

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: P243662

Luminaire Tested: **S125DR-H850D927-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243662
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-61)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DR-H850D927-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2599.1 lumens
Efficiency: N/A
Efficacy: 110.1 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

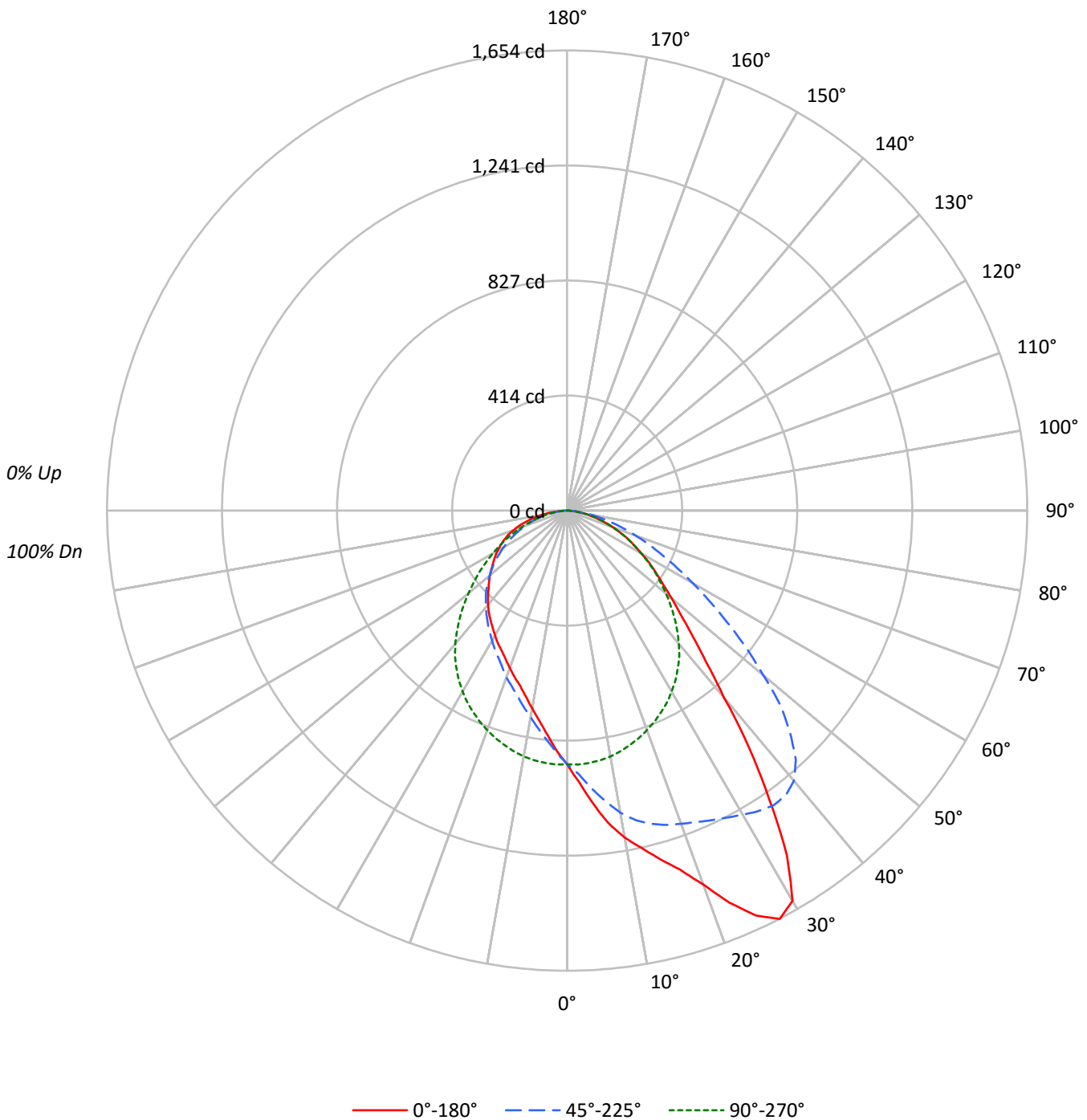
Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P243662

CATALOG NUMBER: S125DR-H850D927-X4F0-XX-UDD-A-W

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	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	109	105	101	97	107	103	99	96	99	96	93		95	92	90		91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	78		84	79	76		81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66		74	69	65		72	67	63	61
4	84	73	64	58	82	71	63	57	69	62	56		66	61	56		64	59	55	53
5	78	65	56	50	75	64	56	50	62	55	49		60	54	49		58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43		54	48	43		53	47	43	40
7	67	53	45	39	65	53	44	39	51	44	38		50	43	38		48	42	38	36
8	62	49	40	35	60	48	40	35	47	40	34		46	39	34		44	38	34	32
9	58	45	37	31	57	44	36	31	43	36	31		42	36	31		41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28		39	33	28		38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	6481	6481	6481
5°	7530	6496	5773
10°	8615	6475	5210
15°	9551	6416	4800
20°	10814	6352	4553
25°	12592	6270	4362
30°	13293	6167	4255
35°	10993	6016	4165
40°	8131	5799	4104
45°	6394	5483	4014
50°	5414	5127	3999
55°	4820	4774	4015
60°	4374	4384	4100
65°	4055	4018	4216
70°	3643	3597	4241
75°	3109	3158	4185
80°	2542	2587	3905
85°	1745	1843	3319



TEST NUMBER: P243662

CATALOG NUMBER: S125DR-H850D927-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.1	3.4
10°-20°	263.2	10.1
20°-30°	428.0	16.5
30°-40°	520.7	20.0
40°-50°	476.5	18.3
50°-60°	381.3	14.7
60°-70°	265.6	10.2
70°-80°	141.1	5.4
80°-90°	34.6	1.3
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°	779.3	30.0
0°-40°	1300.0	50.0
0°-60°	2157.7	83.0
0°-90°	2599.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2599.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	912	912	912	912	912	
5°	1055	1002	910	828	809	105
15°	1298	1166	872	690	652	372
25°	1606	1228	800	584	556	733
35°	1267	1293	693	497	480	785
45°	636	1134	546	412	399	502
55°	389	704	385	314	324	351
65°	241	376	239	211	251	237
75°	113	166	115	110	152	122
85°	21	32	23	26	41	28
90°	0	0	0	0	0	



TEST NUMBER: P243662

CATALOG NUMBER: S125DR-H850D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9
2.5°	976.3	972.2	971.1	971.5	969.3	967.4	963.0	957.1	953.0	947.8	946.3
5°	1055.4	1045.4	1047.3	1044.3	1039.5	1033.2	1027.7	1018.8	1010.3	1002.2	991.5
7.5°	1133.1	1131.2	1126.1	1125.3	1117.6	1106.8	1095.7	1083.5	1065.4	1052.8	1038.4
10°	1193.7	1197.4	1190.0	1190.4	1176.7	1166.0	1156.4	1140.5	1120.1	1103.1	1082.1
12.5°	1242.6	1244.0	1242.9	1238.1	1229.2	1211.1	1201.9	1185.2	1163.0	1139.7	1123.5
15°	1298.0	1294.0	1287.7	1281.8	1268.8	1255.9	1236.6	1217.0	1188.9	1165.6	1142.0
17.5°	1353.5	1352.8	1345.0	1332.4	1316.1	1299.1	1270.3	1245.1	1215.2	1184.5	1154.9
20°	1429.7	1425.6	1414.1	1399.7	1369.8	1345.7	1309.9	1275.5	1236.3	1197.8	1163.4
22.5°	1525.1	1511.8	1500.3	1478.1	1443.7	1401.9	1361.6	1311.7	1257.0	1211.9	1169.0
25°	1605.7	1599.8	1587.6	1562.8	1523.6	1473.3	1413.4	1356.8	1288.0	1228.1	1172.3
27.5°	1654.5	1651.9	1644.5	1621.2	1588.7	1538.8	1474.8	1402.7	1324.7	1243.7	1176.7
30°	1619.8	1620.1	1624.2	1621.6	1607.2	1575.0	1518.1	1445.6	1355.3	1262.2	1177.8
32.5°	1470.4	1480.3	1512.1	1527.3	1547.6	1554.3	1528.8	1468.5	1381.2	1280.6	1181.5
35°	1267.0	1291.4	1312.8	1357.2	1410.1	1453.3	1478.5	1458.9	1392.0	1293.2	1183.4
37.5°	1075.4	1073.6	1106.8	1154.9	1211.1	1284.7	1356.1	1395.3	1373.5	1290.6	1180.1
40°	876.4	893.5	914.2	956.7	1022.5	1113.1	1198.2	1282.1	1312.4	1267.7	1167.1
42.5°	740.4	748.1	768.8	802.1	849.4	941.9	1025.8	1133.8	1211.5	1216.7	1138.6
45°	636.1	644.6	650.5	683.4	727.4	789.5	875.7	984.4	1088.7	1133.8	1092.4
47.5°	552.5	557.3	570.2	590.2	619.1	674.2	742.9	841.7	955.2	1042.9	1028.8
50°	489.6	493.3	503.7	514.8	538.4	579.1	634.6	715.6	824.7	920.5	951.9
52.5°	434.2	439.0	444.1	454.9	476.7	504.0	549.2	612.4	713.7	811.7	861.7
55°	389.0	390.9	396.4	404.6	421.2	441.9	477.8	535.1	606.1	703.7	772.5
57.5°	349.8	348.0	353.9	359.5	370.5	387.9	413.8	456.3	524.0	607.2	679.0
60°	307.7	309.5	314.0	318.4	326.2	341.3	361.7	395.7	445.2	519.9	593.2
62.5°	271.4	272.9	274.0	280.3	287.3	298.1	314.7	342.4	383.5	445.2	510.7
65°	241.1	238.5	240.0	244.4	250.0	258.9	274.4	294.7	325.4	375.7	430.1
67.5°	205.6	206.4	206.7	209.3	214.1	222.6	233.7	250.4	275.5	315.1	362.8
70°	175.3	175.7	176.0	178.2	182.3	187.1	194.9	207.8	229.3	260.0	297.3
72.5°	144.2	145.7	145.7	147.6	150.5	153.1	160.5	171.2	187.5	211.9	243.3
75°	113.2	115.7	116.5	118.7	121.3	122.0	127.6	136.1	146.4	166.4	191.2
77.5°	88.0	88.0	89.5	92.1	92.1	94.3	100.2	103.9	112.1	125.7	144.6
80°	62.1	63.2	63.2	64.0	65.5	67.3	69.9	73.2	80.2	90.2	100.2
82.5°	40.7	41.0	41.4	43.3	42.5	44.4	45.5	49.6	52.9	57.7	64.0
85°	21.4	21.4	21.8	22.9	24.0	24.4	25.1	27.0	29.6	31.8	35.5
87.5°	8.9	8.5	8.5	9.2	9.2	9.6	10.0	10.7	12.2	12.2	13.7
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: P243662

CATALOG NUMBER: S125DR-H850D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9
2.5°	945.2	942.3	937.1	932.7	927.1	923.0	919.0	913.8	908.6	903.1	897.2
5°	982.9	974.1	964.1	954.1	942.3	932.7	922.3	910.5	900.5	889.4	877.6
7.5°	1026.2	1010.7	993.3	973.7	955.2	938.6	921.6	905.3	890.5	873.9	857.6
10°	1068.0	1041.0	1019.2	992.6	966.3	941.9	918.6	897.2	875.7	855.0	835.0
12.5°	1096.5	1065.8	1038.4	1007.7	977.0	946.3	915.6	886.1	860.5	835.4	814.3
15°	1116.1	1094.6	1058.4	1021.4	981.1	941.2	906.4	872.0	841.7	812.5	787.3
17.5°	1128.3	1100.5	1065.0	1026.2	981.8	940.1	898.3	857.2	822.5	791.0	762.5
20°	1131.6	1099.1	1062.1	1021.8	977.4	931.5	884.6	839.8	802.1	766.2	737.4
22.5°	1128.3	1090.6	1051.0	1011.8	965.2	918.6	869.4	820.6	777.3	740.4	710.0
25°	1122.7	1077.2	1035.8	989.6	946.3	902.0	851.3	799.5	754.4	715.9	681.9
27.5°	1115.7	1063.6	1012.5	967.0	920.1	876.4	829.8	777.0	730.0	687.8	656.0
30°	1107.6	1045.4	988.9	934.9	890.5	846.9	801.4	751.4	704.1	663.8	629.4
32.5°	1098.3	1026.2	959.7	901.6	854.3	813.9	771.4	723.7	677.1	633.9	603.9
35°	1085.4	1000.0	928.2	865.3	816.2	772.5	735.2	693.4	647.2	606.9	575.8
37.5°	1070.2	976.7	896.4	828.4	774.7	730.0	695.6	661.6	618.3	579.5	549.5
40°	1049.9	948.6	862.8	789.2	731.8	687.8	654.2	625.0	589.1	549.9	522.9
42.5°	1023.3	917.5	824.7	746.3	690.8	643.8	612.4	585.8	555.1	521.1	494.4
45°	992.9	882.0	782.1	705.2	644.9	600.2	569.5	545.5	522.2	491.8	467.1
47.5°	945.6	840.2	743.7	658.6	599.5	556.2	527.3	504.4	487.0	463.0	438.6
50°	889.4	792.9	698.2	612.8	552.9	511.1	483.7	463.7	448.9	430.5	412.0
52.5°	827.6	739.6	648.3	568.4	508.5	468.9	440.1	422.3	412.7	397.9	383.5
55°	755.5	679.7	594.7	521.8	463.0	422.7	397.9	385.3	374.6	367.2	354.3
57.5°	683.0	619.1	543.2	471.1	417.1	381.3	359.1	345.0	337.3	332.1	322.8
60°	603.9	553.6	484.1	421.6	373.5	339.5	319.9	308.4	301.4	298.4	292.1
62.5°	528.5	490.0	426.8	374.6	331.7	301.8	282.2	272.9	268.5	265.2	261.5
65°	454.1	423.8	373.9	325.1	288.8	261.8	246.3	238.9	235.6	231.9	231.5
67.5°	387.2	359.5	319.5	279.6	249.3	226.3	212.6	205.2	201.5	201.9	200.1
70°	321.4	299.9	267.4	234.8	208.9	190.8	177.9	173.1	171.6	171.2	169.7
72.5°	260.0	247.8	219.3	191.9	171.6	157.5	147.2	143.1	141.3	140.5	140.5
75°	206.0	197.1	172.7	152.0	136.5	125.0	118.0	115.0	112.4	113.9	112.8
77.5°	154.6	147.2	130.5	115.7	103.9	94.3	91.0	88.4	86.9	86.5	88.0
80°	108.7	104.3	93.9	82.1	73.2	67.7	65.5	63.2	62.1	61.4	62.1
82.5°	69.9	67.3	59.9	52.9	47.7	44.7	42.5	41.4	39.6	39.9	40.7
85°	38.1	37.4	32.5	30.3	25.5	25.1	23.7	22.6	22.9	22.2	23.3
87.5°	15.5	14.8	13.7	12.6	11.1	10.0	9.2	10.0	8.9	10.0	9.6
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: P243662

CATALOG NUMBER: S125DR-H850D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9
2.5°	894.2	890.1	885.3	880.9	874.2	869.8	867.6	868.3	865.7	865.0	864.6
5°	870.5	861.3	852.4	845.0	837.2	828.4	822.1	820.2	819.5	817.6	813.6
7.5°	846.1	834.3	822.8	812.1	801.0	790.6	784.4	779.2	776.2	771.0	769.9
10°	820.2	805.8	793.6	778.1	764.8	754.0	745.9	741.5	738.9	734.1	730.0
12.5°	795.5	780.3	761.4	747.4	733.3	722.2	713.0	705.6	703.7	697.5	694.1
15°	768.8	750.3	733.3	717.1	703.7	689.7	684.1	677.5	670.8	665.3	664.2
17.5°	743.3	721.1	704.5	688.6	672.3	662.0	654.6	650.1	644.9	642.0	636.8
20°	712.6	694.5	676.0	661.2	647.2	638.3	628.3	624.2	620.5	613.5	611.3
22.5°	686.7	664.9	649.4	634.6	622.0	609.4	602.4	598.3	592.8	589.1	586.1
25°	659.7	641.6	622.0	607.2	596.5	583.9	579.1	573.9	569.1	565.8	562.8
27.5°	633.5	613.5	597.6	582.8	571.7	562.8	556.2	550.6	547.3	544.7	542.9
30°	606.1	587.6	572.8	559.1	546.6	539.2	532.9	530.7	527.0	525.1	522.2
32.5°	581.3	562.5	548.4	536.6	525.5	518.1	514.4	511.1	507.4	504.0	503.7
35°	553.2	537.0	524.0	511.1	502.9	497.0	493.0	489.6	486.7	484.1	482.6
37.5°	528.5	512.9	498.5	489.3	480.4	475.2	470.8	469.7	466.7	467.1	464.8
40°	501.8	487.8	475.6	466.3	460.4	454.9	451.9	448.2	446.4	446.7	444.9
42.5°	475.9	463.0	451.9	443.4	437.1	433.0	430.5	427.5	425.3	423.8	423.4
45°	449.7	438.2	429.0	420.5	415.3	411.6	408.3	404.6	402.7	402.0	401.6
47.5°	423.8	413.4	403.5	397.5	392.7	389.4	386.1	383.1	381.6	380.5	378.7
50°	397.2	386.8	379.8	372.4	368.3	363.9	360.2	358.7	356.9	356.5	358.3
52.5°	369.4	361.3	355.0	349.1	344.3	339.5	335.8	333.9	335.0	335.0	337.3
55°	343.2	334.7	328.8	324.0	318.8	314.3	310.6	310.6	310.6	312.9	315.8
57.5°	314.0	306.6	302.1	296.6	291.8	288.8	286.2	285.9	287.3	291.0	294.4
60°	284.4	279.2	274.4	270.0	265.2	262.9	262.6	261.8	264.0	267.7	274.8
62.5°	255.2	251.8	245.9	243.7	239.6	237.0	237.0	237.8	241.1	247.0	253.3
65°	227.1	222.3	217.8	215.6	213.0	210.8	210.8	213.7	218.6	224.1	231.9
67.5°	198.2	194.1	191.2	189.0	186.0	184.9	186.0	189.3	195.3	200.8	208.9
70°	167.2	166.4	163.8	160.9	159.4	159.4	160.5	164.2	168.6	177.1	184.2
72.5°	138.7	138.7	137.2	135.3	134.2	135.3	136.1	139.8	145.3	152.7	160.5
75°	112.8	111.7	110.6	109.8	109.5	110.2	111.3	114.3	120.9	128.0	134.2
77.5°	87.3	86.5	85.4	86.2	86.2	86.5	89.9	93.2	96.9	102.4	109.1
80°	62.9	63.2	62.1	61.8	63.6	64.3	66.9	69.5	72.1	78.4	83.2
82.5°	41.4	42.2	41.8	42.5	43.3	43.3	46.2	48.8	51.0	55.5	59.2
85°	23.7	24.0	24.0	25.1	25.9	25.5	28.1	29.6	30.7	34.0	36.2
87.5°	10.4	10.7	11.1	11.1	11.1	12.6	12.9	13.7	14.1	14.8	15.9
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: P243662

CATALOG NUMBER: S125DR-H850D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	911.9	911.9	911.9	911.9
2.5°	861.3	860.9	862.8	863.9
5°	811.0	809.9	808.4	809.1
7.5°	766.2	763.3	762.5	762.5
10°	726.7	723.7	723.0	721.9
12.5°	693.0	688.6	686.7	684.9
15°	661.2	660.5	656.4	652.3
17.5°	632.0	633.1	629.0	627.2
20°	607.6	604.3	602.8	602.0
22.5°	582.8	580.2	580.2	577.6
25°	560.6	558.4	558.8	556.2
27.5°	539.9	539.5	539.2	538.4
30°	520.7	519.2	517.7	518.5
32.5°	502.2	500.0	498.9	498.5
35°	483.0	482.2	480.7	480.0
37.5°	464.1	464.5	462.6	462.3
40°	443.8	443.4	443.0	442.3
42.5°	422.3	421.2	422.0	421.6
45°	400.9	399.8	400.5	399.4
47.5°	379.8	380.5	380.5	380.9
50°	359.1	360.6	360.6	361.7
52.5°	339.9	342.8	342.8	342.4
55°	319.1	322.5	323.6	324.0
57.5°	299.5	302.9	306.2	306.9
60°	278.5	284.4	287.7	288.4
62.5°	259.6	265.2	269.6	270.0
65°	238.5	245.2	249.3	250.7
67.5°	217.1	222.3	227.8	230.0
70°	192.7	199.0	202.7	204.1
72.5°	167.2	174.2	179.0	179.7
75°	142.7	147.9	151.6	152.4
77.5°	115.0	120.2	123.5	124.3
80°	87.3	91.7	93.9	95.4
82.5°	61.8	64.7	65.8	67.3
85°	38.1	40.3	40.7	40.7
87.5°	16.6	17.0	17.0	17.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)