

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: P242925

Luminaire Tested: **S125RDR-S850D930-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242925
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-32)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125RDR-S850D930-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2572.8 lumens
Efficiency: N/A
Efficacy: 97.5 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.21 / 1.48
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

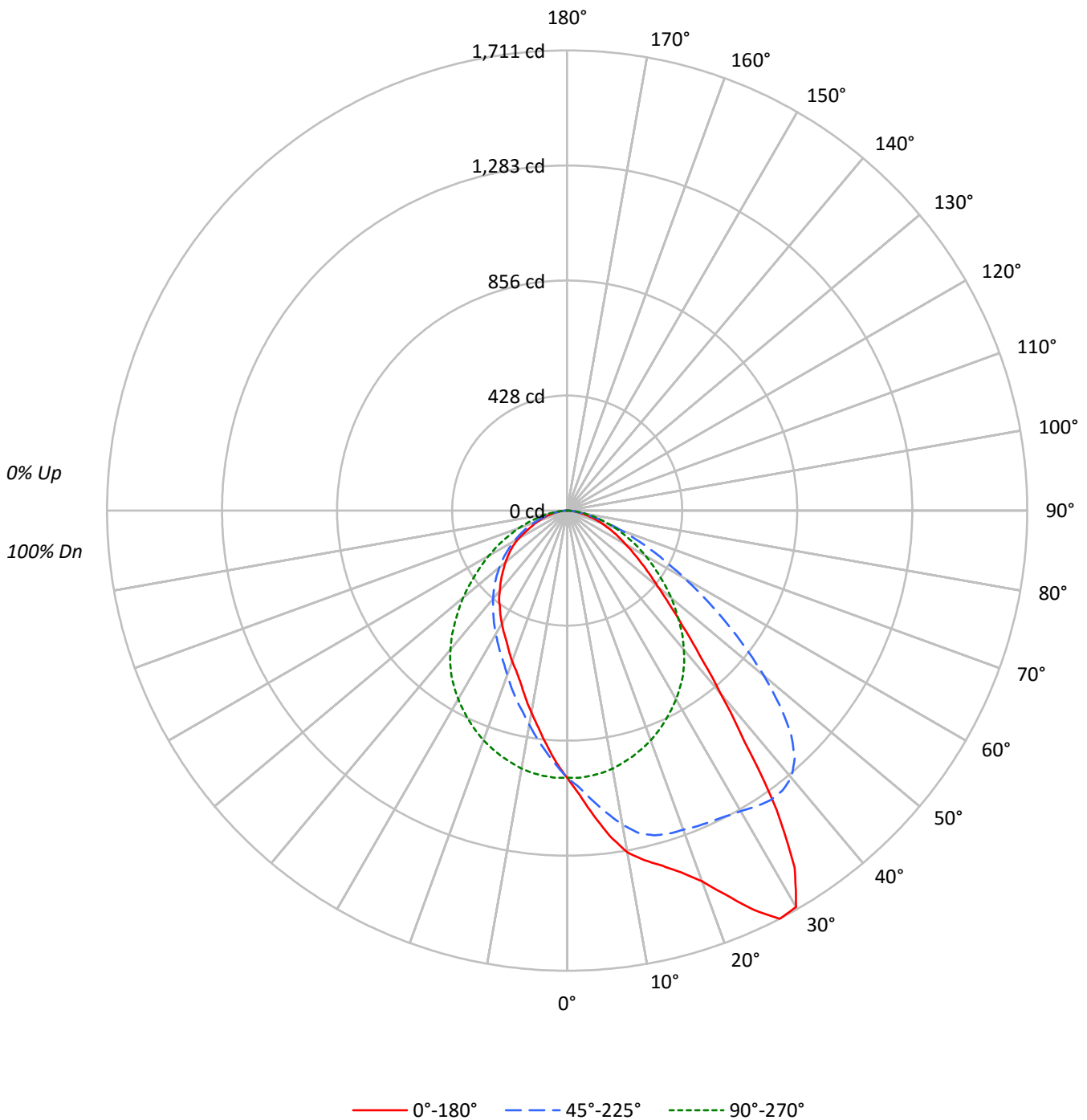
Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					86			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73					73			
3	92	83	75	69	90	81	74	69	78	72	67	76	70	66	73	69	65	63					63			
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55					55			
5	79	66	58	52	77	65	57	51	63	56	51	61	55	50	60	54	50	48					48			
6	73	60	52	45	71	59	51	45	57	50	45	56	49	44	54	49	44	42					42			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	50	44	39	37					37			
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	42	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28					28			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	7058	7058	7058
5°	8120	7067	6241
10°	9314	7031	5507
15°	10060	6959	4895
20°	11093	6875	4520
25°	12837	6764	4194
30°	13970	6648	3981
35°	11784	6511	3785
40°	8230	6266	3616
45°	6105	5936	3450
50°	4867	5594	3308
55°	4131	5167	3182
60°	3569	4786	2978
65°	3180	4374	2565
70°	2795	4006	2338
75°	2417	3471	2194
80°	1834	2918	1834
85°	1533	2291	1729



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.2	3.7
10°-20°	279.2	10.9
20°-30°	442.6	17.2
30°-40°	534.9	20.8
40°-50°	476.3	18.5
50°-60°	365.2	14.2
60°-70°	237.2	9.2
70°-80°	115.1	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°	817.0	31.8
0°-40°	1351.9	52.5
0°-60°	2193.4	85.3
0°-90°	2572.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2572.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	993	993	993	993	993	
5°	1138	1082	990	900	875	113
15°	1367	1250	946	728	665	391
25°	1637	1274	862	587	535	754
35°	1358	1316	750	478	436	823
45°	607	1178	591	379	343	482
55°	333	715	417	278	257	302
65°	189	341	260	178	152	188
75°	88	119	126	88	80	94
85°	19	20	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°	993.0	993.0	993.0	993.0	993.0	993.0	993.0	993.0	993.0	993.0	993.0
2.5°	1057.4	1056.6	1058.2	1053.7	1054.1	1047.2	1047.2	1041.9	1035.0	1029.7	1027.2
5°	1138.1	1138.9	1137.3	1131.2	1127.1	1121.0	1114.0	1101.8	1091.6	1081.8	1074.1
7.5°	1220.4	1221.2	1215.9	1214.7	1204.1	1197.6	1182.1	1166.2	1152.4	1134.0	1121.0
10°	1290.5	1290.1	1284.4	1279.9	1271.0	1259.6	1244.5	1224.9	1206.6	1186.2	1166.6
12.5°	1331.3	1330.1	1329.3	1323.6	1315.4	1305.6	1293.4	1274.2	1250.6	1227.8	1204.1
15°	1367.2	1364.3	1359.0	1352.1	1340.3	1328.5	1314.2	1297.1	1275.5	1250.2	1229.0
17.5°	1410.4	1410.8	1402.6	1395.3	1379.8	1360.2	1339.0	1313.0	1285.2	1259.6	1238.4
20°	1466.6	1465.4	1457.3	1438.5	1420.2	1394.1	1368.8	1335.0	1299.1	1262.8	1234.7
22.5°	1547.3	1543.7	1535.1	1509.0	1478.0	1442.6	1400.6	1357.4	1312.1	1269.8	1230.6
25°	1637.0	1634.6	1617.9	1589.3	1549.4	1497.6	1447.1	1390.4	1328.0	1273.8	1229.0
27.5°	1711.2	1706.3	1691.2	1664.3	1625.2	1569.4	1499.7	1426.3	1352.1	1280.8	1219.2
30°	1702.2	1708.4	1706.7	1695.7	1668.0	1619.1	1555.9	1470.7	1378.2	1290.5	1213.5
32.5°	1574.2	1579.5	1597.9	1627.6	1636.6	1624.4	1581.2	1504.1	1407.5	1304.8	1209.0
35°	1358.2	1365.5	1393.3	1436.9	1493.9	1541.6	1551.4	1509.0	1423.0	1315.8	1204.5
37.5°	1083.5	1131.2	1149.9	1194.3	1284.0	1370.8	1446.3	1463.4	1416.9	1313.4	1199.2
40°	887.0	896.8	938.4	990.1	1062.7	1154.0	1274.2	1361.1	1363.9	1297.1	1182.1
42.5°	727.2	740.2	765.5	804.2	863.8	955.1	1080.2	1201.7	1267.3	1252.2	1159.7
45°	607.4	616.7	637.5	669.3	717.0	792.4	899.2	1031.7	1136.9	1178.0	1116.1
47.5°	513.6	518.5	537.7	563.3	600.0	657.1	743.9	863.8	988.9	1072.5	1056.2
50°	440.2	445.9	459.8	478.1	507.9	554.4	620.4	716.2	846.2	954.3	975.9
52.5°	383.2	387.7	395.0	412.1	435.3	468.4	518.5	602.9	716.6	833.2	890.3
55°	333.4	336.7	343.6	353.4	373.0	398.7	444.7	504.6	599.2	715.0	788.3
57.5°	291.0	292.7	296.8	306.5	320.8	340.0	375.0	429.6	498.1	607.0	687.7
60°	251.1	252.7	258.4	264.5	275.1	292.3	318.4	353.8	419.0	505.0	587.0
62.5°	219.3	220.1	221.7	227.9	236.8	249.1	268.2	295.5	344.0	417.0	493.2
65°	189.1	189.5	190.4	195.3	201.0	210.7	224.2	244.6	283.7	340.8	409.3
67.5°	159.0	159.8	162.6	164.3	171.2	176.1	184.7	201.0	231.1	271.9	327.3
70°	134.5	134.1	137.0	139.0	141.0	147.2	152.5	165.1	182.2	211.6	256.0
72.5°	111.7	110.5	111.3	111.7	114.5	118.2	123.5	130.0	142.3	160.2	191.6
75°	88.0	88.5	88.5	89.3	91.3	92.9	94.6	98.6	106.0	119.4	137.8
77.5°	66.0	65.2	67.3	67.3	68.9	70.9	72.1	73.8	76.6	82.7	93.8
80°	44.8	44.8	45.2	46.5	46.1	46.9	48.9	50.5	54.2	57.5	60.7
82.5°	31.8	31.4	31.8	31.8	31.8	32.6	33.0	33.0	33.8	35.1	37.1
85°	18.8	18.8	19.2	19.2	19.6	19.6	20.0	20.0	20.0	20.4	20.8
87.5°	9.0	8.6	8.2	8.2	8.6	9.4	9.0	8.6	8.6	8.6	9.0
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°	993.0	993.0	993.0	993.0	993.0	993.0	993.0	993.0	993.0	993.0	993.0
2.5°	1027.2	1024.4	1019.1	1014.2	1008.1	1002.8	999.1	994.6	988.9	982.0	976.3
5°	1065.5	1056.6	1044.7	1034.6	1021.5	1011.3	1000.7	990.5	980.3	967.3	955.9
7.5°	1107.9	1090.4	1074.1	1052.9	1033.7	1017.0	1000.7	984.0	968.1	950.2	933.5
10°	1146.2	1123.8	1099.0	1070.4	1044.3	1019.5	996.6	974.2	950.6	929.8	907.4
12.5°	1182.1	1151.5	1122.2	1084.3	1051.7	1019.9	989.3	960.0	934.3	905.7	881.3
15°	1200.9	1172.3	1140.5	1096.5	1052.9	1016.2	982.0	945.7	914.3	884.1	857.2
17.5°	1211.9	1181.7	1145.0	1102.2	1055.3	1009.7	966.5	927.8	891.9	857.2	827.5
20°	1207.0	1178.0	1140.1	1099.8	1048.8	1000.7	953.0	909.0	867.8	830.7	798.5
22.5°	1195.2	1165.0	1128.7	1085.5	1037.8	986.0	934.3	886.6	843.0	804.2	768.4
25°	1183.3	1142.6	1105.1	1063.5	1017.4	966.9	914.3	862.5	816.5	777.3	739.0
27.5°	1171.9	1122.6	1076.1	1036.2	986.9	941.2	889.8	836.4	788.3	748.8	709.7
30°	1155.2	1098.1	1045.6	998.7	952.6	909.8	861.7	810.0	760.2	719.1	679.1
32.5°	1134.4	1072.9	1013.8	957.9	913.9	871.5	829.1	780.2	732.1	689.3	648.5
35°	1117.7	1040.3	977.5	920.0	870.7	829.5	790.4	750.4	701.9	657.9	618.4
37.5°	1094.5	1009.3	938.4	875.6	824.2	783.5	752.1	714.2	668.9	626.1	589.4
40°	1073.7	975.0	895.6	833.6	779.0	735.4	706.4	675.4	635.1	595.5	558.9
42.5°	1046.0	943.7	852.3	787.1	732.1	690.5	661.2	635.1	602.9	566.2	526.2
45°	1008.1	901.3	807.9	738.6	683.2	642.0	614.7	590.6	565.0	530.7	496.5
47.5°	962.8	860.9	762.7	686.4	633.0	594.3	567.4	547.4	528.7	498.9	464.3
50°	906.2	808.7	713.3	640.0	582.1	545.8	520.9	505.9	489.2	462.7	434.9
52.5°	839.3	754.9	662.0	586.6	532.8	499.3	475.7	460.6	447.6	427.2	401.1
55°	768.4	692.1	606.5	538.5	488.3	454.1	431.3	417.0	408.8	390.5	369.7
57.5°	688.1	629.4	551.9	485.5	440.2	406.0	388.9	376.2	366.9	353.4	337.9
60°	603.3	565.0	497.3	434.9	394.2	362.0	346.9	336.7	328.1	317.1	305.7
62.5°	517.3	492.0	435.3	384.0	347.3	321.6	307.8	298.8	288.6	282.1	271.1
65°	442.3	417.4	376.6	334.7	300.0	278.4	268.2	260.1	254.0	245.8	238.1
67.5°	359.1	347.7	317.5	286.2	260.9	240.1	231.1	224.6	217.7	212.8	207.1
70°	283.7	278.8	258.8	239.7	216.4	203.4	195.3	192.8	183.8	178.9	175.3
72.5°	216.9	215.2	205.9	194.0	179.4	168.3	161.0	158.2	153.3	149.6	147.6
75°	157.8	158.6	156.5	148.0	141.9	134.5	128.0	126.4	122.3	119.0	117.0
77.5°	107.6	111.7	110.9	110.5	107.6	102.3	99.5	98.2	93.8	92.5	92.1
80°	68.5	73.0	77.0	76.6	75.8	74.6	72.6	71.3	69.3	68.1	67.3
82.5°	39.9	44.0	47.3	50.1	50.1	48.9	47.7	47.3	47.3	46.5	46.5
85°	21.6	22.4	23.6	26.5	28.5	28.9	28.5	28.1	26.9	27.3	27.7
87.5°	9.4	9.4	9.8	9.8	9.4	11.4	12.6	13.0	12.2	11.4	10.6
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°	993.0	993.0	993.0	993.0	993.0	993.0	993.0	993.0	993.0	993.0	993.0
2.5°	972.2	966.5	962.4	954.3	948.5	946.1	941.6	940.4	944.9	941.6	941.2
5°	947.3	935.5	926.1	916.7	906.6	900.0	890.3	888.6	886.2	882.5	881.7
7.5°	918.4	903.7	892.7	877.2	864.6	854.4	842.2	837.3	834.8	830.3	823.0
10°	889.0	870.7	854.4	838.9	822.2	808.7	796.5	787.1	781.0	775.3	772.9
12.5°	860.1	841.3	819.3	799.8	780.6	765.1	751.3	746.0	739.0	732.1	725.6
15°	829.9	805.1	782.2	760.6	744.7	728.4	715.4	706.4	696.2	693.4	682.4
17.5°	797.7	774.5	747.6	724.4	706.4	689.3	675.0	664.4	656.7	645.7	640.4
20°	768.0	739.0	712.9	692.1	671.8	650.6	635.9	627.3	620.0	611.4	607.4
22.5°	736.2	708.0	681.1	655.9	635.1	614.3	604.9	595.9	587.4	579.6	573.9
25°	705.2	676.7	648.5	623.3	601.7	586.6	574.3	564.2	559.7	551.9	546.2
27.5°	674.2	644.0	615.5	589.0	572.3	557.2	547.4	539.3	530.7	523.8	518.5
30°	644.5	613.5	581.7	561.7	543.8	529.5	518.5	510.8	504.6	498.5	494.9
32.5°	614.7	582.5	555.2	533.2	516.5	504.6	493.2	485.9	479.4	472.4	468.0
35°	582.5	549.9	527.1	505.9	489.2	477.7	470.0	459.4	454.1	449.2	444.7
37.5°	553.6	522.6	497.3	479.0	463.5	452.5	442.3	437.0	430.0	426.0	422.3
40°	520.9	493.2	470.8	451.2	440.6	428.0	418.6	411.3	406.4	400.7	396.6
42.5°	491.6	466.3	444.7	427.6	413.7	403.5	394.6	387.2	380.7	377.1	373.8
45°	464.3	438.6	417.4	401.1	388.9	378.7	369.3	365.6	357.5	352.6	351.0
47.5°	435.8	412.5	391.7	376.6	364.0	354.6	345.7	337.5	333.4	328.5	326.1
50°	406.8	384.8	365.6	351.0	338.7	328.1	320.0	315.1	309.0	304.5	301.2
52.5°	377.9	357.9	338.7	324.9	314.7	304.1	294.7	289.8	284.1	281.7	279.6
55°	350.6	329.0	312.6	298.8	287.8	278.0	269.4	264.5	260.9	258.0	257.2
57.5°	319.2	301.6	286.2	273.9	262.1	252.7	245.0	240.5	237.2	236.8	234.0
60°	288.6	273.1	259.2	245.8	236.0	227.5	220.9	215.6	212.4	212.0	211.1
62.5°	258.0	243.4	230.7	219.3	210.7	202.6	196.5	190.4	188.7	186.3	184.2
65°	227.9	214.4	203.8	194.4	185.1	178.1	172.0	168.3	163.9	161.4	156.9
67.5°	198.1	187.1	176.9	169.2	161.4	154.5	149.2	143.9	140.6	138.6	134.9
70°	168.8	160.6	150.4	141.9	136.1	130.8	126.8	120.7	118.6	117.0	115.4
72.5°	141.0	134.1	126.0	119.4	113.7	108.8	103.9	101.9	99.9	98.2	97.4
75°	115.4	108.4	101.1	96.2	92.1	88.0	85.6	83.6	82.7	82.3	80.7
77.5°	89.7	85.6	79.5	75.0	72.1	70.5	68.1	67.3	67.7	65.6	65.2
80°	64.8	62.8	57.9	56.3	54.2	52.6	51.4	49.3	47.3	46.5	45.2
82.5°	44.0	42.0	40.8	37.9	36.3	35.5	34.2	33.8	34.6	33.4	33.0
85°	25.7	23.6	22.8	22.4	21.6	22.4	22.0	21.6	21.2	20.8	21.2
87.5°	10.2	10.2	9.8	10.6	9.4	9.8	9.8	9.4	9.4	9.4	9.0
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: P242925

CATALOG NUMBER: S125RDR-S850D930-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	993.0	993.0	993.0	993.0
2.5°	940.8	936.3	935.1	936.7
5°	877.6	873.5	875.6	874.8
7.5°	824.2	818.9	812.8	814.4
10°	767.6	763.5	761.0	763.1
12.5°	719.9	717.8	715.8	714.2
15°	677.5	672.6	670.5	665.2
17.5°	636.7	635.1	629.8	626.1
20°	601.2	599.6	594.3	597.6
22.5°	571.9	567.8	567.0	565.0
25°	544.6	539.3	537.3	534.8
27.5°	516.9	514.0	511.2	510.3
30°	490.0	487.1	485.1	485.1
32.5°	465.9	463.9	461.8	461.4
35°	442.7	439.4	438.6	436.2
37.5°	418.2	415.4	415.4	415.8
40°	395.0	393.0	392.5	389.7
42.5°	370.1	369.3	367.7	366.9
45°	348.1	345.3	345.3	343.2
47.5°	324.9	322.4	322.8	320.4
50°	301.6	300.4	300.0	299.2
52.5°	278.4	278.0	280.0	278.0
55°	258.0	256.8	259.2	256.8
57.5°	234.0	233.2	235.6	234.0
60°	210.3	207.9	209.1	209.5
62.5°	182.2	181.0	181.8	179.4
65°	156.1	154.9	153.3	152.5
67.5°	135.7	132.1	132.1	132.9
70°	112.9	112.9	112.5	112.5
72.5°	97.0	96.6	95.8	95.4
75°	80.7	81.1	80.3	79.9
77.5°	63.2	61.1	62.0	61.1
80°	45.2	44.8	46.1	44.8
82.5°	33.4	33.0	33.4	32.6
85°	21.6	21.2	20.8	21.2
87.5°	9.4	9.0	9.0	9.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)