

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: P243779

Luminaire Tested: **S125RDR-H610D840-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243779
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-71)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125RDR-H610D840-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2259.4 lumens
Efficiency: N/A
Efficacy: 131.4 lumens/watt
Spacing Criteria (0/90/45): 1.42 / 1.22 / 1.5
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

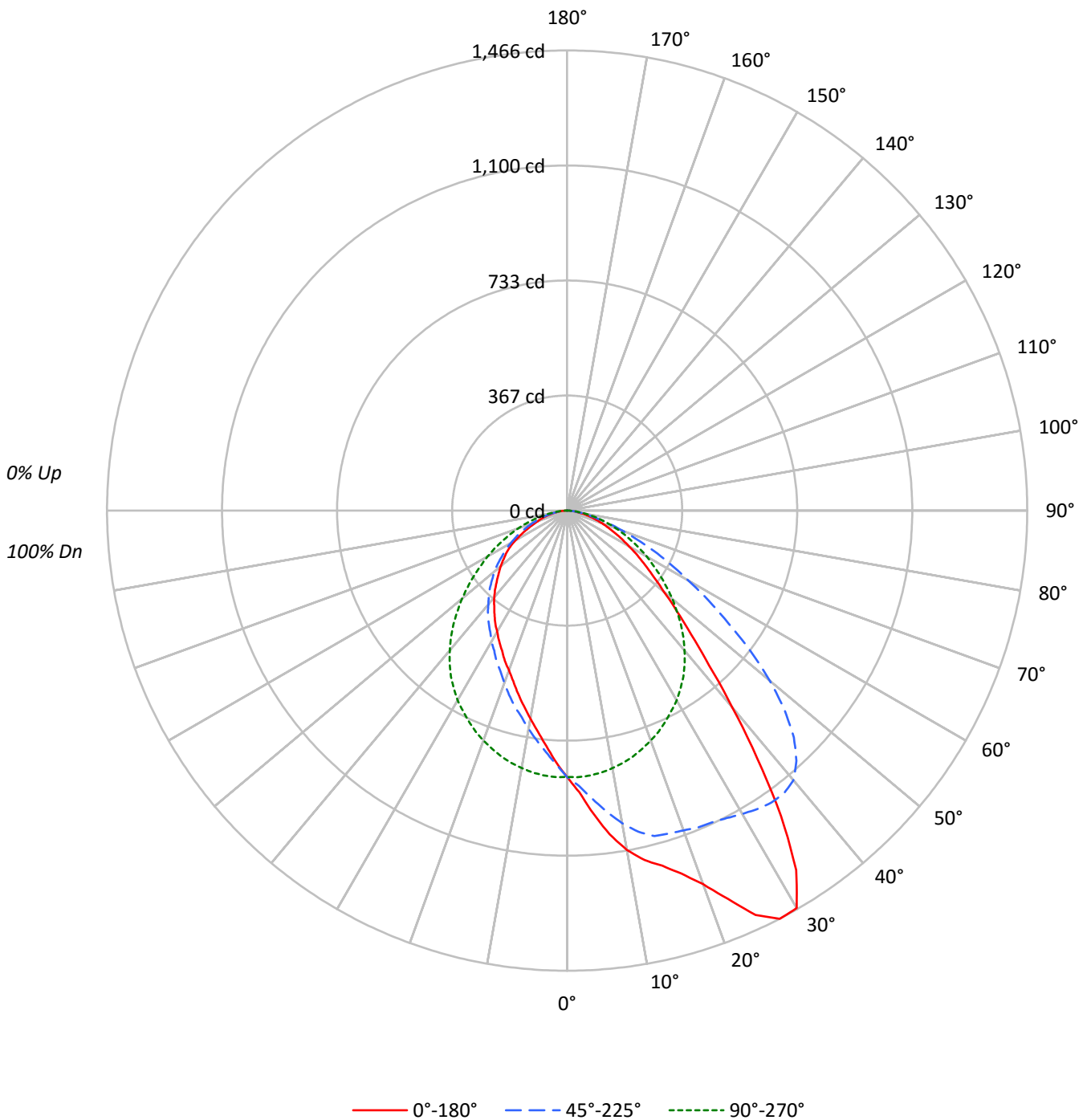
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P243779

CATALOG NUMBER: S125RDR-H610D840-X4F0-XX-UDD-A-W

Luminous Intensity Polar Plot





TEST NUMBER: P243779

CATALOG NUMBER: S125RDR-H610D840-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	68	78	72	67	75	70	66	73	69	65					63				
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	66	61	56					54				
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50					48				
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44					42				
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39					37				
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35					33				
9	59	46	38	32	57	45	38	32	44	37	32	43	37	32	42	36	32					30				
10	55	42	35	29	54	42	34	29	41	34	29	40	34	29	39	33	29					27				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	6033	6033	6033
5°	6926	6042	5374
10°	7924	6012	4858
15°	8619	5964	4444
20°	9578	5896	4094
25°	11145	5813	3854
30°	12001	5727	3658
35°	10310	5599	3499
40°	7596	5397	3354
45°	5610	5146	3180
50°	4444	4839	3052
55°	3755	4484	2937
60°	3235	4154	2718
65°	2809	3782	2366
70°	2462	3462	2070
75°	2090	3032	1961
80°	1625	2534	1625
85°	1427	2031	1484



TEST NUMBER: P243779

CATALOG NUMBER: S125RDR-H610D840-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.7	3.6
10°-20°	241.8	10.7
20°-30°	385.6	17.1
30°-40°	468.2	20.7
40°-50°	421.9	18.7
50°-60°	324.4	14.4
60°-70°	210.5	9.3
70°-80°	101.3	4.5
80°-90°	24.0	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°	709.1	31.4
0°-40°	1177.3	52.1
0°-60°	1923.6	85.1
0°-90°	2259.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2259.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	849	849	849	849	849	
5°	971	922	847	772	753	97
15°	1171	1074	811	645	604	336
25°	1421	1095	741	531	492	650
35°	1188	1135	645	436	403	727
45°	558	1022	512	347	316	443
55°	303	628	362	254	237	275
65°	167	305	225	161	141	167
75°	76	103	110	79	71	82
85°	18	18	25	20	18	20
90°	0	0	0	0	0	



TEST NUMBER: P243779

CATALOG NUMBER: S125RDR-H610D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	848.9	848.9	848.9	848.9	848.9	848.9	848.9	848.9	848.9	848.9	848.9
2.5°	898.1	901.5	898.8	900.4	897.8	896.4	893.0	888.0	882.9	878.2	877.9
5°	970.8	970.1	967.4	963.7	961.0	954.3	950.9	939.5	931.8	922.3	917.6
7.5°	1040.1	1038.5	1034.4	1029.4	1027.0	1018.3	1008.8	994.4	982.2	967.4	956.3
10°	1098.0	1097.7	1094.7	1091.3	1082.2	1072.5	1063.4	1048.2	1030.0	1011.5	996.0
12.5°	1140.5	1138.8	1135.1	1129.3	1121.9	1115.2	1103.1	1089.3	1067.1	1048.2	1027.0
15°	1171.4	1170.8	1165.4	1163.3	1148.9	1139.4	1123.3	1109.5	1092.3	1073.5	1050.6
17.5°	1212.5	1213.8	1209.1	1197.7	1184.6	1170.1	1147.2	1124.6	1100.7	1078.9	1060.3
20°	1266.4	1263.0	1254.9	1241.1	1217.5	1199.7	1176.8	1148.9	1116.6	1084.2	1057.6
22.5°	1338.4	1334.7	1321.9	1305.1	1275.4	1242.8	1207.8	1166.0	1129.0	1092.0	1057.0
25°	1421.2	1414.1	1395.3	1377.1	1335.0	1300.3	1248.2	1198.4	1144.5	1095.4	1056.0
27.5°	1466.3	1466.3	1457.5	1437.7	1404.4	1353.2	1300.0	1233.7	1171.4	1104.1	1048.2
30°	1462.3	1459.9	1463.3	1454.9	1433.3	1394.9	1342.1	1272.4	1193.0	1115.9	1048.9
32.5°	1357.9	1358.9	1379.1	1392.9	1403.7	1394.3	1359.9	1297.0	1217.9	1127.3	1046.2
35°	1188.3	1190.9	1226.6	1250.2	1298.3	1325.9	1334.0	1300.0	1229.0	1135.4	1041.5
37.5°	994.4	994.4	1035.8	1071.5	1125.3	1193.3	1244.1	1256.9	1222.3	1135.1	1037.5
40°	818.7	817.6	850.3	894.1	951.6	1026.7	1102.4	1167.4	1175.8	1121.9	1023.3
42.5°	669.9	668.2	703.9	728.1	788.7	855.7	956.3	1048.2	1100.7	1081.2	1002.4
45°	558.1	556.8	580.0	607.6	650.3	720.0	804.5	906.5	994.7	1021.6	963.4
47.5°	474.0	474.6	487.1	510.3	546.7	596.5	672.2	766.8	875.9	938.2	914.3
50°	401.9	404.3	413.7	431.2	457.8	497.9	562.8	648.3	760.4	842.9	847.9
52.5°	348.1	351.4	361.5	371.0	393.2	421.4	471.9	546.0	638.6	737.5	772.9
55°	303.0	304.6	310.4	320.5	337.0	360.5	397.2	453.8	539.6	627.8	690.1
57.5°	265.3	265.3	269.0	276.0	289.2	310.4	334.9	381.7	454.1	533.9	600.2
60°	227.6	228.9	231.6	239.3	248.1	264.2	288.1	317.8	380.4	447.0	518.4
62.5°	195.9	198.3	201.0	204.7	212.7	224.2	241.0	268.3	310.4	372.0	435.6
65°	167.0	169.3	169.7	174.0	179.4	188.8	201.6	221.5	256.5	305.0	357.5
67.5°	141.4	142.4	143.4	146.8	151.8	157.9	166.3	181.1	208.7	241.4	292.5
70°	118.5	119.2	119.5	123.2	125.6	130.9	135.3	144.7	162.2	187.5	227.2
72.5°	96.9	95.9	95.6	98.6	99.6	104.0	109.4	116.1	125.6	143.4	173.0
75°	76.1	76.4	76.7	78.4	78.8	80.8	84.2	88.5	92.9	103.3	122.2
77.5°	58.6	57.2	57.2	59.2	59.9	60.3	62.6	65.0	67.3	73.4	80.8
80°	39.7	40.4	40.4	40.4	40.7	41.4	42.8	44.8	46.5	50.2	51.5
82.5°	28.3	28.3	27.9	28.6	28.9	29.3	29.3	29.3	30.3	31.3	32.7
85°	17.5	17.8	16.8	17.5	17.8	17.8	17.8	17.8	18.9	18.5	18.9
87.5°	7.4	7.7	7.7	8.1	8.1	8.4	8.1	8.4	8.1	8.1	8.4
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: P243779

CATALOG NUMBER: S125RDR-H610D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	848.9	848.9	848.9	848.9	848.9	848.9	848.9	848.9	848.9	848.9	848.9
2.5°	876.9	872.8	870.8	866.8	861.4	858.0	854.7	850.0	846.3	840.5	835.5
5°	909.2	901.1	893.7	883.6	873.9	865.4	856.7	846.9	838.2	828.4	818.0
7.5°	945.2	932.4	916.9	899.1	884.0	870.8	856.0	841.5	828.4	812.9	798.8
10°	979.9	959.4	938.8	914.9	892.7	873.2	853.3	833.1	816.0	796.8	779.3
12.5°	1006.8	987.3	956.7	927.0	898.1	872.8	847.9	823.4	800.8	779.6	758.7
15°	1030.4	998.1	972.1	939.8	904.5	870.2	839.2	810.6	783.3	758.4	737.2
17.5°	1037.1	1008.2	979.9	942.2	904.2	865.1	829.4	795.4	765.1	737.5	713.6
20°	1036.4	1007.2	976.5	940.5	900.1	857.4	817.6	779.6	745.3	713.6	688.0
22.5°	1026.3	998.1	967.1	930.7	889.7	845.6	803.8	761.8	724.4	691.4	665.2
25°	1015.6	979.9	947.6	910.9	871.8	831.1	786.7	741.2	702.2	667.8	638.2
27.5°	1006.1	963.4	923.7	887.7	847.6	810.9	766.8	719.3	679.3	643.3	612.6
30°	991.0	945.9	897.8	858.4	819.7	781.3	740.9	697.8	654.0	617.4	586.7
32.5°	977.9	921.0	868.8	824.4	785.7	752.0	713.3	671.9	629.1	594.1	561.1
35°	963.4	895.4	840.9	788.7	750.0	713.3	682.7	645.3	602.9	565.9	536.2
37.5°	946.2	869.1	806.5	753.3	713.3	675.6	648.0	614.7	576.3	539.6	510.3
40°	927.0	842.2	770.2	715.3	672.2	634.5	611.3	581.7	549.0	512.7	485.4
42.5°	902.8	813.6	737.2	677.3	629.5	595.5	572.2	547.7	517.7	486.1	456.5
45°	872.2	777.9	697.8	634.5	587.4	554.4	530.2	512.0	488.1	458.5	430.5
47.5°	834.8	740.6	657.4	591.8	546.3	514.7	492.1	474.0	455.8	430.2	403.6
50°	785.3	697.8	618.0	551.0	502.9	472.3	452.1	437.6	421.1	400.2	376.0
52.5°	730.8	649.7	571.6	509.0	462.5	431.9	411.0	398.9	386.4	369.3	348.4
55°	667.5	601.5	527.1	465.9	420.4	390.1	373.6	361.9	351.4	338.3	320.8
57.5°	600.5	542.6	478.0	421.4	378.7	350.1	335.6	325.8	317.1	307.7	293.2
60°	530.2	489.1	427.8	376.0	338.6	315.1	301.3	292.2	284.1	276.4	265.6
62.5°	456.8	422.8	377.0	332.9	299.6	277.4	267.3	259.5	251.1	244.4	236.6
65°	382.4	362.9	331.2	289.8	259.2	241.0	231.3	224.9	220.8	213.1	207.0
67.5°	314.7	304.0	277.0	249.1	225.5	209.0	200.0	195.2	190.9	187.2	180.4
70°	250.4	242.7	227.2	207.4	188.8	174.7	168.0	166.6	160.6	156.9	153.5
72.5°	190.9	188.8	176.1	167.3	156.9	145.8	140.7	138.0	134.0	130.6	129.3
75°	135.7	138.7	134.6	130.3	125.2	116.1	111.8	110.4	106.7	105.7	104.0
77.5°	92.6	96.9	98.3	96.3	93.9	90.9	87.9	86.5	82.8	82.1	81.1
80°	58.2	64.6	67.0	66.7	65.6	66.0	62.3	61.9	60.3	59.2	60.3
82.5°	35.3	38.7	43.1	44.1	42.8	43.4	42.4	41.1	41.1	41.7	40.4
85°	19.2	19.5	21.5	22.9	24.6	25.9	24.6	24.9	24.6	24.6	23.6
87.5°	8.4	8.8	8.8	8.4	9.1	9.8	11.1	11.8	11.4	10.4	9.1
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: P243779

CATALOG NUMBER: S125RDR-H610D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	848.9	848.9	848.9	848.9	848.9	848.9	848.9	848.9	848.9	848.9	848.9
2.5°	831.4	829.1	825.0	821.7	813.9	808.6	807.9	808.2	807.5	806.9	806.5
5°	811.2	803.5	796.1	789.7	781.0	772.2	768.2	766.5	765.8	762.1	764.1
7.5°	789.7	777.9	769.2	757.1	746.6	739.2	732.1	728.8	728.1	723.1	721.7
10°	766.8	752.7	739.5	727.4	717.0	706.6	698.1	695.1	691.1	687.0	681.0
12.5°	744.3	726.8	712.3	698.8	684.7	672.9	666.2	661.8	656.7	653.0	651.0
15°	717.3	702.5	684.7	670.2	655.7	645.3	636.2	628.1	623.4	620.4	612.0
17.5°	693.1	673.6	656.7	642.9	627.1	615.3	605.9	599.2	591.1	585.0	579.7
20°	667.2	647.0	631.5	615.0	598.8	584.4	572.6	567.2	561.5	555.8	552.7
22.5°	639.2	621.7	604.2	587.1	569.9	554.4	547.0	539.3	534.2	528.5	524.4
25°	615.0	595.8	578.3	559.1	540.3	531.2	521.1	513.3	509.3	503.6	499.2
27.5°	589.1	570.6	549.7	529.8	518.7	503.2	496.5	490.5	485.1	479.3	476.3
30°	564.8	543.3	522.4	506.9	492.5	481.4	475.0	467.6	460.2	457.5	453.4
32.5°	539.3	516.0	497.9	482.4	470.3	456.8	450.7	444.7	437.6	434.2	430.5
35°	512.7	490.1	472.3	458.1	445.7	435.6	428.8	422.5	418.1	413.0	410.3
37.5°	484.7	465.2	448.0	433.9	422.5	414.4	406.0	400.9	394.9	390.1	388.1
40°	458.1	440.6	424.1	411.0	400.6	390.8	383.4	377.0	373.3	369.3	365.9
42.5°	434.2	416.1	401.9	388.1	378.7	369.3	361.9	357.2	350.8	349.1	344.4
45°	408.7	391.8	377.7	364.9	355.1	347.4	338.6	332.9	328.9	324.8	323.2
47.5°	382.7	367.2	354.1	342.3	332.2	323.5	316.8	310.7	306.3	302.6	300.6
50°	357.5	344.0	330.9	319.4	309.0	302.6	294.5	287.8	284.4	280.4	278.0
52.5°	330.9	319.8	305.6	295.9	286.1	277.7	269.6	265.3	261.9	258.5	256.8
55°	306.0	294.2	282.1	271.6	262.2	253.5	247.1	243.7	239.3	237.3	237.0
57.5°	280.4	268.3	258.2	248.8	238.0	231.3	225.5	221.5	217.8	216.1	216.1
60°	252.5	242.7	233.3	222.8	215.1	207.4	201.3	198.6	194.9	194.2	191.9
62.5°	226.9	217.8	208.7	198.9	191.9	184.1	179.8	176.1	174.0	171.3	168.6
65°	200.3	192.2	183.5	175.0	169.3	160.9	156.9	152.5	150.1	147.1	143.7
67.5°	174.7	167.0	158.9	151.1	146.4	138.3	135.7	130.3	128.6	125.2	122.2
70°	147.8	142.4	136.0	128.3	124.2	117.8	115.1	110.1	107.4	105.4	103.7
72.5°	124.5	119.5	112.1	107.0	102.0	98.0	93.6	91.2	88.9	87.2	86.8
75°	101.7	95.3	90.9	86.2	82.8	78.8	76.7	75.1	74.1	73.0	72.0
77.5°	77.8	75.1	70.7	66.0	63.3	61.6	60.3	59.6	58.6	58.2	57.2
80°	57.9	54.2	51.5	49.8	47.8	46.5	45.4	43.1	41.7	41.1	40.4
82.5°	38.4	37.4	35.3	33.7	32.0	31.6	30.6	30.0	29.6	29.6	29.3
85°	23.2	20.5	20.5	20.2	20.2	19.9	19.2	19.2	18.5	19.5	19.5
87.5°	9.4	9.4	8.8	8.8	9.1	8.4	8.1	8.1	8.1	7.7	8.1
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: P243779

CATALOG NUMBER: S125RDR-H610D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	848.9	848.9	848.9	848.9
2.5°	806.5	804.9	805.2	803.2
5°	760.4	759.4	756.0	753.3
7.5°	718.3	714.0	713.6	710.9
10°	679.0	674.9	672.9	673.2
12.5°	644.6	640.2	640.2	637.6
15°	607.9	603.6	604.2	603.9
17.5°	577.6	574.6	572.2	570.2
20°	548.0	544.3	543.0	541.3
22.5°	520.7	518.1	518.4	518.4
25°	494.8	495.2	492.1	491.5
27.5°	471.9	471.3	470.6	469.2
30°	450.4	447.7	447.0	445.7
32.5°	428.2	427.8	425.1	426.2
35°	405.6	404.6	403.9	403.3
37.5°	384.8	382.7	382.4	381.7
40°	363.5	362.9	359.8	361.5
42.5°	340.7	339.3	339.3	339.3
45°	321.5	317.8	317.8	316.4
47.5°	299.9	298.6	297.9	295.5
50°	278.7	276.7	276.0	276.0
52.5°	256.8	256.5	257.2	255.8
55°	237.7	238.0	237.7	237.0
57.5°	216.8	215.1	215.1	215.4
60°	191.9	191.9	192.5	191.2
62.5°	168.0	167.3	164.9	164.3
65°	143.4	140.7	140.4	140.7
67.5°	121.5	120.5	118.8	119.2
70°	102.7	102.3	100.6	99.6
72.5°	85.8	85.8	84.8	84.8
75°	71.7	71.0	70.7	71.4
77.5°	55.2	53.5	54.2	53.2
80°	40.1	40.7	40.1	39.7
82.5°	29.6	28.9	29.3	28.9
85°	18.9	18.2	18.5	18.2
87.5°	7.7	8.1	8.1	7.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)