

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: P242827

Luminaire Tested: **S125DR-S850D935-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242827
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-22)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DR-S850D935-X4F0-XX-UDD-A-W
Description: DEFINE 5 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: 2862.1 lumens
Efficiency: N/A
Efficacy: 108.4 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.23 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

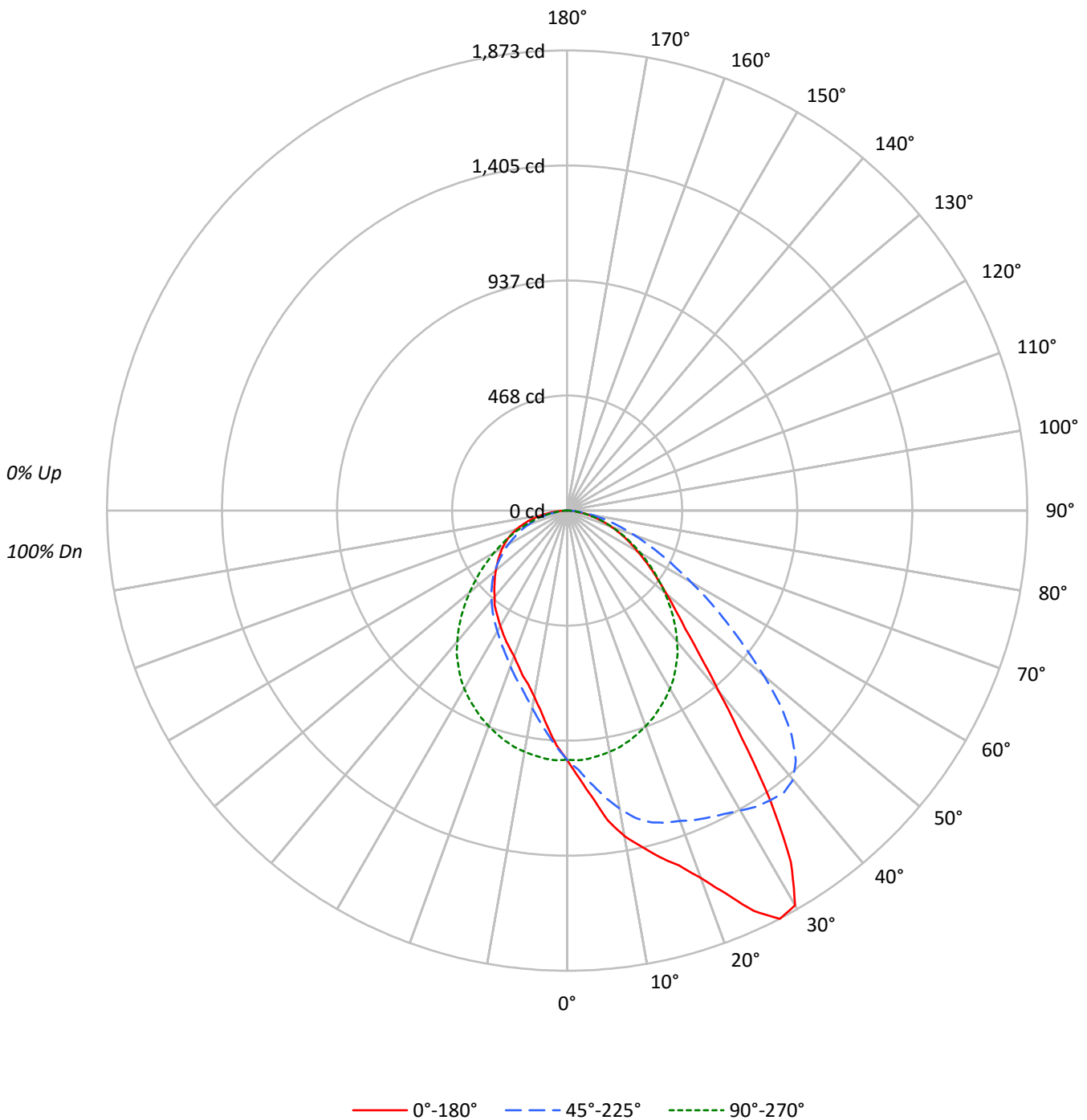
Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	105	101	97	107	103	99	96	99	96	93		95	92	90		91	89	87	85
2	100	92	86	80	98	90	84	79	87	82	78		84	80	76		81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66		74	69	65		72	67	64	61
4	84	73	64	58	82	71	63	57	69	62	57		67	61	56		64	59	55	53
5	78	65	56	50	76	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	41
7	67	53	45	39	65	53	45	39	51	44	39		50	43	38		48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34		46	39	34		44	39	34	32
9	58	45	37	31	57	44	37	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°	7208	7208	7208
5°	8347	7233	6333
10°	9712	7195	5548
15°	10750	7142	5119
20°	12034	7059	4773
25°	14098	6965	4605
30°	15227	6872	4459
35°	12520	6697	4363
40°	8899	6455	4258
45°	6837	6127	4197
50°	5836	5721	4188
55°	5196	5323	4224
60°	4687	4890	4333
65°	4329	4452	4445
70°	3936	3998	4509
75°	3477	3523	4468
80°	2926	2873	4089
85°	2316	2071	3303



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.6	3.4
10°-20°	290.7	10.2
20°-30°	472.3	16.5
30°-40°	577.2	20.2
40°-50°	523.6	18.3
50°-60°	417.1	14.6
60°-70°	290.5	10.1
70°-80°	154.7	5.4
80°-90°	38.4	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°	860.7	30.1
0°-40°	1437.8	50.2
0°-60°	2378.5	83.1
0°-90°	2862.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2862.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1014	1014	1014	1014	1014	
5°	1170	1114	1014	912	888	118
15°	1461	1313	971	736	696	418
25°	1798	1377	888	617	587	824
35°	1443	1440	772	523	503	885
45°	680	1292	610	433	418	541
55°	419	792	430	330	341	377
65°	257	420	265	223	264	255
75°	127	187	128	117	163	136
85°	28	38	25	28	40	33
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°	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2
2.5°	1087.4	1085.7	1083.9	1080.5	1083.1	1075.8	1072.3	1066.3	1059.0	1056.4	1053.4
5°	1170.0	1172.2	1174.3	1165.3	1166.2	1160.1	1146.4	1135.2	1126.1	1114.5	1106.3
7.5°	1272.5	1266.0	1266.5	1260.9	1251.0	1242.8	1229.5	1210.9	1194.2	1175.2	1158.9
10°	1345.7	1346.1	1342.2	1335.3	1324.6	1316.8	1297.9	1279.8	1257.9	1232.0	1213.5
12.5°	1400.8	1402.9	1397.8	1387.9	1384.0	1364.2	1350.4	1328.0	1300.9	1281.5	1251.0
15°	1461.0	1456.3	1452.9	1441.2	1432.2	1414.1	1390.4	1368.1	1339.7	1313.4	1287.1
17.5°	1514.4	1518.3	1512.7	1504.1	1477.4	1456.3	1427.0	1398.6	1364.6	1331.9	1301.3
20°	1591.1	1594.5	1584.6	1566.1	1532.5	1511.4	1469.7	1430.1	1389.2	1344.0	1309.5
22.5°	1686.6	1682.3	1668.1	1637.5	1609.6	1566.1	1520.0	1469.7	1415.8	1363.3	1314.7
25°	1797.7	1779.6	1771.4	1736.6	1698.2	1641.0	1579.0	1508.4	1444.7	1377.1	1318.6
27.5°	1873.4	1866.1	1854.5	1826.1	1782.2	1717.2	1644.0	1559.6	1474.0	1391.3	1317.7
30°	1855.4	1856.2	1857.1	1849.3	1823.5	1777.5	1704.7	1612.1	1505.4	1409.4	1320.7
32.5°	1695.2	1714.6	1733.1	1757.2	1772.7	1773.1	1734.4	1653.0	1542.4	1430.1	1319.0
35°	1443.0	1447.7	1496.3	1544.6	1610.0	1660.8	1694.8	1657.8	1565.2	1440.0	1317.7
37.5°	1166.6	1190.3	1226.9	1281.1	1379.3	1459.3	1564.4	1600.5	1557.0	1448.1	1317.3
40°	959.1	980.6	1002.6	1058.1	1137.8	1240.2	1363.8	1469.2	1493.8	1430.1	1304.4
42.5°	799.0	814.9	839.9	878.2	941.5	1029.3	1145.9	1291.9	1391.7	1377.5	1277.2
45°	680.2	690.9	709.9	743.0	791.2	862.3	966.4	1117.1	1248.4	1291.9	1231.2
47.5°	595.8	596.2	611.7	635.4	672.0	737.4	815.3	939.3	1080.9	1181.2	1167.0
50°	527.8	525.6	537.2	557.0	584.6	624.6	698.2	792.5	927.3	1044.8	1077.5
52.5°	469.2	470.1	476.1	489.5	511.4	544.1	594.5	677.1	787.3	908.7	977.6
55°	419.3	417.6	425.7	435.6	452.4	474.8	514.4	579.4	672.8	791.7	871.7
57.5°	371.1	375.8	379.3	386.1	400.8	416.3	451.6	501.5	578.6	684.0	768.8
60°	329.7	334.5	337.1	344.0	355.1	368.1	393.9	432.6	495.1	582.9	666.8
62.5°	292.7	296.2	296.6	302.6	311.2	323.7	342.7	373.7	419.7	493.8	575.6
65°	257.4	257.4	259.1	265.6	269.9	281.1	296.6	320.3	359.9	419.7	489.9
67.5°	223.0	225.1	224.7	227.7	231.6	241.1	252.7	272.5	303.9	349.1	407.2
70°	189.4	191.1	190.7	192.9	197.2	202.8	211.8	230.3	251.4	288.9	337.1
72.5°	159.3	159.7	158.4	161.4	163.6	168.3	178.6	186.4	205.8	235.9	273.4
75°	126.6	127.4	128.3	130.0	132.6	135.2	140.3	150.2	163.2	186.8	212.2
77.5°	100.7	98.6	101.2	100.7	102.0	104.2	108.9	114.5	125.7	141.6	162.7
80°	71.5	71.9	71.9	72.3	74.5	75.8	79.6	83.5	91.7	102.9	116.7
82.5°	47.4	48.6	47.8	48.6	50.4	51.2	52.9	56.0	59.8	68.0	77.1
85°	28.4	26.3	27.1	28.0	28.0	28.4	30.1	31.4	34.0	37.5	41.3
87.5°	10.3	11.2	11.6	11.6	12.1	12.1	13.8	13.8	15.1	16.4	18.1
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°	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2
2.5°	1050.8	1047.8	1044.3	1038.3	1031.0	1027.1	1021.1	1017.2	1009.5	1003.0	996.1
5°	1096.4	1085.2	1074.9	1061.6	1046.9	1037.5	1026.3	1013.8	1000.9	987.5	972.9
7.5°	1142.1	1123.6	1103.3	1082.2	1061.6	1042.2	1024.1	1005.6	988.8	967.7	950.1
10°	1188.1	1163.2	1136.5	1105.0	1074.5	1047.8	1020.7	997.0	972.9	947.1	924.2
12.5°	1234.2	1198.9	1158.4	1123.1	1084.8	1051.2	1018.1	986.2	954.4	925.1	897.6
15°	1251.0	1221.7	1186.8	1137.8	1096.4	1052.1	1009.9	970.7	934.1	902.3	868.7
17.5°	1267.3	1229.9	1192.9	1145.5	1091.7	1043.9	996.1	953.5	913.0	873.0	842.4
20°	1271.2	1232.5	1193.3	1147.2	1091.7	1034.9	987.1	933.3	888.9	847.2	807.6
22.5°	1269.9	1224.7	1181.2	1133.5	1079.6	1028.4	968.1	913.0	864.0	823.1	781.3
25°	1260.4	1213.5	1160.1	1112.4	1059.0	1003.4	944.9	888.1	839.0	792.1	751.2
27.5°	1254.8	1195.4	1136.9	1081.8	1030.6	979.3	922.5	864.0	810.2	762.4	724.5
30°	1242.4	1175.6	1107.6	1049.5	996.6	947.1	894.1	837.3	780.5	734.0	692.6
32.5°	1231.2	1150.7	1077.9	1013.3	956.5	908.7	861.0	807.6	752.0	704.7	663.4
35°	1216.1	1126.1	1043.9	972.5	912.6	863.1	822.2	771.9	720.6	675.0	635.4
37.5°	1198.5	1094.3	1007.3	932.8	867.8	816.2	777.4	738.3	687.0	642.3	607.0
40°	1176.9	1059.8	966.4	889.8	821.8	767.5	732.2	695.7	654.8	613.9	576.0
42.5°	1149.8	1028.8	925.1	841.2	774.0	721.5	684.0	654.3	619.5	582.0	547.6
45°	1115.4	990.1	879.9	791.2	723.2	671.1	632.8	609.6	582.4	546.3	516.6
47.5°	1069.7	946.2	832.5	740.9	670.7	622.5	585.9	563.1	543.3	514.9	486.9
50°	1004.7	895.8	780.5	689.6	619.5	570.8	537.7	517.4	501.1	480.4	457.6
52.5°	932.0	832.5	729.2	639.7	570.4	522.6	490.3	473.1	460.2	446.8	424.5
55°	854.1	768.0	669.8	584.6	520.5	473.5	445.1	429.6	418.4	407.2	393.5
57.5°	770.1	700.4	610.4	530.8	471.4	427.5	400.8	384.8	375.8	369.8	361.2
60°	680.6	622.9	548.0	477.0	419.3	381.4	355.6	344.0	336.6	331.9	325.9
62.5°	597.5	552.7	484.7	421.4	372.8	337.5	315.1	303.9	297.0	295.3	290.6
65°	516.1	479.6	422.3	368.5	325.4	294.9	275.5	264.7	260.4	257.9	258.3
67.5°	434.4	410.7	362.9	315.5	280.2	253.1	237.2	229.0	226.9	223.0	223.0
70°	360.7	344.0	305.2	265.2	234.6	214.8	201.0	192.4	190.3	188.6	188.1
72.5°	295.7	281.5	249.2	219.1	192.4	175.6	164.9	160.6	156.7	155.8	155.8
75°	232.0	223.8	197.2	171.8	152.8	140.8	133.0	128.3	125.7	125.3	125.7
77.5°	175.2	167.5	148.9	130.0	117.5	108.1	100.7	99.4	96.0	96.4	95.6
80°	124.0	119.2	108.5	94.3	84.4	76.6	73.2	70.2	69.3	68.0	69.3
82.5°	81.4	76.2	69.7	62.0	54.2	50.4	46.9	46.5	46.1	45.6	45.6
85°	44.3	44.8	40.5	33.6	30.1	27.6	25.4	25.4	25.0	24.5	25.0
87.5°	18.9	18.1	16.4	15.1	12.9	11.6	11.2	11.6	10.3	9.9	10.3
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°	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2	1014.2
2.5°	992.3	987.5	983.6	975.0	970.3	963.8	958.7	964.3	958.2	960.8	957.0
5°	965.6	953.5	944.9	932.4	921.7	911.8	904.4	903.1	899.7	898.0	892.8
7.5°	933.7	919.9	905.7	890.2	877.3	863.5	855.4	847.6	842.9	836.9	832.1
10°	906.2	885.9	868.7	848.9	831.7	816.6	804.6	798.5	792.9	784.8	781.8
12.5°	872.2	851.1	829.1	807.6	791.2	774.0	764.1	754.2	750.8	741.3	740.9
15°	846.3	814.9	794.2	772.7	749.9	736.1	727.5	717.6	713.3	706.8	702.1
17.5°	814.5	786.1	760.2	738.3	717.6	706.4	695.2	688.3	681.0	676.3	668.5
20°	779.2	752.5	726.6	703.0	687.9	674.6	666.0	659.5	651.7	649.6	641.8
22.5°	749.5	719.3	694.8	675.9	659.1	643.6	634.1	630.2	625.5	617.7	617.7
25°	716.7	686.2	665.1	645.3	630.7	616.9	610.4	604.8	599.7	594.9	593.2
27.5°	689.2	662.1	636.2	618.2	605.7	592.8	587.2	579.9	576.0	572.1	566.9
30°	659.9	631.9	610.0	592.8	579.0	567.8	561.8	557.0	553.6	550.2	547.6
32.5°	629.8	604.4	583.3	566.5	552.7	545.0	539.8	536.8	532.9	528.6	525.2
35°	604.0	575.6	554.9	540.3	529.5	523.0	517.0	514.0	509.7	509.7	506.2
37.5°	573.4	548.4	529.9	516.6	507.1	501.1	494.2	492.5	489.5	487.7	486.4
40°	546.7	523.9	506.7	493.3	483.0	478.3	473.1	469.7	467.9	465.8	464.9
42.5°	519.2	497.6	481.3	469.2	460.6	456.7	452.0	449.9	446.0	443.0	442.5
45°	491.2	470.1	455.0	445.1	437.4	432.6	429.6	424.5	422.7	419.3	418.9
47.5°	465.3	444.7	429.6	421.4	414.6	411.1	406.4	400.8	398.6	396.5	396.0
50°	435.6	417.1	403.4	395.6	389.2	383.6	378.8	375.4	374.1	374.1	374.9
52.5°	405.5	390.4	379.3	369.4	363.3	357.3	353.0	351.3	349.1	351.7	353.4
55°	376.2	360.3	351.7	342.7	336.6	329.7	327.6	326.7	325.4	328.9	330.6
57.5°	344.8	334.1	323.7	314.3	309.1	304.8	301.3	300.9	303.5	304.3	309.5
60°	315.1	302.2	293.2	286.3	279.8	277.2	276.4	275.5	277.2	282.0	289.3
62.5°	282.4	272.5	262.6	257.9	253.6	248.8	248.8	249.7	253.6	259.1	266.5
65°	250.5	241.5	235.0	229.0	225.1	222.6	223.4	225.1	229.0	236.3	244.5
67.5°	217.8	211.8	205.8	200.2	196.3	196.7	197.2	199.3	204.0	212.7	220.4
70°	186.4	179.5	174.8	172.6	169.6	167.9	170.5	174.8	178.6	186.4	192.9
72.5°	155.0	149.4	145.9	144.6	143.8	142.5	142.9	147.7	153.3	161.0	168.7
75°	124.0	121.8	119.2	117.5	116.2	117.1	118.0	122.3	126.6	134.7	143.3
77.5°	96.0	93.4	91.7	91.3	90.4	90.8	93.0	96.4	100.7	106.8	113.6
80°	68.4	67.6	66.7	66.3	66.3	66.7	70.2	72.3	76.2	81.8	87.0
82.5°	45.2	44.8	44.8	44.8	45.2	45.2	46.9	49.9	52.9	56.8	61.1
85°	26.3	25.4	26.7	27.1	26.3	27.6	28.4	30.1	31.4	33.6	35.7
87.5°	10.8	11.6	11.2	11.6	11.6	12.5	12.1	13.8	14.6	15.5	15.1
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: P242827

CATALOG NUMBER: S125DR-S850D935-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1014.2	1014.2	1014.2	1014.2
2.5°	954.4	957.4	954.8	958.2
5°	890.7	886.8	889.4	887.6
7.5°	831.7	828.2	823.1	821.4
10°	777.0	772.3	771.9	768.8
12.5°	737.0	732.7	726.6	725.8
15°	699.5	696.1	693.1	695.7
17.5°	667.7	664.7	663.8	661.2
20°	638.0	635.8	636.7	631.1
22.5°	614.3	609.6	608.7	608.7
25°	589.3	587.2	585.0	587.2
27.5°	567.4	565.2	564.4	564.8
30°	547.6	543.3	543.7	543.3
32.5°	526.0	523.5	522.6	521.7
35°	505.0	505.0	502.8	502.8
37.5°	485.6	485.2	483.9	484.7
40°	463.2	462.8	461.5	458.9
42.5°	441.7	440.0	439.5	439.1
45°	418.9	418.9	418.0	417.6
47.5°	396.5	397.3	399.1	398.6
50°	376.7	377.1	378.4	378.8
52.5°	354.7	357.7	359.5	359.0
55°	334.5	337.5	340.5	340.9
57.5°	314.3	318.1	321.1	322.0
60°	293.6	299.2	303.1	304.8
62.5°	273.8	280.2	284.1	284.1
65°	251.8	258.3	261.7	264.3
67.5°	229.0	235.5	238.9	241.1
70°	203.6	210.1	215.2	217.0
72.5°	178.6	184.2	188.1	190.3
75°	148.9	156.7	160.6	162.7
77.5°	120.5	128.3	130.4	131.7
80°	92.1	96.4	99.4	99.9
82.5°	65.4	68.9	69.3	70.6
85°	38.7	40.5	40.9	40.5
87.5°	15.9	15.5	15.5	16.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)