

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: P242822

Luminaire Tested: **S125DR-S850D930-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242822
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-S850D930-X4F0-XX-UDD-A-W
Description: DEFINE 5 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: 2710.2 lumens
Efficiency: N/A
Efficacy: 102.7 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

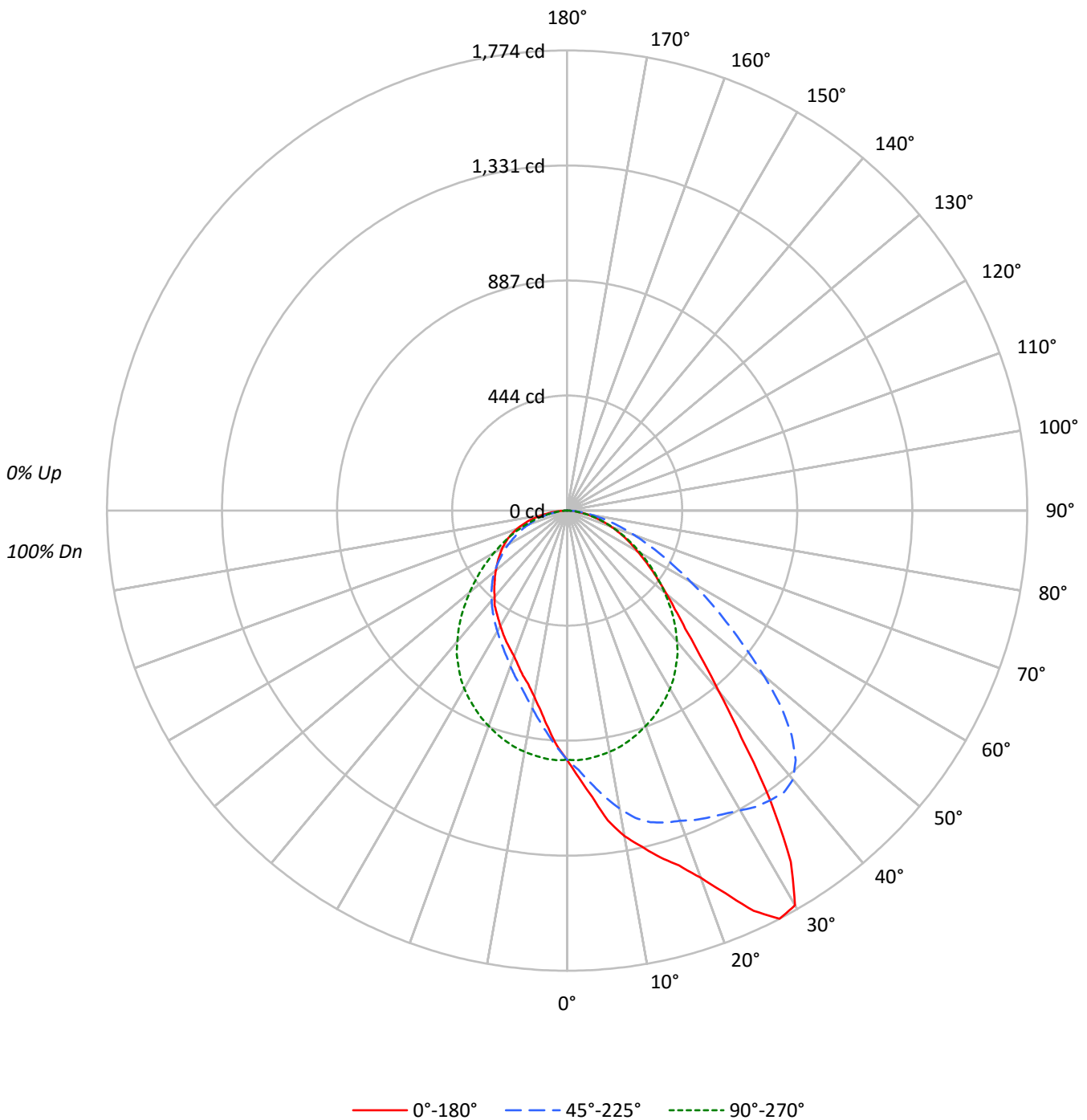
Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	6826	6826	6826
5°	7904	6849	5997
10°	9197	6814	5254
15°	10180	6764	4847
20°	11395	6684	4520
25°	13350	6594	4360
30°	14419	6506	4222
35°	11856	6342	4131
40°	8426	6111	4031
45°	6474	5802	3974
50°	5526	5418	3966
55°	4919	5041	4000
60°	4438	4630	4102
65°	4100	4216	4209
70°	3728	3786	4268
75°	3290	3336	4232
80°	2771	2718	3872
85°	2194	1965	3123



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.4	3.4
10°-20°	275.3	10.2
20°-30°	447.2	16.5
30°-40°	546.5	20.2
40°-50°	495.8	18.3
50°-60°	394.9	14.6
60°-70°	275.1	10.1
70°-80°	146.5	5.4
80°-90°	36.3	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°	815.0	30.1
0°-40°	1361.5	50.2
0°-60°	2252.3	83.1
0°-90°	2710.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2710.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	960	960	960	960	960	
5°	1108	1055	960	863	840	111
15°	1384	1244	919	697	659	395
25°	1702	1304	841	584	556	780
35°	1366	1364	731	495	476	838
45°	644	1223	577	410	395	513
55°	397	750	407	312	323	357
65°	244	397	251	211	250	242
75°	120	177	122	111	154	129
85°	27	36	24	26	38	31
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°	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4
2.5°	1029.7	1028.0	1026.4	1023.2	1025.6	1018.7	1015.4	1009.7	1002.8	1000.3	997.5
5°	1107.9	1110.0	1112.0	1103.5	1104.3	1098.6	1085.5	1074.9	1066.4	1055.4	1047.6
7.5°	1205.0	1198.8	1199.2	1193.9	1184.6	1176.8	1164.2	1146.7	1130.8	1112.8	1097.3
10°	1274.3	1274.7	1271.0	1264.5	1254.3	1246.9	1229.0	1211.9	1191.1	1166.6	1149.1
12.5°	1326.4	1328.5	1323.6	1314.2	1310.5	1291.8	1278.7	1257.5	1231.9	1213.5	1184.6
15°	1383.5	1379.0	1375.8	1364.7	1356.2	1339.1	1316.6	1295.4	1268.5	1243.7	1218.8
17.5°	1434.0	1437.7	1432.4	1424.3	1399.0	1379.0	1351.3	1324.4	1292.2	1261.2	1232.3
20°	1506.6	1509.9	1500.5	1483.0	1451.2	1431.2	1391.7	1354.1	1315.4	1272.6	1240.0
22.5°	1597.1	1593.0	1579.6	1550.6	1524.1	1483.0	1439.3	1391.7	1340.7	1291.0	1244.9
25°	1702.3	1685.1	1677.4	1644.4	1608.1	1553.9	1495.2	1428.3	1368.0	1304.0	1248.6
27.5°	1774.0	1767.1	1756.1	1729.2	1687.6	1626.0	1556.7	1476.8	1395.7	1317.5	1247.8
30°	1756.9	1757.7	1758.5	1751.2	1726.7	1683.1	1614.2	1526.6	1425.5	1334.6	1250.6
32.5°	1605.2	1623.6	1641.1	1663.9	1678.6	1679.0	1642.3	1565.3	1460.5	1354.1	1249.0
35°	1366.4	1370.9	1416.9	1462.6	1524.5	1572.6	1604.8	1569.8	1482.1	1363.5	1247.8
37.5°	1104.7	1127.1	1161.7	1213.1	1306.0	1381.9	1481.3	1515.6	1474.4	1371.3	1247.3
40°	908.2	928.6	949.4	1002.0	1077.4	1174.4	1291.4	1391.2	1414.5	1354.1	1235.1
42.5°	756.6	771.6	795.3	831.6	891.5	974.6	1085.1	1223.3	1317.9	1304.4	1209.4
45°	644.1	654.2	672.2	703.6	749.2	816.5	915.1	1057.8	1182.1	1223.3	1165.8
47.5°	564.2	564.6	579.2	601.7	636.3	698.3	772.1	889.4	1023.6	1118.5	1105.1
50°	499.8	497.7	508.7	527.5	553.6	591.5	661.2	750.4	878.0	989.3	1020.3
52.5°	444.3	445.1	450.8	463.5	484.3	515.2	562.9	641.2	745.6	860.5	925.7
55°	397.0	395.4	403.1	412.5	428.4	449.6	487.1	548.7	637.1	749.6	825.5
57.5°	351.4	355.9	359.1	365.6	379.5	394.2	427.6	474.9	547.9	647.7	728.0
60°	312.2	316.7	319.2	325.7	336.3	348.5	373.0	409.7	468.8	551.9	631.4
62.5°	277.2	280.4	280.9	286.6	294.7	306.5	324.5	353.8	397.4	467.6	545.0
65°	243.8	243.8	245.4	251.5	255.6	266.2	280.9	303.3	340.8	397.4	463.9
67.5°	211.2	213.2	212.8	215.6	219.3	228.3	239.3	258.0	287.8	330.6	385.6
70°	179.4	181.0	180.6	182.6	186.7	192.0	200.6	218.1	238.1	273.5	319.2
72.5°	150.8	151.2	150.0	152.9	154.9	159.4	169.2	176.5	194.8	223.4	258.8
75°	119.8	120.7	121.5	123.1	125.6	128.0	132.9	142.3	154.5	176.9	201.0
77.5°	95.4	93.3	95.8	95.4	96.6	98.6	103.1	108.4	119.0	134.1	154.1
80°	67.7	68.1	68.1	68.5	70.5	71.7	75.4	79.1	86.8	97.4	110.5
82.5°	44.8	46.1	45.2	46.1	47.7	48.5	50.1	53.0	56.7	64.4	73.0
85°	26.9	24.9	25.7	26.5	26.5	26.9	28.5	29.8	32.2	35.5	39.1
87.5°	9.8	10.6	11.0	11.0	11.4	11.4	13.0	13.0	14.3	15.5	17.1
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°	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4
2.5°	995.0	992.2	988.9	983.2	976.3	972.6	966.9	963.2	955.9	949.8	943.3
5°	1038.2	1027.6	1017.9	1005.2	991.4	982.4	971.8	960.0	947.7	935.1	921.2
7.5°	1081.4	1063.9	1044.8	1024.8	1005.2	986.9	969.8	952.2	936.3	916.4	899.6
10°	1125.1	1101.4	1076.1	1046.4	1017.4	992.2	966.5	944.1	921.2	896.8	875.2
12.5°	1168.7	1135.3	1096.9	1063.5	1027.2	995.4	964.0	933.9	903.7	876.0	849.9
15°	1184.6	1156.9	1123.8	1077.4	1038.2	996.2	956.3	919.2	884.6	854.4	822.6
17.5°	1200.1	1164.6	1129.5	1084.7	1033.8	988.5	943.3	902.9	864.6	826.7	797.7
20°	1203.7	1167.0	1130.0	1086.3	1033.8	979.9	934.7	883.7	841.8	802.2	764.7
22.5°	1202.5	1159.7	1118.5	1073.3	1022.3	973.8	916.8	864.6	818.1	779.4	739.8
25°	1193.5	1149.1	1098.6	1053.3	1002.8	950.2	894.7	840.9	794.5	750.0	711.3
27.5°	1188.2	1132.0	1076.6	1024.4	975.9	927.4	873.6	818.1	767.2	721.9	686.0
30°	1176.4	1113.2	1048.8	993.8	943.7	896.8	846.6	792.8	739.0	695.0	655.9
32.5°	1165.8	1089.6	1020.7	959.6	905.8	860.5	815.3	764.7	712.1	667.3	628.2
35°	1151.6	1066.4	988.5	920.8	864.2	817.3	778.6	730.9	682.4	639.2	601.7
37.5°	1134.8	1036.2	953.9	883.3	821.8	772.9	736.2	699.1	650.6	608.2	574.8
40°	1114.5	1003.6	915.1	842.6	778.2	726.8	693.4	658.7	620.0	581.3	545.4
42.5°	1088.8	974.2	876.0	796.5	732.9	683.2	647.7	619.6	586.6	551.1	518.5
45°	1056.2	937.6	833.2	749.2	684.8	635.5	599.2	577.2	551.5	517.3	489.2
47.5°	1013.0	896.0	788.4	701.5	635.1	589.4	554.8	533.2	514.4	487.5	461.0
50°	951.4	848.3	739.0	653.0	586.6	540.5	509.1	490.0	474.5	454.9	433.3
52.5°	882.5	788.4	690.5	605.7	540.1	494.9	464.3	448.0	435.8	423.1	401.9
55°	808.7	727.2	634.3	553.6	492.8	448.4	421.5	406.8	396.2	385.6	372.6
57.5°	729.3	663.2	578.0	502.6	446.4	404.8	379.5	364.4	355.9	350.2	342.0
60°	644.5	589.8	518.9	451.7	397.0	361.2	336.7	325.7	318.8	314.3	308.6
62.5°	565.8	523.4	459.0	399.1	353.0	319.6	298.4	287.8	281.3	279.6	275.2
65°	488.7	454.1	399.9	348.9	308.2	279.2	260.9	250.7	246.6	244.2	244.6
67.5°	411.3	388.9	343.6	298.8	265.4	239.7	224.6	216.9	214.8	211.2	211.2
70°	341.6	325.7	289.0	251.1	222.2	203.4	190.4	182.2	180.2	178.5	178.1
72.5°	280.0	266.6	236.0	207.5	182.2	166.3	156.1	152.0	148.4	147.6	147.6
75°	219.7	212.0	186.7	162.6	144.7	133.3	126.0	121.5	119.0	118.6	119.0
77.5°	165.9	158.6	141.0	123.1	111.3	102.3	95.4	94.2	90.9	91.3	90.5
80°	117.4	112.9	102.7	89.3	79.9	72.6	69.3	66.4	65.6	64.4	65.6
82.5°	77.0	72.2	66.0	58.7	51.4	47.7	44.4	44.0	43.6	43.2	43.2
85°	42.0	42.4	38.3	31.8	28.5	26.1	24.1	24.1	23.6	23.2	23.6
87.5°	17.9	17.1	15.5	14.3	12.2	11.0	10.6	11.0	9.8	9.4	9.8
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°	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4
2.5°	939.6	935.1	931.4	923.3	918.8	912.7	907.8	913.1	907.4	909.8	906.2
5°	914.3	902.9	894.7	882.9	872.7	863.4	856.4	855.2	851.9	850.3	845.4
7.5°	884.2	871.1	857.7	843.0	830.8	817.7	810.0	802.6	798.1	792.4	787.9
10°	858.1	838.9	822.6	803.8	787.5	773.3	761.9	756.2	750.9	743.1	740.3
12.5°	825.9	805.9	785.1	764.7	749.2	732.9	723.5	714.2	710.9	701.9	701.5
15°	801.4	771.6	752.1	731.7	710.1	697.0	688.9	679.5	675.4	669.3	664.8
17.5°	771.2	744.3	719.9	699.1	679.5	668.9	658.3	651.8	644.9	640.4	633.1
20°	737.8	712.5	688.1	665.7	651.4	638.8	630.6	624.5	617.2	615.1	607.8
22.5°	709.7	681.2	657.9	640.0	624.1	609.4	600.4	596.8	592.3	584.9	584.9
25°	678.7	649.8	629.8	611.0	597.2	584.1	578.0	572.7	567.8	563.3	561.7
27.5°	652.6	626.9	602.5	585.4	573.5	561.3	556.0	549.1	545.4	541.7	536.8
30°	624.9	598.4	577.6	561.3	548.3	537.7	532.0	527.5	524.2	521.0	518.5
32.5°	596.4	572.3	552.3	536.4	523.4	516.1	511.2	508.3	504.6	500.6	497.3
35°	571.9	545.0	525.4	511.6	501.4	495.3	489.6	486.7	482.6	482.6	479.4
37.5°	543.0	519.3	501.8	489.2	480.2	474.5	468.0	466.3	463.5	461.8	460.6
40°	517.7	496.1	479.8	467.1	457.4	452.9	448.0	444.7	443.1	441.1	440.2
42.5°	491.6	471.2	455.7	444.3	436.2	432.5	428.0	426.0	422.3	419.5	419.0
45°	465.1	445.1	430.9	421.5	414.2	409.7	406.8	401.9	400.3	397.0	396.6
47.5°	440.6	421.1	406.8	399.1	392.5	389.3	384.8	379.5	377.5	375.4	375.0
50°	412.5	395.0	381.9	374.6	368.5	363.2	358.7	355.5	354.2	354.2	355.0
52.5°	384.0	369.7	359.1	349.7	344.0	338.3	334.3	332.6	330.6	333.0	334.7
55°	356.3	341.2	333.0	324.5	318.8	312.2	310.2	309.4	308.2	311.4	313.1
57.5°	326.5	316.3	306.5	297.6	292.7	288.6	285.3	284.9	287.4	288.2	293.1
60°	298.4	286.2	277.6	271.1	265.0	262.5	261.7	260.9	262.5	267.0	273.9
62.5°	267.4	258.0	248.7	244.2	240.1	235.6	235.6	236.4	240.1	245.4	252.3
65°	237.2	228.7	222.6	216.9	213.2	210.7	211.6	213.2	216.9	223.8	231.5
67.5°	206.3	200.6	194.8	189.5	185.9	186.3	186.7	188.7	193.2	201.4	208.7
70°	176.5	170.0	165.5	163.5	160.6	159.0	161.4	165.5	169.2	176.5	182.6
72.5°	146.7	141.4	138.2	137.0	136.1	134.9	135.3	139.8	145.1	152.5	159.8
75°	117.4	115.4	112.9	111.3	110.1	110.9	111.7	115.8	119.8	127.6	135.7
77.5°	90.9	88.5	86.8	86.4	85.6	86.0	88.0	91.3	95.4	101.1	107.6
80°	64.8	64.0	63.2	62.8	62.8	63.2	66.4	68.5	72.2	77.4	82.3
82.5°	42.8	42.4	42.4	42.4	42.8	42.8	44.4	47.3	50.1	53.8	57.9
85°	24.9	24.1	25.3	25.7	24.9	26.1	26.9	28.5	29.8	31.8	33.8
87.5°	10.2	11.0	10.6	11.0	11.0	11.8	11.4	13.0	13.9	14.7	14.3
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: P242822

CATALOG NUMBER: S125DR-S850D930-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	960.4	960.4	960.4	960.4
2.5°	903.7	906.6	904.1	907.4
5°	843.4	839.7	842.2	840.5
7.5°	787.5	784.3	779.4	777.8
10°	735.8	731.3	730.9	728.0
12.5°	697.9	693.8	688.1	687.3
15°	662.4	659.1	656.3	658.7
17.5°	632.2	629.4	628.6	626.1
20°	604.1	602.1	602.9	597.6
22.5°	581.7	577.2	576.4	576.4
25°	558.0	556.0	554.0	556.0
27.5°	537.3	535.2	534.4	534.8
30°	518.5	514.4	514.8	514.4
32.5°	498.1	495.7	494.9	494.0
35°	478.2	478.2	476.1	476.1
37.5°	459.8	459.4	458.2	459.0
40°	438.6	438.2	437.0	434.5
42.5°	418.2	416.6	416.2	415.8
45°	396.6	396.6	395.8	395.4
47.5°	375.4	376.2	377.9	377.5
50°	356.7	357.1	358.3	358.7
52.5°	335.9	338.7	340.4	340.0
55°	316.7	319.6	322.4	322.8
57.5°	297.6	301.2	304.1	304.9
60°	278.0	283.3	287.0	288.6
62.5°	259.3	265.4	269.0	269.0
65°	238.5	244.6	247.8	250.3
67.5°	216.9	223.0	226.2	228.3
70°	192.8	198.9	203.8	205.4
72.5°	169.2	174.5	178.1	180.2
75°	141.0	148.4	152.0	154.1
77.5°	114.1	121.5	123.5	124.7
80°	87.2	91.3	94.2	94.6
82.5°	62.0	65.2	65.6	66.9
85°	36.7	38.3	38.7	38.3
87.5°	15.1	14.7	14.7	15.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)