

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: P243795

Luminaire Tested: **S125RDR-H850D940-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243795
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-H850D940-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2794.0 lumens
Efficiency: N/A
Efficacy: 118.4 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

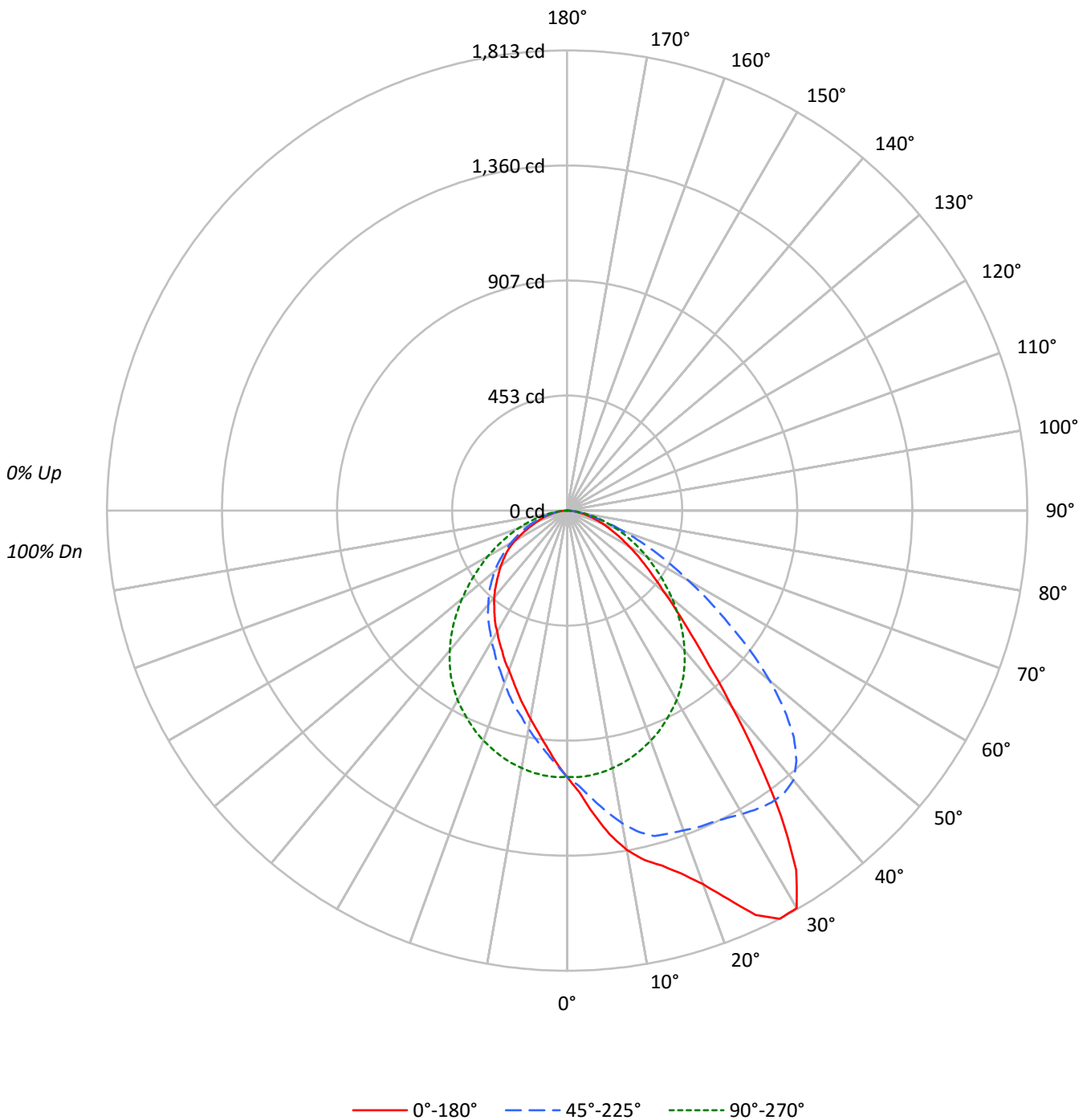
Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	7461	7461	7461
5°	8565	7472	6646
10°	9800	7436	6008
15°	10659	7376	5495
20°	11844	7292	5063
25°	13782	7188	4766
30°	14840	7082	4523
35°	12749	6924	4327
40°	9393	6674	4148
45°	6937	6363	3933
50°	5495	5984	3774
55°	4642	5545	3632
60°	4000	5136	3360
65°	3473	4677	2926
70°	3044	4283	2560
75°	2584	3748	2422
80°	2010	3135	2010
85°	1761	2512	1835



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.0	3.6
10°-20°	299.0	10.7
20°-30°	476.8	17.1
30°-40°	579.0	20.7
40°-50°	521.7	18.7
50°-60°	401.2	14.4
60°-70°	260.3	9.3
70°-80°	125.3	4.5
80°-90°	29.6	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°	876.9	31.4
0°-40°	1455.8	52.1
0°-60°	2378.7	85.1
0°-90°	2794.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2794.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1050	1050	1050	1050	1050	
5°	1200	1141	1047	955	932	119
15°	1449	1328	1002	798	747	415
25°	1758	1354	917	657	608	804
35°	1469	1404	798	539	499	899
45°	690	1263	633	430	391	548
55°	375	776	448	314	293	340
65°	206	377	278	199	174	207
75°	94	128	136	97	88	101
85°	22	23	31	25	22	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8
2.5°	1110.6	1114.8	1111.4	1113.5	1110.2	1108.5	1104.4	1098.1	1091.9	1086.1	1085.6
5°	1200.5	1199.7	1196.4	1191.8	1188.5	1180.1	1176.0	1161.8	1152.2	1140.6	1134.8
7.5°	1286.3	1284.2	1279.2	1273.0	1270.0	1259.2	1247.6	1229.7	1214.7	1196.4	1182.6
10°	1357.9	1357.5	1353.7	1349.6	1338.3	1326.2	1315.0	1296.3	1273.8	1250.9	1231.7
12.5°	1410.3	1408.2	1403.7	1396.6	1387.4	1379.1	1364.1	1347.1	1319.6	1296.3	1270.0
15°	1448.6	1447.8	1441.1	1438.6	1420.7	1409.1	1389.1	1372.0	1350.8	1327.5	1299.2
17.5°	1499.4	1501.1	1495.2	1481.1	1464.9	1447.0	1418.7	1390.8	1361.2	1334.1	1311.3
20°	1566.0	1561.8	1551.9	1534.8	1505.7	1483.6	1455.3	1420.7	1380.8	1340.8	1307.9
22.5°	1655.1	1650.5	1634.7	1613.9	1577.3	1536.9	1493.6	1442.0	1396.2	1350.4	1307.1
25°	1757.5	1748.8	1725.4	1703.0	1650.9	1608.1	1543.5	1481.9	1415.3	1354.5	1305.8
27.5°	1813.3	1813.3	1802.5	1777.9	1736.7	1673.4	1607.6	1525.6	1448.6	1365.4	1296.3
30°	1808.3	1805.4	1809.5	1799.1	1772.5	1725.0	1659.7	1573.5	1475.3	1379.9	1297.1
32.5°	1679.2	1680.5	1705.5	1722.5	1735.8	1724.2	1681.7	1603.9	1506.1	1394.1	1293.8
35°	1469.4	1472.8	1516.9	1546.0	1605.6	1639.7	1649.7	1607.6	1519.8	1404.1	1287.9
37.5°	1229.7	1229.7	1280.9	1325.0	1391.6	1475.7	1538.5	1554.4	1511.5	1403.7	1282.9
40°	1012.4	1011.1	1051.5	1105.6	1176.8	1269.6	1363.3	1443.6	1454.0	1387.4	1265.5
42.5°	828.4	826.3	870.4	900.4	975.3	1058.2	1182.6	1296.3	1361.2	1337.1	1239.7
45°	690.2	688.5	717.2	751.4	804.2	890.4	994.9	1121.0	1230.1	1263.4	1191.4
47.5°	586.1	586.9	602.3	631.1	676.0	737.6	831.3	948.3	1083.1	1160.1	1130.6
50°	497.0	499.9	511.6	533.2	566.1	615.7	696.0	801.7	940.4	1042.3	1048.6
52.5°	430.4	434.6	447.1	458.7	486.2	521.2	583.6	675.2	789.7	912.0	955.8
55°	374.6	376.7	383.8	396.3	416.7	445.8	491.2	561.1	667.3	776.3	853.4
57.5°	328.0	328.0	332.6	341.3	357.6	383.8	414.2	472.1	561.5	660.2	742.2
60°	281.4	283.1	286.4	296.0	306.8	326.8	356.3	393.0	470.4	552.8	641.1
62.5°	242.3	245.2	248.5	253.1	263.1	277.2	298.0	331.8	383.8	460.0	538.7
65°	206.5	209.4	209.8	215.2	221.9	233.5	249.3	273.9	317.2	377.1	442.1
67.5°	174.8	176.1	177.3	181.5	187.7	195.2	205.6	224.0	258.1	298.5	361.7
70°	146.5	147.4	147.8	152.4	155.3	161.9	167.3	179.0	200.6	231.9	281.0
72.5°	119.9	118.6	118.2	122.0	123.2	128.6	135.3	143.6	155.3	177.3	214.0
75°	94.1	94.5	94.9	97.0	97.4	99.9	104.1	109.5	114.9	127.8	151.1
77.5°	72.4	70.8	70.8	73.3	74.1	74.5	77.4	80.3	83.3	90.7	99.9
80°	49.1	50.0	50.0	50.0	50.4	51.2	52.9	55.4	57.4	62.0	63.7
82.5°	35.0	35.0	34.6	35.4	35.8	36.2	36.2	36.2	37.5	38.7	40.4
85°	21.6	22.1	20.8	21.6	22.1	22.1	22.1	22.1	23.3	22.9	23.3
87.5°	9.2	9.6	9.6	10.0	10.0	10.4	10.0	10.4	10.0	10.0	10.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8
2.5°	1084.4	1079.4	1076.9	1071.9	1065.2	1061.1	1056.9	1051.1	1046.5	1039.4	1033.2
5°	1124.3	1114.4	1105.2	1092.7	1080.6	1070.2	1059.4	1047.3	1036.5	1024.4	1011.5
7.5°	1168.9	1153.1	1133.9	1111.9	1093.1	1076.9	1058.6	1040.7	1024.4	1005.3	987.8
10°	1211.8	1186.4	1161.0	1131.4	1104.0	1079.8	1055.2	1030.3	1009.0	985.3	963.7
12.5°	1245.1	1220.9	1183.0	1146.4	1110.6	1079.4	1048.6	1018.2	990.3	964.1	938.3
15°	1274.2	1234.2	1202.2	1162.2	1118.5	1076.1	1037.8	1002.4	968.7	937.9	911.6
17.5°	1282.5	1246.7	1211.8	1165.1	1118.1	1069.8	1025.7	983.6	946.2	912.0	882.5
20°	1281.7	1245.5	1207.6	1163.1	1113.1	1060.2	1011.1	964.1	921.6	882.5	850.9
22.5°	1269.2	1234.2	1195.9	1151.0	1100.2	1045.7	994.1	942.0	895.8	855.0	822.6
25°	1255.9	1211.8	1171.8	1126.4	1078.1	1027.8	972.8	916.6	868.3	825.9	789.2
27.5°	1244.2	1191.4	1142.2	1097.7	1048.2	1002.8	948.3	889.6	840.0	795.5	757.6
30°	1225.5	1169.7	1110.2	1061.5	1013.6	966.2	916.2	862.9	808.8	763.4	725.6
32.5°	1209.3	1138.9	1074.4	1019.4	971.6	929.9	882.1	830.9	778.0	734.7	693.9
35°	1191.4	1107.3	1039.8	975.3	927.5	882.1	844.2	798.0	745.5	699.8	663.1
37.5°	1170.1	1074.8	997.4	931.6	882.1	835.5	801.3	760.1	712.7	667.3	631.1
40°	1146.4	1041.5	952.4	884.6	831.3	784.7	755.9	719.3	678.9	634.0	600.3
42.5°	1116.4	1006.1	911.6	837.5	778.4	736.4	707.7	677.3	640.2	601.1	564.5
45°	1078.6	962.0	862.9	784.7	726.4	685.6	655.6	633.1	603.6	567.0	532.4
47.5°	1032.4	915.8	813.0	731.8	675.6	636.5	608.6	586.1	563.6	532.0	499.1
50°	971.2	862.9	764.3	681.4	621.9	584.0	559.1	541.2	520.8	494.9	465.0
52.5°	903.7	803.4	706.8	629.4	572.0	534.1	508.3	493.3	477.9	456.6	430.8
55°	825.5	743.9	651.9	576.1	519.9	482.5	462.1	447.5	434.6	418.4	396.7
57.5°	742.6	671.0	591.1	521.2	468.3	432.9	415.0	403.0	392.1	380.5	362.6
60°	655.6	604.8	529.1	465.0	418.8	389.6	372.6	361.3	351.3	341.8	328.4
62.5°	564.9	522.8	466.2	411.7	370.5	343.0	330.5	320.9	310.5	302.2	292.6
65°	472.9	448.7	409.6	358.4	320.5	298.0	286.0	278.1	273.1	263.5	256.0
67.5°	389.2	375.9	342.6	308.0	278.9	258.5	247.3	241.4	236.0	231.4	223.1
70°	309.7	300.1	281.0	256.4	233.5	216.0	207.7	206.1	198.6	194.0	189.8
72.5°	236.0	233.5	217.7	206.9	194.0	180.2	174.0	170.7	165.7	161.5	159.8
75°	167.8	171.5	166.5	161.1	154.9	143.6	138.2	136.5	132.0	130.7	128.6
77.5°	114.5	119.9	121.6	119.1	116.1	112.4	108.6	107.0	102.4	101.6	100.3
80°	72.0	79.9	82.8	82.4	81.2	81.6	77.0	76.6	74.5	73.3	74.5
82.5°	43.7	47.9	53.3	54.5	52.9	53.7	52.5	50.8	50.8	51.6	50.0
85°	23.7	24.1	26.6	28.3	30.4	32.1	30.4	30.8	30.4	30.4	29.1
87.5°	10.4	10.8	10.8	10.4	11.2	12.1	13.7	14.6	14.2	12.9	11.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8	1049.8
2.5°	1028.2	1025.3	1020.3	1016.1	1006.5	999.9	999.1	999.5	998.6	997.8	997.4
5°	1003.2	993.6	984.5	976.6	965.7	954.9	949.9	947.8	947.0	942.4	944.9
7.5°	976.6	962.0	951.2	936.2	923.3	914.1	905.4	901.2	900.4	894.1	892.5
10°	948.3	930.8	914.5	899.6	886.7	873.8	863.3	859.6	854.6	849.6	842.1
12.5°	920.4	898.7	880.8	864.2	846.7	832.1	823.8	818.4	812.1	807.6	805.1
15°	887.1	868.8	846.7	828.8	810.9	798.0	786.8	776.8	770.9	767.2	756.8
17.5°	857.1	833.0	812.1	795.1	775.5	760.9	749.3	741.0	731.0	723.5	716.8
20°	825.0	800.1	780.9	760.5	740.5	722.6	708.1	701.4	694.3	687.3	683.5
22.5°	790.5	768.9	747.2	726.0	704.7	685.6	676.4	666.9	660.6	653.5	648.6
25°	760.5	736.8	715.2	691.4	668.1	656.9	644.4	634.8	629.8	622.7	617.3
27.5°	728.5	705.6	679.8	655.2	641.5	622.3	614.0	606.5	599.8	592.8	589.0
30°	698.5	671.9	646.1	626.9	609.0	595.3	587.4	578.2	569.0	565.7	560.7
32.5°	666.9	638.1	615.7	596.5	581.5	564.9	557.4	549.9	541.2	537.0	532.4
35°	634.0	606.1	584.0	566.5	551.1	538.7	530.3	522.4	517.0	510.8	507.4
37.5°	599.4	575.3	554.1	536.6	522.4	512.4	502.0	495.8	488.3	482.5	480.0
40°	566.5	544.9	524.5	508.3	495.4	483.3	474.1	466.2	461.6	456.6	452.5
42.5°	537.0	514.5	497.0	480.0	468.3	456.6	447.5	441.7	433.8	431.7	425.8
45°	505.4	484.5	467.1	451.2	439.2	429.6	418.8	411.7	406.7	401.7	399.6
47.5°	473.3	454.2	437.9	423.3	410.9	400.0	391.7	384.2	378.8	374.2	371.7
50°	442.1	425.4	409.2	395.0	382.1	374.2	364.2	355.9	351.7	346.8	343.8
52.5°	409.2	395.5	378.0	365.9	353.8	343.4	333.4	328.0	323.9	319.7	317.6
55°	378.4	363.8	348.8	335.9	324.3	313.5	305.5	301.4	296.0	293.5	293.1
57.5°	346.8	331.8	319.3	307.6	294.3	286.0	278.9	273.9	269.3	267.2	267.2
60°	312.2	300.1	288.5	275.6	266.0	256.4	248.9	245.6	241.0	240.2	237.3
62.5°	280.6	269.3	258.1	246.0	237.3	227.7	222.3	217.7	215.2	211.9	208.6
65°	247.7	237.7	226.9	216.5	209.4	199.0	194.0	188.6	185.7	181.9	177.7
67.5°	216.0	206.5	196.5	186.9	181.1	171.1	167.8	161.1	159.0	154.9	151.1
70°	182.7	176.1	168.2	158.6	153.6	145.7	142.4	136.1	132.8	130.3	128.2
72.5°	154.0	147.8	138.6	132.4	126.1	121.1	115.7	112.8	109.9	107.8	107.4
75°	125.7	117.8	112.4	106.6	102.4	97.4	94.9	92.8	91.6	90.3	89.1
77.5°	96.2	92.8	87.4	81.6	78.3	76.2	74.5	73.7	72.4	72.0	70.8
80°	71.6	67.0	63.7	61.6	59.1	57.4	56.2	53.3	51.6	50.8	50.0
82.5°	47.5	46.2	43.7	41.6	39.5	39.1	37.9	37.0	36.6	36.6	36.2
85°	28.7	25.4	25.4	25.0	25.0	24.6	23.7	23.7	22.9	24.1	24.1
87.5°	11.7	11.7	10.8	10.8	11.2	10.4	10.0	10.0	10.0	9.6	10.0
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: P243795

CATALOG NUMBER: S125RDR-H850D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1049.8	1049.8	1049.8	1049.8
2.5°	997.4	995.3	995.7	993.2
5°	940.4	939.1	934.9	931.6
7.5°	888.3	882.9	882.5	879.2
10°	839.6	834.6	832.1	832.5
12.5°	797.2	791.7	791.7	788.4
15°	751.8	746.4	747.2	746.8
17.5°	714.3	710.6	707.7	705.2
20°	677.7	673.1	671.4	669.4
22.5°	644.0	640.6	641.1	641.1
25°	611.9	612.3	608.6	607.8
27.5°	583.6	582.8	581.9	580.3
30°	557.0	553.6	552.8	551.1
32.5°	529.5	529.1	525.8	527.0
35°	501.6	500.4	499.5	498.7
37.5°	475.8	473.3	472.9	472.1
40°	449.6	448.7	445.0	447.1
42.5°	421.3	419.6	419.6	419.6
45°	397.5	393.0	393.0	391.3
47.5°	370.9	369.2	368.4	365.5
50°	344.7	342.2	341.3	341.3
52.5°	317.6	317.2	318.0	316.4
55°	293.9	294.3	293.9	293.1
57.5°	268.1	266.0	266.0	266.4
60°	237.3	237.3	238.1	236.4
62.5°	207.7	206.9	204.0	203.1
65°	177.3	174.0	173.6	174.0
67.5°	150.3	149.0	146.9	147.4
70°	127.0	126.5	124.5	123.2
72.5°	106.1	106.1	104.9	104.9
75°	88.7	87.8	87.4	88.2
77.5°	68.3	66.2	67.0	65.8
80°	49.5	50.4	49.5	49.1
82.5°	36.6	35.8	36.2	35.8
85°	23.3	22.5	22.9	22.5
87.5°	9.6	10.0	10.0	9.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)