

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: P243785

Luminaire Tested: **S125RDR-H850D930-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243785
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-H850D930-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2554.6 lumens
Efficiency: N/A
Efficacy: 108.2 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

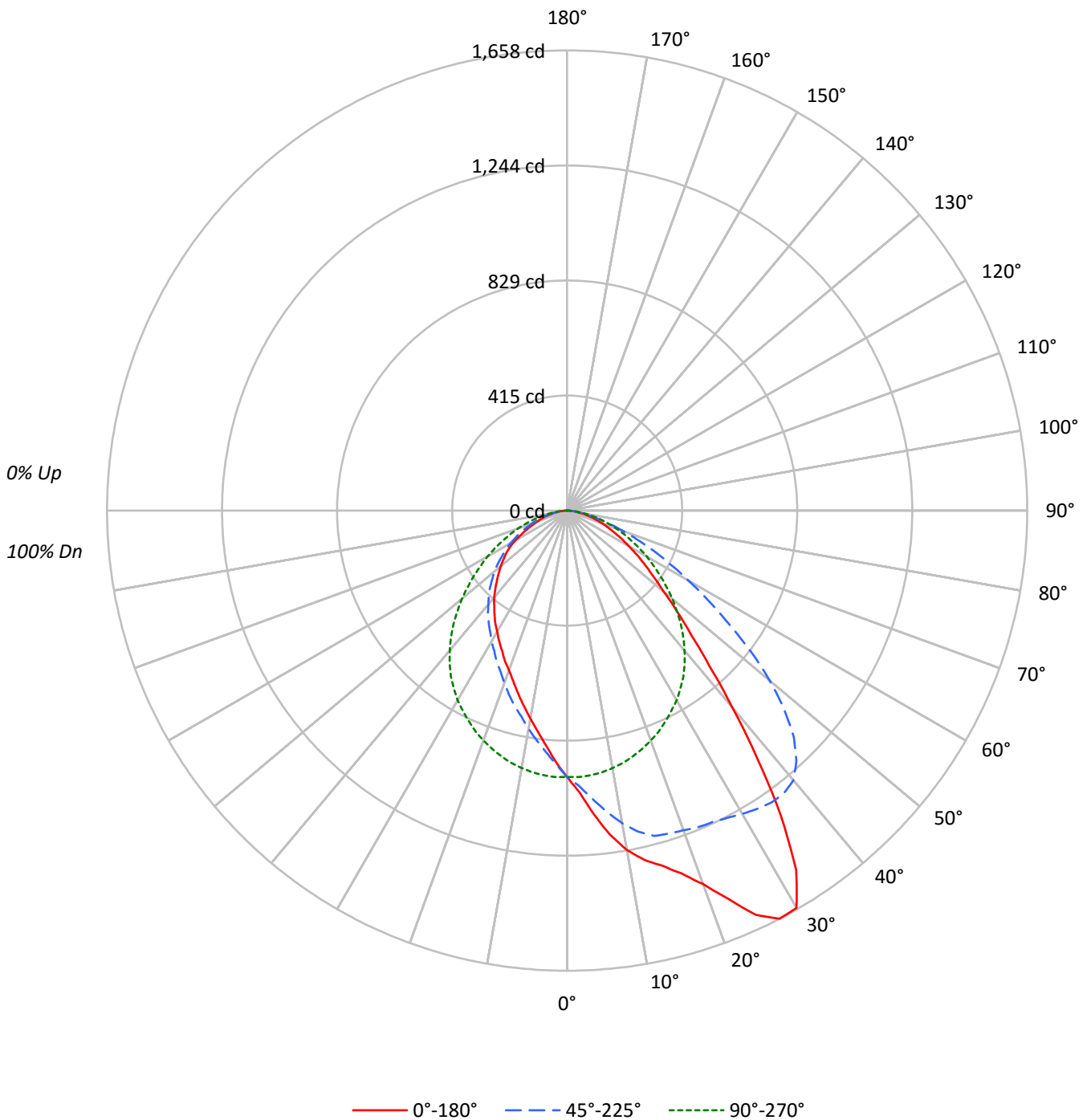
Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	6822	6822	6822
5°	7832	6832	6077
10°	8960	6798	5494
15°	9746	6744	5024
20°	10829	6667	4629
25°	12601	6572	4358
30°	13568	6475	4135
35°	11657	6330	3956
40°	8588	6102	3793
45°	6342	5819	3596
50°	5024	5471	3451
55°	4244	5069	3320
60°	3657	4697	3073
65°	3175	4275	2676
70°	2785	3915	2342
75°	2362	3427	2216
80°	1838	2865	1838
85°	1615	2300	1680



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.4	3.6
10°-20°	273.3	10.7
20°-30°	436.0	17.1
30°-40°	529.4	20.7
40°-50°	477.0	18.7
50°-60°	366.8	14.4
60°-70°	238.0	9.3
70°-80°	114.5	4.5
80°-90°	27.1	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°	801.7	31.4
0°-40°	1331.1	52.1
0°-60°	2174.9	85.1
0°-90°	2554.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2554.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	960	960	960	960	960	
5°	1098	1043	958	873	852	109
15°	1324	1214	916	730	683	380
25°	1607	1238	838	601	556	735
35°	1344	1284	730	492	456	822
45°	631	1155	579	393	358	501
55°	342	710	409	287	268	310
65°	189	345	254	182	159	189
75°	86	117	125	89	81	93
85°	20	21	28	22	21	22
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°	959.9	959.9	959.9	959.9	959.9	959.9	959.9	959.9	959.9	959.9	959.9
2.5°	1015.4	1019.2	1016.2	1018.1	1015.1	1013.5	1009.7	1004.0	998.3	993.0	992.6
5°	1097.7	1096.9	1093.8	1089.7	1086.6	1079.0	1075.2	1062.3	1053.5	1042.8	1037.5
7.5°	1176.1	1174.2	1169.6	1163.9	1161.2	1151.3	1140.7	1124.3	1110.6	1093.8	1081.3
10°	1241.5	1241.1	1237.7	1233.9	1223.6	1212.6	1202.3	1185.2	1164.6	1143.7	1126.2
12.5°	1289.5	1287.6	1283.4	1276.9	1268.5	1260.9	1247.2	1231.6	1206.5	1185.2	1161.2
15°	1324.5	1323.7	1317.6	1315.4	1299.0	1288.3	1270.1	1254.5	1235.0	1213.7	1187.9
17.5°	1370.9	1372.4	1367.1	1354.2	1339.3	1323.0	1297.1	1271.6	1244.6	1219.8	1198.9
20°	1431.8	1428.0	1418.9	1403.3	1376.6	1356.5	1330.6	1299.0	1262.5	1225.9	1195.8
22.5°	1513.3	1509.1	1494.6	1475.6	1442.1	1405.2	1365.6	1318.4	1276.5	1234.7	1195.1
25°	1606.9	1598.9	1577.6	1557.0	1509.5	1470.3	1411.3	1354.9	1294.0	1238.5	1193.9
27.5°	1657.9	1657.9	1648.0	1625.5	1587.9	1530.0	1469.9	1394.9	1324.5	1248.4	1185.2
30°	1653.3	1650.7	1654.5	1645.0	1620.6	1577.2	1517.5	1438.7	1348.8	1261.7	1186.0
32.5°	1535.3	1536.5	1559.3	1574.9	1587.1	1576.4	1537.6	1466.5	1377.0	1274.6	1182.9
35°	1343.5	1346.6	1386.9	1413.5	1468.0	1499.2	1508.3	1469.9	1389.6	1283.8	1177.6
37.5°	1124.3	1124.3	1171.1	1211.5	1272.3	1349.2	1406.7	1421.2	1382.0	1283.4	1173.0
40°	925.6	924.5	961.4	1010.9	1076.0	1160.8	1246.5	1319.9	1329.4	1268.5	1157.0
42.5°	757.4	755.5	795.8	823.2	891.7	967.5	1081.3	1185.2	1244.6	1222.5	1133.4
45°	631.0	629.5	655.8	687.0	735.3	814.1	909.6	1025.0	1124.7	1155.1	1089.3
47.5°	535.9	536.6	550.7	577.0	618.1	674.4	760.1	867.0	990.3	1060.7	1033.7
50°	454.4	457.1	467.8	487.5	517.6	562.9	636.4	733.0	859.8	953.0	958.7
52.5°	393.5	397.3	408.8	419.4	444.5	476.5	533.6	617.3	722.0	833.9	873.9
55°	342.5	344.4	350.9	362.3	381.0	407.6	449.1	513.0	610.1	709.8	780.2
57.5°	299.9	299.9	304.1	312.1	326.9	350.9	378.7	431.6	513.4	603.6	678.6
60°	257.3	258.8	261.9	270.6	280.5	298.8	325.8	359.3	430.1	505.4	586.1
62.5°	221.5	224.2	227.2	231.4	240.5	253.5	272.5	303.3	350.9	420.6	492.5
65°	188.8	191.4	191.8	196.8	202.9	213.5	228.0	250.4	290.0	344.8	404.2
67.5°	159.9	161.0	162.1	165.9	171.7	178.5	188.0	204.8	236.0	272.9	330.7
70°	134.0	134.7	135.1	139.3	142.0	148.1	153.0	163.7	183.4	212.0	256.9
72.5°	109.6	108.5	108.1	111.5	112.7	117.6	123.7	131.3	142.0	162.1	195.6
75°	86.0	86.4	86.8	88.7	89.1	91.3	95.2	100.1	105.0	116.8	138.2
77.5°	66.2	64.7	64.7	67.0	67.7	68.1	70.8	73.5	76.1	83.0	91.3
80°	44.9	45.7	45.7	45.7	46.1	46.8	48.3	50.6	52.5	56.7	58.2
82.5°	32.0	32.0	31.6	32.4	32.7	33.1	33.1	33.1	34.3	35.4	36.9
85°	19.8	20.2	19.0	19.8	20.2	20.2	20.2	20.2	21.3	20.9	21.3
87.5°	8.4	8.8	8.8	9.1	9.1	9.5	9.1	9.5	9.1	9.1	9.5
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°	959.9	959.9	959.9	959.9	959.9	959.9	959.9	959.9	959.9	959.9	959.9
2.5°	991.5	986.9	984.6	980.0	974.0	970.2	966.3	961.0	956.8	950.4	944.6
5°	1028.0	1018.9	1010.5	999.1	988.0	978.5	968.6	957.6	947.7	936.7	924.9
7.5°	1068.7	1054.3	1036.8	1016.6	999.5	984.6	967.9	951.5	936.7	919.1	903.2
10°	1107.9	1084.7	1061.5	1034.5	1009.4	987.3	964.8	942.0	922.6	900.9	881.1
12.5°	1138.4	1116.3	1081.7	1048.2	1015.4	986.9	958.7	930.9	905.4	881.5	857.9
15°	1165.0	1128.5	1099.2	1062.6	1022.7	983.9	948.8	916.5	885.7	857.5	833.5
17.5°	1172.6	1139.9	1107.9	1065.3	1022.3	978.1	937.8	899.4	865.1	833.9	806.9
20°	1171.9	1138.8	1104.1	1063.4	1017.7	969.4	924.5	881.5	842.6	806.9	777.9
22.5°	1160.5	1128.5	1093.5	1052.4	1005.9	956.1	908.9	861.3	819.1	781.8	752.1
25°	1148.3	1107.9	1071.4	1029.9	985.8	939.7	889.5	838.1	793.9	755.1	721.6
27.5°	1137.6	1089.3	1044.4	1003.6	958.4	916.9	867.0	813.3	768.1	727.3	692.7
30°	1120.5	1069.5	1015.1	970.5	926.8	883.4	837.7	789.0	739.5	698.0	663.4
32.5°	1105.6	1041.3	982.3	932.1	888.3	850.3	806.5	759.7	711.3	671.8	634.5
35°	1089.3	1012.4	950.7	891.7	848.0	806.5	771.9	729.6	681.7	639.8	606.3
37.5°	1069.9	982.7	911.9	851.8	806.5	763.9	732.7	695.0	651.6	610.1	577.0
40°	1048.2	952.3	870.8	808.8	760.1	717.4	691.2	657.7	620.8	579.7	548.8
42.5°	1020.8	919.9	833.5	765.8	711.7	673.3	647.0	619.2	585.4	549.6	516.1
45°	986.1	879.6	789.0	717.4	664.1	626.8	599.4	578.9	551.9	518.4	486.8
47.5°	943.9	837.3	743.3	669.1	617.7	581.9	556.4	535.9	515.3	486.4	456.3
50°	887.9	789.0	698.8	623.0	568.6	534.0	511.1	494.8	476.1	452.5	425.1
52.5°	826.3	734.6	646.3	575.5	522.9	488.3	464.7	451.0	436.9	417.5	393.9
55°	754.7	680.1	596.0	526.8	475.4	441.1	422.5	409.1	397.3	382.5	362.7
57.5°	679.0	613.5	540.5	476.5	428.2	395.8	379.5	368.4	358.5	347.9	331.5
60°	599.4	553.0	483.7	425.1	382.9	356.2	340.6	330.4	321.2	312.5	300.3
62.5°	516.5	478.0	426.3	376.4	338.7	313.6	302.2	293.4	283.9	276.3	267.6
65°	432.4	410.3	374.5	327.7	293.1	272.5	261.5	254.2	249.7	240.9	234.1
67.5°	355.9	343.7	313.2	281.6	255.0	236.4	226.1	220.7	215.8	211.6	204.0
70°	283.2	274.4	256.9	234.4	213.5	197.5	189.9	188.4	181.5	177.4	173.6
72.5°	215.8	213.5	199.1	189.2	177.4	164.8	159.1	156.0	151.5	147.7	146.2
75°	153.4	156.8	152.2	147.3	141.6	131.3	126.4	124.8	120.7	119.5	117.6
77.5°	104.7	109.6	111.1	108.9	106.2	102.8	99.3	97.8	93.6	92.9	91.7
80°	65.8	73.1	75.7	75.4	74.2	74.6	70.4	70.0	68.1	67.0	68.1
82.5°	40.0	43.8	48.7	49.9	48.3	49.1	48.0	46.4	46.4	47.2	45.7
85°	21.7	22.1	24.4	25.9	27.8	29.3	27.8	28.2	27.8	27.8	26.6
87.5°	9.5	9.9	9.9	9.5	10.3	11.0	12.6	13.3	12.9	11.8	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°	959.9	959.9	959.9	959.9	959.9	959.9	959.9	959.9	959.9	959.9	959.9
2.5°	940.1	937.4	932.9	929.0	920.3	914.2	913.4	913.8	913.1	912.3	911.9
5°	917.2	908.5	900.1	892.9	883.0	873.1	868.5	866.6	865.9	861.7	864.0
7.5°	892.9	879.6	869.7	856.0	844.2	835.8	827.8	824.0	823.2	817.5	816.0
10°	867.0	851.0	836.2	822.5	810.7	798.9	789.4	785.9	781.4	776.8	770.0
12.5°	841.5	821.7	805.4	790.1	774.1	760.8	753.2	748.3	742.6	738.4	736.1
15°	811.1	794.3	774.1	757.8	741.4	729.6	719.3	710.2	704.9	701.4	691.9
17.5°	783.7	761.6	742.6	726.9	709.1	695.7	685.1	677.5	668.3	661.5	655.4
20°	754.3	731.5	714.0	695.4	677.1	660.7	647.4	641.3	634.8	628.4	624.9
22.5°	722.8	703.0	683.2	663.8	644.4	626.8	618.5	609.7	604.0	597.5	593.0
25°	695.4	673.7	653.9	632.2	610.9	600.6	589.2	580.4	575.8	569.4	564.4
27.5°	666.1	645.1	621.5	599.1	586.5	569.0	561.4	554.5	548.4	542.0	538.5
30°	638.6	614.3	590.7	573.2	556.8	544.3	537.0	528.7	520.3	517.2	512.7
32.5°	609.7	583.5	562.9	545.4	531.7	516.5	509.6	502.8	494.8	491.0	486.8
35°	579.7	554.2	534.0	518.0	503.9	492.5	484.9	477.7	472.7	467.0	464.0
37.5°	548.1	526.0	506.6	490.6	477.7	468.5	459.0	453.3	446.4	441.1	438.8
40°	518.0	498.2	479.6	464.7	452.9	441.9	433.5	426.3	422.1	417.5	413.7
42.5°	491.0	470.4	454.4	438.8	428.2	417.5	409.1	403.8	396.6	394.7	389.4
45°	462.0	443.0	427.0	412.6	401.5	392.8	382.9	376.4	371.8	367.3	365.4
47.5°	432.7	415.2	400.4	387.1	375.7	365.8	358.1	351.3	346.3	342.2	339.9
50°	404.2	389.0	374.1	361.2	349.4	342.2	333.0	325.4	321.6	317.0	314.4
52.5°	374.1	361.6	345.6	334.5	323.5	314.0	304.9	299.9	296.1	292.3	290.4
55°	346.0	332.6	318.9	307.1	296.5	286.6	279.4	275.6	270.6	268.3	267.9
57.5°	317.0	303.3	291.9	281.3	269.1	261.5	255.0	250.4	246.2	244.3	244.3
60°	285.5	274.4	263.8	252.0	243.2	234.4	227.6	224.6	220.4	219.6	216.9
62.5°	256.5	246.2	236.0	224.9	216.9	208.2	203.2	199.1	196.8	193.7	190.7
65°	226.5	217.3	207.4	197.9	191.4	181.9	177.4	172.4	169.7	166.3	162.5
67.5°	197.5	188.8	179.6	170.9	165.6	156.4	153.4	147.3	145.4	141.6	138.2
70°	167.1	161.0	153.8	145.0	140.4	133.2	130.2	124.5	121.4	119.1	117.2
72.5°	140.8	135.1	126.7	121.0	115.3	110.8	105.8	103.1	100.5	98.6	98.2
75°	114.9	107.7	102.8	97.4	93.6	89.1	86.8	84.9	83.7	82.6	81.4
77.5°	87.9	84.9	79.9	74.6	71.6	69.6	68.1	67.4	66.2	65.8	64.7
80°	65.5	61.3	58.2	56.3	54.0	52.5	51.4	48.7	47.2	46.4	45.7
82.5°	43.4	42.2	40.0	38.1	36.2	35.8	34.6	33.9	33.5	33.5	33.1
85°	26.3	23.2	23.2	22.8	22.8	22.5	21.7	21.7	20.9	22.1	22.1
87.5°	10.7	10.7	9.9	9.9	10.3	9.5	9.1	9.1	9.1	8.8	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: P243785

CATALOG NUMBER: S125RDR-H850D930-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	959.9	959.9	959.9	959.9
2.5°	911.9	910.0	910.4	908.1
5°	859.8	858.6	854.8	851.8
7.5°	812.2	807.3	806.9	803.8
10°	767.7	763.1	760.8	761.2
12.5°	728.8	723.9	723.9	720.9
15°	687.4	682.4	683.2	682.8
17.5°	653.1	649.7	647.0	644.7
20°	619.6	615.4	613.9	612.0
22.5°	588.8	585.7	586.1	586.1
25°	559.5	559.9	556.4	555.7
27.5°	533.6	532.8	532.1	530.6
30°	509.2	506.2	505.4	503.9
32.5°	484.1	483.7	480.7	481.8
35°	458.6	457.5	456.7	456.0
37.5°	435.0	432.7	432.4	431.6
40°	411.0	410.3	406.9	408.8
42.5°	385.2	383.6	383.6	383.6
45°	363.5	359.3	359.3	357.8
47.5°	339.1	337.6	336.8	334.2
50°	315.1	312.9	312.1	312.1
52.5°	290.4	290.0	290.8	289.3
55°	268.7	269.1	268.7	267.9
57.5°	245.1	243.2	243.2	243.6
60°	216.9	216.9	217.7	216.2
62.5°	189.9	189.2	186.5	185.7
65°	162.1	159.1	158.7	159.1
67.5°	137.4	136.3	134.4	134.7
70°	116.1	115.7	113.8	112.7
72.5°	97.1	97.1	95.9	95.9
75°	81.1	80.3	79.9	80.7
77.5°	62.4	60.5	61.3	60.1
80°	45.3	46.1	45.3	44.9
82.5°	33.5	32.7	33.1	32.7
85°	21.3	20.6	20.9	20.6
87.5°	8.8	9.1	9.1	8.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)