.9	1328.7	1371.1	1379.8	1342.1	1265.6	1170.3	1071.3
37.5°	963.6	1006.0	1022.7	1062.2	1142.0	1219.2	1286.3	1301.5	1260.2	1168.1	1066.6
40°	788.9	797.6	834.6	880.6	945.1	1026.3	1133.3	1210.5	1213.0	1153.6	1051.3
42.5°	646.8	658.4	680.8	715.3	768.2	849.4	960.7	1068.7	1127.1	1113.7	1031.4
45°	540.2	548.5	567.0	595.3	637.7	704.8	799.7	917.6	1011.1	1047.7	992.6
47.5°	456.8	461.1	478.2	501.0	533.6	584.4	661.6	768.2	879.5	953.8	939.3
50°	391.5	396.6	408.9	425.3	451.7	493.0	551.8	637.0	752.6	848.7	867.9
52.5°	340.8	344.8	351.3	366.5	387.2	416.6	461.1	536.2	637.3	741.0	791.8
55°	296.6	299.5	305.6	314.3	331.7	354.6	395.5	448.8	532.9	635.9	701.1
57.5°	258.8	260.3	263.9	272.6	285.3	302.4	333.5	382.1	443.0	539.8	611.6
60°	223.3	224.8	229.8	235.3	244.7	259.9	283.1	314.7	372.7	449.2	522.0
62.5°	195.0	195.8	197.2	202.7	210.6	221.5	238.5	262.8	306.0	370.9	438.7
65°	168.2	168.6	169.3	173.7	178.7	187.4	199.4	217.5	252.3	303.1	364.0
67.5°	141.4	142.1	144.7	146.1	152.3	156.6	164.2	178.7	205.6	241.8	291.1
70°	119.6	119.3	121.8	123.6	125.4	130.9	135.6	146.8	162.1	188.2	227.7
72.5°	99.3	98.2	99.0	99.3	101.9	105.1	109.8	115.6	126.5	142.5	170.4
75°	78.3	78.7	78.7	79.4	81.2	82.7	84.1	87.7	94.3	106.2	122.5
77.5°	58.7	58.0	59.8	59.8	61.3	63.1	64.2	65.6	68.2	73.6	83.4
80°	39.9	39.9	40.2	41.3	41.0	41.7	43.5	45.0	48.2	51.1	54.0
82.5°	28.3	27.9	28.3	28.3	28.3	29.0	29.4	29.4	30.1	31.2	33.0
85°	16.7	16.7	17.0	17.0	17.4	17.4	17.8	17.8	17.8	18.1	18.5
87.5°	8.0	7.6	7.3	7.3	7.6	8.3	8.0	7.6	7.6	7.6	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: P242919

CATALOG NUMBER: S125RDR-S610D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	883.1	883.1	883.1	883.1	883.1	883.1	883.1	883.1	883.1	883.1	883.1
2.5°	913.6	911.0	906.3	902.0	896.5	891.8	888.6	884.6	879.5	873.3	868.3
5°	947.7	939.7	929.2	920.1	908.5	899.4	890.0	881.0	871.9	860.3	850.1
7.5°	985.4	969.8	955.3	936.4	919.4	904.5	890.0	875.2	861.0	845.1	830.2
10°	1019.4	999.5	977.4	952.0	928.8	906.7	886.4	866.5	845.4	826.9	807.0
12.5°	1051.3	1024.2	998.1	964.3	935.3	907.1	879.9	853.8	830.9	805.5	783.8
15°	1068.0	1042.6	1014.4	975.2	936.4	903.8	873.3	841.1	813.2	786.3	762.4
17.5°	1077.8	1051.0	1018.4	980.3	938.6	898.0	859.6	825.1	793.2	762.4	735.9
20°	1073.5	1047.7	1014.0	978.1	932.8	890.0	847.6	808.4	771.8	738.8	710.2
22.5°	1062.9	1036.1	1003.9	965.4	923.0	877.0	830.9	788.5	749.7	715.3	683.4
25°	1052.4	1016.2	982.8	945.8	904.9	859.9	813.2	767.1	726.2	691.4	657.3
27.5°	1042.3	998.4	957.1	921.6	877.7	837.1	791.4	743.9	701.1	666.0	631.2
30°	1027.4	976.7	929.9	888.2	847.2	809.2	766.4	720.4	676.1	639.5	604.0
32.5°	1008.9	954.2	901.6	852.0	812.8	775.1	737.4	693.9	651.1	613.0	576.8
35°	994.1	925.2	869.4	818.2	774.4	737.8	703.0	667.4	624.3	585.1	550.0
37.5°	973.4	897.6	834.6	778.7	733.0	696.8	668.9	635.2	594.9	556.9	524.2
40°	954.9	867.2	796.5	741.4	692.8	654.0	628.3	600.7	564.8	529.7	497.0
42.5°	930.3	839.3	758.1	700.1	651.1	614.1	588.0	564.8	536.2	503.6	468.0
45°	896.5	801.6	718.5	656.9	607.6	571.0	546.7	525.3	502.5	472.0	441.6
47.5°	856.3	765.7	678.3	610.5	563.0	528.6	504.6	486.9	470.2	443.7	412.9
50°	805.9	719.3	634.4	569.2	517.7	485.4	463.3	449.9	435.0	411.5	386.8
52.5°	746.5	671.4	588.8	521.7	473.8	444.1	423.1	409.7	398.1	379.9	356.7
55°	683.4	615.6	539.4	478.9	434.3	403.9	383.6	370.9	363.6	347.3	328.8
57.5°	612.0	559.8	490.9	431.8	391.5	361.1	345.9	334.6	326.3	314.3	300.5
60°	536.5	502.5	442.3	386.8	350.6	321.9	308.5	299.5	291.8	282.1	271.9
62.5°	460.1	437.6	387.2	341.5	308.9	286.0	273.7	265.7	256.7	250.9	241.1
65°	393.3	371.2	335.0	297.6	266.8	247.6	238.5	231.3	225.9	218.6	211.7
67.5°	319.4	309.2	282.4	254.5	232.0	213.5	205.6	199.8	193.6	189.2	184.2
70°	252.3	248.0	230.2	213.2	192.5	180.9	173.7	171.5	163.5	159.2	155.9
72.5°	192.9	191.4	183.1	172.6	159.5	149.7	143.2	140.7	136.3	133.0	131.2
75°	140.3	141.0	139.2	131.6	126.2	119.6	113.8	112.4	108.8	105.9	104.0
77.5°	95.7	99.3	98.6	98.2	95.7	91.0	88.5	87.4	83.4	82.3	81.9
80°	60.9	64.9	68.5	68.2	67.4	66.3	64.5	63.4	61.6	60.5	59.8
82.5°	35.5	39.2	42.1	44.6	44.6	43.5	42.4	42.1	42.1	41.3	41.3
85°	19.2	19.9	21.0	23.6	25.4	25.7	25.4	25.0	23.9	24.3	24.7
87.5°	8.3	8.3	8.7	8.7	8.3	10.2	11.2	11.6	10.9	10.2	9.4
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: P242919

CATALOG NUMBER: S125RDR-S610D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	883.1	883.1	883.1	883.1	883.1	883.1	883.1	883.1	883.1	883.1	883.1
2.5°	864.6	859.6	855.9	848.7	843.6	841.4	837.5	836.4	840.4	837.5	837.1
5°	842.5	832.0	823.7	815.3	806.3	800.5	791.8	790.3	788.1	784.9	784.2
7.5°	816.8	803.7	793.9	780.2	768.9	759.9	749.0	744.6	742.5	738.5	732.0
10°	790.7	774.4	759.9	746.1	731.2	719.3	708.4	700.1	694.6	689.5	687.4
12.5°	764.9	748.3	728.7	711.3	694.3	680.5	668.1	663.4	657.3	651.1	645.3
15°	738.1	716.0	695.7	676.5	662.3	647.8	636.2	628.3	619.2	616.7	606.9
17.5°	709.5	688.8	664.9	644.2	628.3	613.0	600.4	590.9	584.0	574.3	569.5
20°	683.0	657.3	634.1	615.6	597.5	578.6	565.6	557.9	551.4	543.8	540.2
22.5°	654.7	629.7	605.8	583.3	564.8	546.3	538.0	530.0	522.4	515.5	510.4
25°	627.2	601.8	576.8	554.3	535.1	521.7	510.8	501.7	497.8	490.9	485.8
27.5°	599.6	572.8	547.4	523.9	509.0	495.6	486.9	479.6	472.0	465.9	461.1
30°	573.2	545.6	517.3	499.6	483.6	470.9	461.1	454.3	448.8	443.4	440.1
32.5°	546.7	518.1	493.8	474.2	459.3	448.8	438.7	432.1	426.3	420.2	416.2
35°	518.1	489.1	468.8	449.9	435.0	424.9	418.0	408.6	403.9	399.5	395.5
37.5°	492.3	464.8	442.3	426.0	412.2	402.4	393.3	388.6	382.5	378.8	375.6
40°	463.3	438.7	418.7	401.3	391.9	380.7	372.3	365.8	361.4	356.4	352.7
42.5°	437.2	414.7	395.5	380.3	368.0	358.9	350.9	344.4	338.6	335.3	332.4
45°	412.9	390.1	371.2	356.7	345.9	336.8	328.5	325.2	317.9	313.6	312.1
47.5°	387.5	366.9	348.4	335.0	323.7	315.4	307.4	300.2	296.6	292.2	290.0
50°	361.8	342.2	325.2	312.1	301.3	291.8	284.6	280.2	274.8	270.8	267.9
52.5°	336.1	318.3	301.3	288.9	279.9	270.4	262.1	257.8	252.7	250.5	248.7
55°	311.8	292.6	278.1	265.7	255.9	247.2	239.6	235.3	232.0	229.5	228.8
57.5°	283.9	268.3	254.5	243.6	233.1	224.8	217.9	213.9	211.0	210.6	208.1
60°	256.7	242.9	230.6	218.6	209.9	202.3	196.5	191.8	188.9	188.5	187.8
62.5°	229.5	216.4	205.2	195.0	187.4	180.2	174.7	169.3	167.9	165.7	163.9
65°	202.7	190.7	181.3	172.9	164.6	158.4	153.0	149.7	145.7	143.6	139.6
67.5°	176.2	166.4	157.3	150.5	143.6	137.4	132.7	128.0	125.1	123.3	120.0
70°	150.1	142.8	133.8	126.2	121.1	116.4	112.7	107.3	105.5	104.0	102.6
72.5°	125.4	119.3	112.0	106.2	101.1	96.8	92.4	90.6	88.8	87.4	86.6
75°	102.6	96.4	89.9	85.6	81.9	78.3	76.1	74.3	73.6	73.2	71.8
77.5°	79.8	76.1	70.7	66.7	64.2	62.7	60.5	59.8	60.2	58.4	58.0
80°	57.6	55.8	51.5	50.0	48.2	46.8	45.7	43.9	42.1	41.3	40.2
82.5°	39.2	37.3	36.3	33.7	32.3	31.5	30.5	30.1	30.8	29.7	29.4
85°	22.8	21.0	20.3	19.9	19.2	19.9	19.6	19.2	18.9	18.5	18.9
87.5°	9.1	9.1	8.7	9.4	8.3	8.7	8.7	8.3	8.3	8.3	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: P242919

CATALOG NUMBER: S125RDR-S610D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	883.1	883.1	883.1	883.1
2.5°	836.7	832.7	831.7	833.1
5°	780.5	776.9	778.7	778.0
7.5°	733.0	728.3	722.9	724.3
10°	682.6	679.0	676.8	678.7
12.5°	640.2	638.4	636.6	635.2
15°	602.5	598.2	596.4	591.7
17.5°	566.3	564.8	560.1	556.9
20°	534.7	533.3	528.6	531.5
22.5°	508.6	505.0	504.3	502.5
25°	484.3	479.6	477.8	475.6
27.5°	459.7	457.2	454.6	453.9
30°	435.8	433.2	431.4	431.4
32.5°	414.4	412.6	410.7	410.4
35°	393.7	390.8	390.1	387.9
37.5°	372.0	369.4	369.4	369.8
40°	351.3	349.5	349.1	346.6
42.5°	329.2	328.5	327.0	326.3
45°	309.6	307.1	307.1	305.3
47.5°	288.9	286.8	287.1	285.0
50°	268.3	267.2	266.8	266.1
52.5°	247.6	247.2	249.1	247.2
55°	229.5	228.4	230.6	228.4
57.5°	208.1	207.4	209.5	208.1
60°	187.1	184.9	186.0	186.3
62.5°	162.1	161.0	161.7	159.5
65°	138.9	137.8	136.3	135.6
67.5°	120.7	117.5	117.5	118.2
70°	100.4	100.4	100.1	100.1
72.5°	86.3	85.9	85.2	84.8
75°	71.8	72.1	71.4	71.1
77.5°	56.2	54.4	55.1	54.4
80°	40.2	39.9	41.0	39.9
82.5°	29.7	29.4	29.7	29.0
85°	19.2	18.9	18.5	18.9
87.5°	8.3	8.0	8.0	8.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)