

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: P242802

Luminaire Tested: **S125DR-S850D927-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242802
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-S850D927-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2633.3 lumens
Efficiency: N/A
Efficacy: 99.7 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

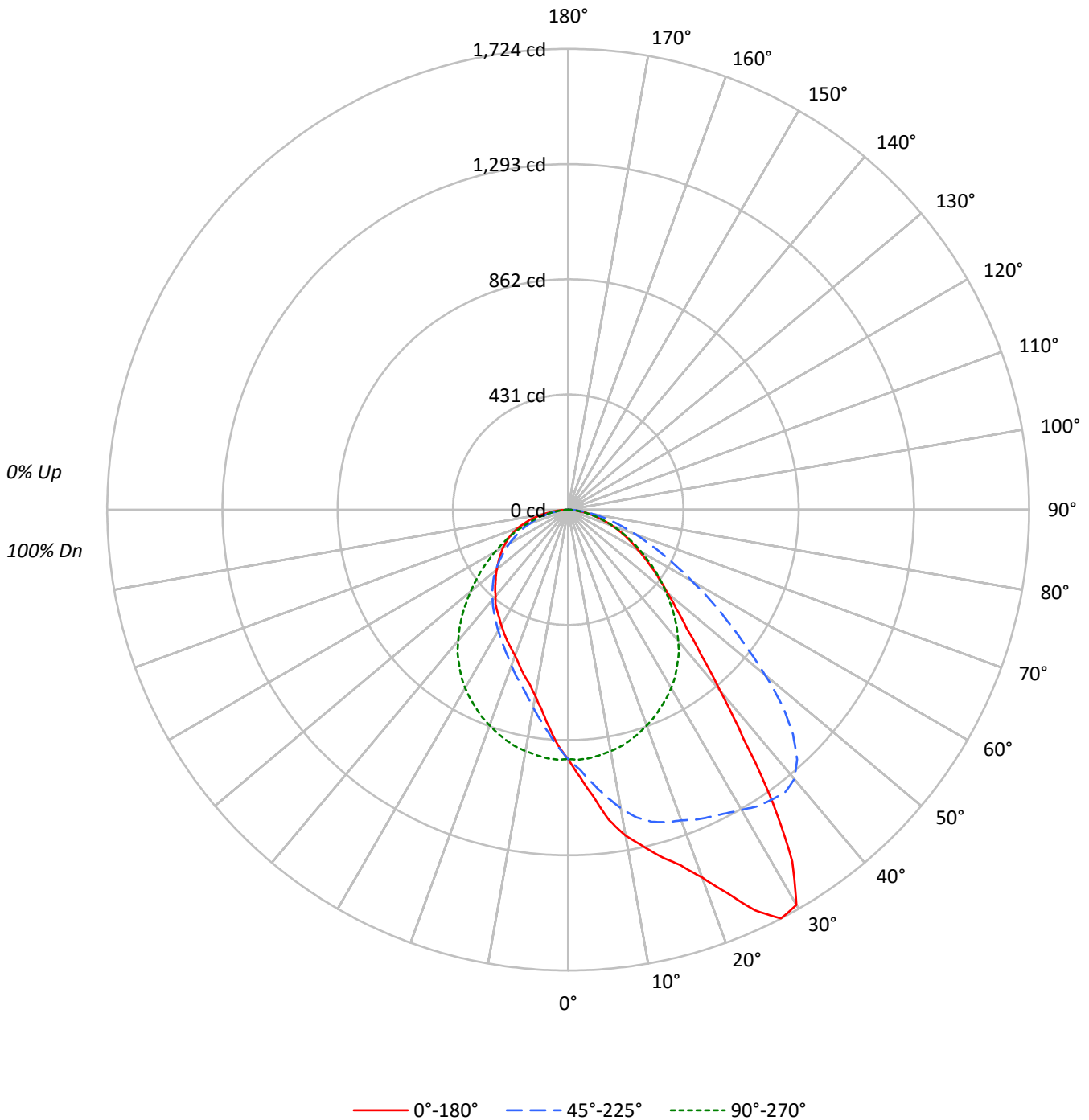
Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85					85			
2	100	92	86	80	98	90	84	79	87	82	78	84	80	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61					61			
4	84	73	64	58	82	71	63	57	69	62	57	67	61	56	64	59	55	53					53			
5	78	65	56	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	6632	6632	6632
5°	7680	6655	5827
10°	8935	6620	5105
15°	9891	6571	4710
20°	11072	6495	4391
25°	12971	6408	4236
30°	14010	6323	4102
35°	11519	6162	4014
40°	8187	5939	3917
45°	6290	5637	3862
50°	5369	5264	3853
55°	4781	4898	3887
60°	4313	4499	3986
65°	3984	4097	4090
70°	3622	3678	4148
75°	3196	3240	4111
80°	2689	2644	3761
85°	2128	1908	3034



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.8	3.4
10°-20°	267.5	10.2
20°-30°	434.5	16.5
30°-40°	531.0	20.2
40°-50°	481.8	18.3
50°-60°	383.7	14.6
60°-70°	267.3	10.1
70°-80°	142.4	5.4
80°-90°	35.3	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°	791.9	30.1
0°-40°	1322.9	50.2
0°-60°	2188.4	83.1
0°-90°	2633.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2633.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	933	933	933	933	933	
5°	1076	1025	933	839	817	108
15°	1344	1208	893	677	640	384
25°	1654	1267	817	568	540	758
35°	1328	1325	710	481	463	815
45°	626	1189	561	398	384	498
55°	386	728	395	303	314	347
65°	237	386	244	205	243	235
75°	116	172	118	108	150	125
85°	26	34	23	25	37	30
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°	933.1	933.1	933.1	933.1	933.1	933.1	933.1	933.1	933.1	933.1	933.1
2.5°	1000.5	998.9	997.3	994.1	996.5	989.8	986.6	981.1	974.3	972.0	969.2
5°	1076.5	1078.5	1080.5	1072.2	1073.0	1067.4	1054.7	1044.4	1036.1	1025.4	1017.9
7.5°	1170.8	1164.8	1165.2	1160.1	1151.0	1143.5	1131.2	1114.2	1098.7	1081.3	1066.2
10°	1238.1	1238.5	1235.0	1228.6	1218.7	1211.6	1194.2	1177.5	1157.3	1133.6	1116.5
12.5°	1288.8	1290.8	1286.0	1276.9	1273.4	1255.2	1242.5	1221.9	1196.9	1179.1	1151.0
15°	1344.3	1339.9	1336.7	1326.1	1317.7	1301.1	1279.3	1258.7	1232.6	1208.4	1184.3
17.5°	1393.4	1396.9	1391.8	1383.9	1359.3	1339.9	1313.0	1286.8	1255.5	1225.4	1197.3
20°	1463.9	1467.1	1457.9	1440.9	1410.0	1390.6	1352.2	1315.8	1278.1	1236.5	1204.9
22.5°	1551.8	1547.9	1534.8	1506.7	1480.9	1440.9	1398.5	1352.2	1302.7	1254.4	1209.6
25°	1654.0	1637.4	1629.8	1597.8	1562.5	1509.8	1452.8	1387.8	1329.2	1267.0	1213.2
27.5°	1723.7	1717.0	1706.3	1680.1	1639.7	1579.9	1512.6	1435.0	1356.2	1280.1	1212.4
30°	1707.1	1707.9	1708.7	1701.5	1677.8	1635.4	1568.4	1483.3	1385.1	1296.7	1215.2
32.5°	1559.7	1577.6	1594.6	1616.8	1631.0	1631.4	1595.8	1520.9	1419.1	1315.8	1213.6
35°	1327.6	1332.0	1376.7	1421.1	1481.3	1528.0	1559.3	1525.3	1440.1	1324.9	1212.4
37.5°	1073.4	1095.1	1128.8	1178.7	1269.0	1342.7	1439.3	1472.6	1432.6	1332.4	1212.0
40°	882.4	902.3	922.5	973.5	1046.8	1141.1	1254.8	1351.8	1374.4	1315.8	1200.1
42.5°	735.1	749.8	772.7	808.0	866.2	947.0	1054.3	1188.6	1280.5	1267.4	1175.1
45°	625.8	635.7	653.1	683.6	728.0	793.3	889.2	1027.8	1148.6	1188.6	1132.8
47.5°	548.2	548.6	562.8	584.6	618.3	678.5	750.2	864.2	994.5	1086.8	1073.8
50°	485.6	483.6	494.3	512.5	537.9	574.7	642.4	729.2	853.1	961.3	991.4
52.5°	431.7	432.5	438.1	450.3	470.5	500.6	547.0	623.0	724.4	836.1	899.5
55°	385.8	384.2	391.7	400.8	416.3	436.9	473.3	533.1	619.1	728.4	802.0
57.5°	341.4	345.8	348.9	355.3	368.7	383.0	415.5	461.4	532.3	629.4	707.4
60°	303.4	307.7	310.1	316.5	326.8	338.6	362.4	398.1	455.5	536.3	613.5
62.5°	269.3	272.5	272.9	278.4	286.4	297.8	315.3	343.8	386.2	454.3	529.5
65°	236.9	236.9	238.4	244.4	248.3	258.6	272.9	294.7	331.1	386.2	450.7
67.5°	205.2	207.1	206.7	209.5	213.1	221.8	232.5	250.7	279.6	321.2	374.7
70°	174.3	175.9	175.5	177.4	181.4	186.6	194.9	211.9	231.3	265.8	310.1
72.5°	146.5	146.9	145.8	148.5	150.5	154.9	164.4	171.5	189.3	217.0	251.5
75°	116.4	117.2	118.0	119.6	122.0	124.4	129.1	138.2	150.1	171.9	195.3
77.5°	92.7	90.7	93.1	92.7	93.9	95.8	100.2	105.4	115.7	130.3	149.7
80°	65.7	66.1	66.1	66.5	68.5	69.7	73.3	76.8	84.4	94.7	107.3
82.5°	43.6	44.8	44.0	44.8	46.3	47.1	48.7	51.5	55.1	62.6	70.9
85°	26.1	24.2	25.0	25.7	25.7	26.1	27.7	28.9	31.3	34.5	38.0
87.5°	9.5	10.3	10.7	10.7	11.1	11.1	12.7	12.7	13.9	15.1	16.6
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	933.1	933.1	933.1	933.1	933.1	933.1	933.1	933.1	933.1	933.1	933.1
2.5°	966.8	964.0	960.9	955.3	948.6	945.0	939.5	935.9	928.8	922.8	916.5
5°	1008.8	998.5	989.0	976.7	963.2	954.5	944.2	932.8	920.9	908.6	895.1
7.5°	1050.8	1033.7	1015.1	995.7	976.7	958.9	942.3	925.2	909.8	890.4	874.1
10°	1093.2	1070.2	1045.6	1016.7	988.6	964.0	939.1	917.3	895.1	871.4	850.4
12.5°	1135.5	1103.1	1065.8	1033.4	998.1	967.2	936.7	907.4	878.1	851.2	825.8
15°	1151.0	1124.1	1092.0	1046.8	1008.8	968.0	929.2	893.1	859.5	830.2	799.3
17.5°	1166.0	1131.6	1097.5	1053.9	1004.4	960.5	916.5	877.3	840.1	803.2	775.1
20°	1169.6	1134.0	1097.9	1055.5	1004.4	952.2	908.2	858.7	817.9	779.5	743.0
22.5°	1168.4	1126.8	1086.8	1042.9	993.3	946.2	890.8	840.1	794.9	757.3	718.9
25°	1159.7	1116.5	1067.4	1023.5	974.3	923.2	869.4	817.1	771.9	728.8	691.1
27.5°	1154.6	1099.9	1046.0	995.3	948.2	901.1	848.8	794.9	745.4	701.4	666.6
30°	1143.1	1081.7	1019.1	965.6	916.9	871.4	822.6	770.4	718.1	675.3	637.3
32.5°	1132.8	1058.7	991.8	932.4	880.1	836.1	792.1	743.0	691.9	648.4	610.3
35°	1118.9	1036.1	960.5	894.7	839.7	794.1	756.5	710.2	663.0	621.0	584.6
37.5°	1102.7	1006.8	926.8	858.3	798.5	751.0	715.3	679.3	632.1	590.9	558.5
40°	1082.9	975.1	889.2	818.7	756.1	706.2	673.7	640.1	602.4	564.8	529.9
42.5°	1057.9	946.6	851.2	773.9	712.1	663.8	629.4	602.0	569.9	535.5	503.8
45°	1026.2	911.0	809.6	728.0	665.4	617.5	582.2	560.8	535.9	502.6	475.3
47.5°	984.2	870.6	766.0	681.6	617.1	572.7	539.1	518.1	499.8	473.7	448.0
50°	924.4	824.2	718.1	634.5	569.9	525.2	494.7	476.1	461.0	442.0	421.0
52.5°	857.5	766.0	670.9	588.6	524.8	480.8	451.1	435.3	423.4	411.1	390.5
55°	785.8	706.6	616.3	537.9	478.9	435.7	409.5	395.3	385.0	374.7	362.0
57.5°	708.6	644.4	561.6	488.4	433.7	393.3	368.7	354.1	345.8	340.2	332.3
60°	626.2	573.1	504.2	438.8	385.8	350.9	327.2	316.5	309.7	305.4	299.8
62.5°	549.7	508.6	446.0	387.8	343.0	310.5	289.9	279.6	273.3	271.7	267.3
65°	474.9	441.2	388.5	339.0	299.4	271.3	253.5	243.6	239.6	237.2	237.6
67.5°	399.6	377.9	333.9	290.3	257.8	232.9	218.2	210.7	208.7	205.2	205.2
70°	331.9	316.5	280.8	244.0	215.9	197.6	185.0	177.0	175.1	173.5	173.1
72.5°	272.1	259.0	229.3	201.6	177.0	161.6	151.7	147.7	144.2	143.4	143.4
75°	213.5	206.0	181.4	158.0	140.6	129.5	122.4	118.0	115.7	115.3	115.7
77.5°	161.2	154.1	137.0	119.6	108.1	99.4	92.7	91.5	88.3	88.7	87.9
80°	114.1	109.7	99.8	86.7	77.6	70.5	67.3	64.6	63.8	62.6	63.8
82.5°	74.9	70.1	64.2	57.0	49.9	46.3	43.2	42.8	42.4	42.0	42.0
85°	40.8	41.2	37.2	30.9	27.7	25.3	23.4	23.4	23.0	22.6	23.0
87.5°	17.4	16.6	15.1	13.9	11.9	10.7	10.3	10.7	9.5	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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	933.1	933.1	933.1	933.1	933.1	933.1	933.1	933.1	933.1	933.1	933.1
2.5°	912.9	908.6	905.0	897.1	892.7	886.8	882.1	887.2	881.7	884.0	880.5
5°	888.4	877.3	869.4	857.9	848.0	838.9	832.1	831.0	827.8	826.2	821.5
7.5°	859.1	846.4	833.3	819.1	807.2	794.5	787.0	779.9	775.5	770.0	765.6
10°	833.7	815.1	799.3	781.1	765.2	751.3	740.3	734.7	729.6	722.0	719.3
12.5°	802.4	783.0	762.8	743.0	728.0	712.1	703.0	693.9	690.8	682.0	681.6
15°	778.7	749.8	730.8	711.0	690.0	677.3	669.4	660.3	656.3	650.4	646.0
17.5°	749.4	723.2	699.5	679.3	660.3	650.0	639.7	633.3	626.6	622.2	615.1
20°	716.9	692.3	668.6	646.8	632.9	620.6	612.7	606.8	599.7	597.7	590.5
22.5°	689.6	661.8	639.3	621.8	606.4	592.1	583.4	579.9	575.5	568.4	568.4
25°	659.5	631.3	611.9	593.7	580.2	567.6	561.6	556.5	551.7	547.4	545.8
27.5°	634.1	609.2	585.4	568.8	557.3	545.4	540.2	533.5	529.9	526.4	521.6
30°	607.2	581.4	561.2	545.4	532.7	522.4	516.9	512.5	509.3	506.2	503.8
32.5°	579.5	556.1	536.7	521.2	508.6	501.4	496.7	493.9	490.3	486.4	483.2
35°	555.7	529.5	510.5	497.1	487.2	481.2	475.7	472.9	468.9	468.9	465.8
37.5°	527.6	504.6	487.6	475.3	466.6	461.0	454.7	453.1	450.3	448.8	447.6
40°	503.0	482.0	466.2	453.9	444.4	440.0	435.3	432.1	430.5	428.6	427.8
42.5°	477.7	457.9	442.8	431.7	423.8	420.2	415.9	413.9	410.3	407.6	407.2
45°	451.9	432.5	418.6	409.5	402.4	398.1	395.3	390.5	388.9	385.8	385.4
47.5°	428.2	409.1	395.3	387.8	381.4	378.2	373.9	368.7	366.8	364.8	364.4
50°	400.8	383.8	371.1	364.0	358.0	352.9	348.5	345.4	344.2	344.2	345.0
52.5°	373.1	359.2	348.9	339.8	334.3	328.7	324.8	323.2	321.2	323.6	325.2
55°	346.2	331.5	323.6	315.3	309.7	303.4	301.4	300.6	299.4	302.6	304.2
57.5°	317.3	307.4	297.8	289.1	284.4	280.4	277.3	276.9	279.2	280.0	284.8
60°	289.9	278.0	269.7	263.4	257.4	255.1	254.3	253.5	255.1	259.4	266.2
62.5°	259.8	250.7	241.6	237.2	233.3	228.9	228.9	229.7	233.3	238.4	245.2
65°	230.5	222.2	216.3	210.7	207.1	204.8	205.6	207.1	210.7	217.4	225.0
67.5°	200.4	194.9	189.3	184.2	180.6	181.0	181.4	183.4	187.7	195.7	202.8
70°	171.5	165.2	160.8	158.8	156.1	154.5	156.8	160.8	164.4	171.5	177.4
72.5°	142.6	137.4	134.3	133.1	132.3	131.1	131.5	135.9	141.0	148.1	155.3
75°	114.1	112.1	109.7	108.1	106.9	107.7	108.5	112.5	116.4	124.0	131.9
77.5°	88.3	85.9	84.4	84.0	83.2	83.6	85.6	88.7	92.7	98.2	104.6
80°	63.0	62.2	61.4	61.0	61.0	61.4	64.6	66.5	70.1	75.3	80.0
82.5°	41.6	41.2	41.2	41.2	41.6	41.6	43.2	45.9	48.7	52.3	56.2
85°	24.2	23.4	24.6	25.0	24.2	25.3	26.1	27.7	28.9	30.9	32.9
87.5°	9.9	10.7	10.3	10.7	10.7	11.5	11.1	12.7	13.5	14.3	13.9
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: P242802

CATALOG NUMBER: S125DR-S850D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	933.1	933.1	933.1	933.1
2.5°	878.1	880.9	878.5	881.7
5°	819.5	815.9	818.3	816.7
7.5°	765.2	762.0	757.3	755.7
10°	714.9	710.6	710.2	707.4
12.5°	678.1	674.1	668.6	667.8
15°	643.6	640.4	637.7	640.1
17.5°	614.3	611.5	610.7	608.4
20°	587.0	585.0	585.8	580.6
22.5°	565.2	560.8	560.0	560.0
25°	542.2	540.2	538.3	540.2
27.5°	522.0	520.0	519.3	519.6
30°	503.8	499.8	500.2	499.8
32.5°	484.0	481.6	480.8	480.0
35°	464.6	464.6	462.6	462.6
37.5°	446.8	446.4	445.2	446.0
40°	426.2	425.8	424.6	422.2
42.5°	406.4	404.8	404.4	404.0
45°	385.4	385.4	384.6	384.2
47.5°	364.8	365.6	367.2	366.8
50°	346.6	347.0	348.1	348.5
52.5°	326.4	329.1	330.7	330.3
55°	307.7	310.5	313.3	313.7
57.5°	289.1	292.7	295.5	296.3
60°	270.1	275.3	278.8	280.4
62.5°	251.9	257.8	261.4	261.4
65°	231.7	237.6	240.8	243.2
67.5°	210.7	216.7	219.8	221.8
70°	187.3	193.3	198.0	199.6
72.5°	164.4	169.5	173.1	175.1
75°	137.0	144.2	147.7	149.7
77.5°	110.9	118.0	120.0	121.2
80°	84.8	88.7	91.5	91.9
82.5°	60.2	63.4	63.8	65.0
85°	35.6	37.2	37.6	37.2
87.5°	14.7	14.3	14.3	15.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)