

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: P243687

Luminaire Tested: **S125DR-H850D935-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243687
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-61)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DR-H850D935-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2824.9 lumens
Efficiency: N/A
Efficacy: 119.7 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

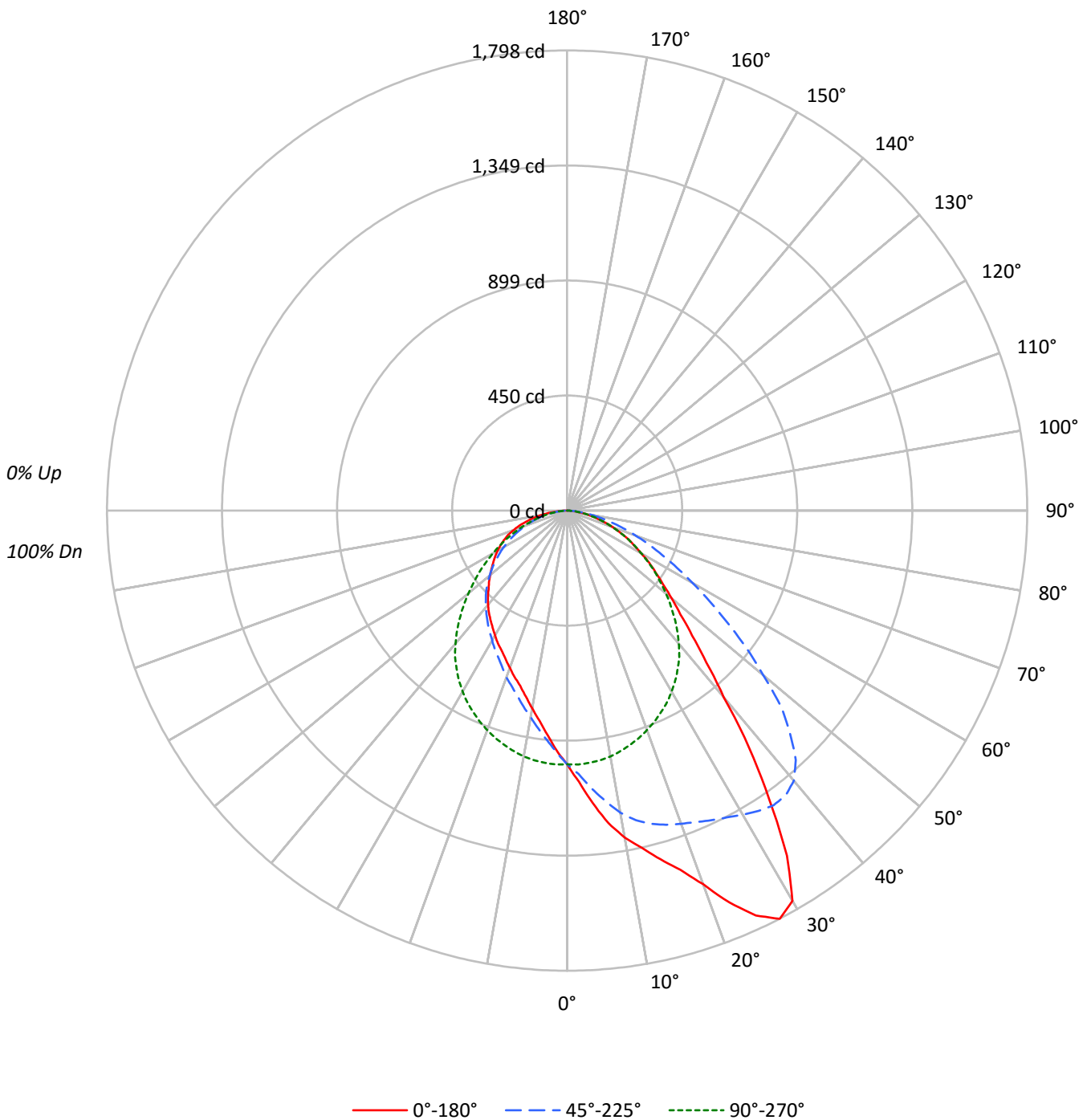
Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	97	90	84	79	87	82	78		84	79	76		81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66		74	69	65		72	67	63	61
4	84	73	64	58	82	71	63	57	69	62	56		66	61	56		64	59	55	53
5	78	65	56	50	75	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	40
7	67	53	45	39	65	53	44	39	51	44	38		50	43	38		48	42	38	36
8	62	49	40	35	60	48	40	35	47	40	34		46	39	34		44	38	34	32
9	58	45	37	31	57	44	36	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°	7045	7045	7045
5°	8184	7060	6274
10°	9363	7037	5662
15°	10381	6974	5217
20°	11753	6904	4949
25°	13686	6815	4741
30°	14448	6703	4625
35°	11947	6539	4527
40°	8838	6303	4460
45°	6948	5959	4363
50°	5885	5573	4347
55°	5239	5189	4363
60°	4753	4765	4456
65°	4408	4366	4583
70°	3959	3909	4611
75°	3378	3433	4547
80°	2763	2812	4244
85°	1900	1998	3604



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.7	3.4
10°-20°	286.1	10.1
20°-30°	465.2	16.5
30°-40°	565.9	20.0
40°-50°	517.8	18.3
50°-60°	414.4	14.7
60°-70°	288.6	10.2
70°-80°	153.4	5.4
80°-90°	37.7	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°	847.0	30.0
0°-40°	1412.9	50.0
0°-60°	2345.2	83.0
0°-90°	2824.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2824.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	991	991	991	991	991	
5°	1147	1089	990	900	879	114
15°	1411	1267	948	750	709	405
25°	1745	1335	869	635	604	797
35°	1377	1406	754	540	522	854
45°	691	1232	593	447	434	545
55°	423	765	419	342	352	381
65°	262	408	260	229	272	258
75°	123	181	125	120	166	133
85°	23	35	24	28	44	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°	991.2	991.2	991.2	991.2	991.2	991.2	991.2	991.2	991.2	991.2	991.2
2.5°	1061.1	1056.7	1055.5	1055.9	1053.5	1051.5	1046.6	1040.2	1035.8	1030.2	1028.5
5°	1147.1	1136.3	1138.3	1135.1	1129.8	1123.0	1117.0	1107.3	1098.1	1089.2	1077.6
7.5°	1231.5	1229.5	1223.9	1223.1	1214.6	1203.0	1190.9	1177.7	1158.0	1144.3	1128.6
10°	1297.4	1301.5	1293.4	1293.8	1279.0	1267.3	1256.8	1239.6	1217.5	1199.0	1176.1
12.5°	1350.5	1352.1	1350.9	1345.7	1336.0	1316.3	1306.3	1288.2	1264.1	1238.8	1221.1
15°	1410.8	1406.4	1399.5	1393.1	1379.0	1365.0	1344.1	1322.8	1292.2	1266.9	1241.2
17.5°	1471.1	1470.3	1461.8	1448.2	1430.5	1412.0	1380.6	1353.3	1320.8	1287.4	1255.2
20°	1553.9	1549.5	1537.0	1521.3	1488.8	1462.6	1423.6	1386.3	1343.7	1301.9	1264.5
22.5°	1657.6	1643.1	1630.6	1606.5	1569.1	1523.7	1479.9	1425.7	1366.2	1317.1	1270.5
25°	1745.2	1738.8	1725.5	1698.6	1656.0	1601.3	1536.2	1474.7	1399.9	1334.8	1274.1
27.5°	1798.2	1795.4	1787.4	1762.1	1726.7	1672.4	1602.9	1524.5	1439.7	1351.7	1279.0
30°	1760.5	1760.9	1765.3	1762.5	1746.8	1711.8	1649.9	1571.2	1473.1	1371.8	1280.2
32.5°	1598.1	1608.9	1643.5	1660.0	1682.1	1689.3	1661.6	1596.1	1501.2	1391.9	1284.2
35°	1377.0	1403.6	1426.9	1475.1	1532.6	1579.6	1606.9	1585.6	1512.9	1405.6	1286.2
37.5°	1168.8	1166.8	1203.0	1255.2	1316.3	1396.3	1473.9	1516.5	1492.8	1402.7	1282.6
40°	952.6	971.1	993.6	1039.8	1111.3	1209.8	1302.3	1393.5	1426.5	1377.8	1268.5
42.5°	804.7	813.1	835.6	871.8	923.2	1023.7	1115.0	1232.3	1316.7	1322.4	1237.6
45°	691.3	700.6	707.0	742.8	790.6	858.1	951.8	1069.9	1183.3	1232.3	1187.3
47.5°	600.5	605.7	619.8	641.5	672.8	732.7	807.5	914.8	1038.2	1133.5	1118.2
50°	532.2	536.2	547.4	559.5	585.2	629.4	689.7	777.7	896.3	1000.4	1034.6
52.5°	471.9	477.1	482.7	494.4	518.1	547.8	596.9	665.6	775.7	882.2	936.5
55°	422.8	424.8	430.9	439.7	457.8	480.3	519.3	581.6	658.8	764.9	839.6
57.5°	380.2	378.2	384.7	390.7	402.7	421.6	449.8	496.0	569.5	660.0	737.9
60°	334.4	336.4	341.2	346.1	354.5	371.0	393.1	430.1	483.9	565.1	644.7
62.5°	295.0	296.6	297.8	304.7	312.3	324.0	342.0	372.2	416.8	483.9	555.1
65°	262.1	259.2	260.9	265.7	271.7	281.4	298.2	320.3	353.7	408.4	467.4
67.5°	223.5	224.3	224.7	227.5	232.7	242.0	254.0	272.1	299.4	342.4	394.3
70°	190.5	190.9	191.3	193.7	198.2	203.4	211.8	225.9	249.2	282.6	323.2
72.5°	156.8	158.4	158.4	160.4	163.6	166.4	174.4	186.1	203.8	230.3	264.5
75°	123.0	125.8	126.6	129.0	131.8	132.6	138.7	147.9	159.2	180.9	207.8
77.5°	95.7	95.7	97.3	100.1	100.1	102.5	108.9	112.9	121.8	136.7	157.2
80°	67.5	68.7	68.7	69.5	71.1	73.2	76.0	79.6	87.2	98.1	108.9
82.5°	44.2	44.6	45.0	47.0	46.2	48.2	49.4	53.9	57.5	62.7	69.5
85°	23.3	23.3	23.7	24.9	26.1	26.5	27.3	29.3	32.2	34.6	38.6
87.5°	9.6	9.2	9.2	10.0	10.0	10.5	10.9	11.7	13.3	13.3	14.9
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°	991.2	991.2	991.2	991.2	991.2	991.2	991.2	991.2	991.2	991.2	991.2
2.5°	1027.3	1024.1	1018.5	1013.7	1007.6	1003.2	998.8	993.2	987.5	981.5	975.1
5°	1068.3	1058.7	1047.8	1037.0	1024.1	1013.7	1002.4	989.6	978.7	966.6	953.8
7.5°	1115.4	1098.5	1079.6	1058.3	1038.2	1020.1	1001.6	983.9	967.9	949.8	932.1
10°	1160.8	1131.4	1107.7	1078.8	1050.3	1023.7	998.4	975.1	951.8	929.3	907.6
12.5°	1191.7	1158.4	1128.6	1095.3	1061.9	1028.5	995.2	963.0	935.3	908.0	885.1
15°	1213.0	1189.7	1150.3	1110.1	1066.3	1022.9	985.1	947.8	914.8	883.0	855.7
17.5°	1226.3	1196.2	1157.6	1115.4	1067.1	1021.7	976.3	931.7	893.9	859.7	828.8
20°	1229.9	1194.5	1154.4	1110.5	1062.3	1012.5	961.4	912.8	871.8	832.8	801.5
22.5°	1226.3	1185.3	1142.3	1099.7	1049.0	998.4	944.9	891.9	844.9	804.7	771.7
25°	1220.3	1170.8	1125.8	1075.6	1028.5	980.3	925.3	869.0	819.9	778.1	741.2
27.5°	1212.6	1156.0	1100.5	1051.1	1000.0	952.6	901.9	844.5	793.4	747.6	713.0
30°	1203.8	1136.3	1074.8	1016.1	967.9	920.4	871.0	816.7	765.3	721.5	684.1
32.5°	1193.7	1115.4	1043.0	979.9	928.5	884.7	838.4	786.6	735.9	688.9	656.4
35°	1179.7	1086.8	1008.9	940.5	887.1	839.6	799.0	753.6	703.4	659.6	625.8
37.5°	1163.2	1061.5	974.3	900.3	842.0	793.4	756.0	719.1	672.0	629.8	597.3
40°	1141.1	1031.0	937.7	857.7	795.4	747.6	711.0	679.3	640.3	597.7	568.3
42.5°	1112.1	997.2	896.3	811.1	750.8	699.8	665.6	636.7	603.3	566.3	537.4
45°	1079.2	958.6	850.1	766.5	701.0	652.3	619.0	592.9	567.5	534.6	507.6
47.5°	1027.7	913.2	808.3	715.8	651.5	604.5	573.2	548.2	529.3	503.2	476.7
50°	966.6	861.7	758.8	666.0	600.9	555.5	525.7	504.0	487.9	467.9	447.8
52.5°	899.5	803.9	704.6	617.8	552.7	509.7	478.3	459.0	448.6	432.5	416.8
55°	821.1	738.8	646.3	567.1	503.2	459.4	432.5	418.8	407.2	399.1	385.1
57.5°	742.4	672.8	590.4	512.1	453.4	414.4	390.3	375.0	366.6	360.9	350.9
60°	656.4	601.7	526.1	458.2	406.0	369.0	347.7	335.2	327.6	324.4	317.5
62.5°	574.4	532.6	463.8	407.2	360.5	328.0	306.7	296.6	291.8	288.2	284.2
65°	493.6	460.6	406.4	353.3	313.9	284.6	267.7	259.6	256.0	252.0	251.6
67.5°	420.8	390.7	347.3	303.9	270.9	246.0	231.1	223.1	219.1	219.5	217.4
70°	349.3	326.0	290.6	255.2	227.1	207.4	193.3	188.1	186.5	186.1	184.5
72.5°	282.6	269.3	238.3	208.6	186.5	171.2	160.0	155.5	153.5	152.7	152.7
75°	223.9	214.2	187.7	165.2	148.3	135.9	128.2	125.0	122.2	123.8	122.6
77.5°	168.0	160.0	141.9	125.8	112.9	102.5	98.9	96.1	94.5	94.1	95.7
80°	118.2	113.3	102.1	89.2	79.6	73.6	71.1	68.7	67.5	66.7	67.5
82.5°	76.0	73.2	65.1	57.5	51.8	48.6	46.2	45.0	43.0	43.4	44.2
85°	41.4	40.6	35.4	33.0	27.7	27.3	25.7	24.5	24.9	24.1	25.3
87.5°	16.9	16.1	14.9	13.7	12.1	10.9	10.0	10.9	9.6	10.9	10.5
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°	991.2	991.2	991.2	991.2	991.2	991.2	991.2	991.2	991.2	991.2	991.2
2.5°	971.9	967.5	962.2	957.4	950.2	945.3	942.9	943.7	940.9	940.1	939.7
5°	946.2	936.1	926.5	918.4	910.0	900.3	893.5	891.5	890.7	888.7	884.3
7.5°	919.6	906.8	894.3	882.6	870.6	859.3	852.5	846.9	843.7	838.0	836.8
10°	891.5	875.8	862.5	845.7	831.2	819.5	810.7	805.9	803.1	797.8	793.4
12.5°	864.6	848.1	827.6	812.3	797.0	785.0	774.9	766.9	764.9	758.0	754.4
15°	835.6	815.5	797.0	779.3	764.9	749.6	743.6	736.3	729.1	723.1	721.9
17.5°	807.9	783.8	765.7	748.4	730.7	719.5	711.4	706.6	701.0	697.8	692.1
20°	774.5	754.8	734.7	718.7	703.4	693.7	682.9	678.5	674.4	666.8	664.4
22.5°	746.4	722.7	705.8	689.7	676.1	662.4	654.7	650.3	644.3	640.3	637.1
25°	717.0	697.4	676.1	660.0	648.3	634.7	629.4	623.8	618.6	615.0	611.7
27.5°	688.5	666.8	649.5	633.4	621.4	611.7	604.5	598.5	594.9	592.0	590.0
30°	658.8	638.7	622.6	607.7	594.1	586.0	579.2	576.8	572.8	570.7	567.5
32.5°	631.8	611.3	596.1	583.2	571.1	563.1	559.1	555.5	551.5	547.8	547.4
35°	601.3	583.6	569.5	555.5	546.6	540.2	535.8	532.2	528.9	526.1	524.5
37.5°	574.4	557.5	541.8	531.8	522.1	516.5	511.7	510.5	507.2	507.6	505.2
40°	545.4	530.1	516.9	506.8	500.4	494.4	491.2	487.1	485.1	485.5	483.5
42.5°	517.3	503.2	491.2	481.9	475.1	470.7	467.9	464.6	462.2	460.6	460.2
45°	488.8	476.3	466.2	457.0	451.4	447.4	443.7	439.7	437.7	436.9	436.5
47.5°	460.6	449.4	438.5	432.1	426.9	423.2	419.6	416.4	414.8	413.6	411.6
50°	431.7	420.4	412.8	404.7	400.3	395.5	391.5	389.9	387.9	387.5	389.5
52.5°	401.5	392.7	385.9	379.4	374.2	369.0	365.0	362.9	364.2	364.2	366.6
55°	373.0	363.7	357.3	352.1	346.5	341.6	337.6	337.6	337.6	340.0	343.3
57.5°	341.2	333.2	328.4	322.4	317.1	313.9	311.1	310.7	312.3	316.3	319.9
60°	309.1	303.5	298.2	293.4	288.2	285.8	285.4	284.6	287.0	291.0	298.6
62.5°	277.3	273.7	267.3	264.9	260.5	257.6	257.6	258.4	262.1	268.5	275.3
65°	246.8	241.6	236.7	234.3	231.5	229.1	229.1	232.3	237.5	243.6	252.0
67.5°	215.4	211.0	207.8	205.4	202.2	201.0	202.2	205.8	212.2	218.2	227.1
70°	181.7	180.9	178.1	174.8	173.2	173.2	174.4	178.5	183.3	192.5	200.2
72.5°	150.7	150.7	149.1	147.1	145.9	147.1	147.9	151.9	158.0	166.0	174.4
75°	122.6	121.4	120.2	119.4	119.0	119.8	121.0	124.2	131.4	139.1	145.9
77.5°	94.9	94.1	92.8	93.7	93.7	94.1	97.7	101.3	105.3	111.3	118.6
80°	68.3	68.7	67.5	67.1	69.1	69.9	72.7	75.6	78.4	85.2	90.4
82.5°	45.0	45.8	45.4	46.2	47.0	47.0	50.2	53.1	55.5	60.3	64.3
85°	25.7	26.1	26.1	27.3	28.1	27.7	30.5	32.2	33.4	37.0	39.4
87.5°	11.3	11.7	12.1	12.1	12.1	13.7	14.1	14.9	15.3	16.1	17.3
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: P243687

CATALOG NUMBER: S125DR-H850D935-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	991.2	991.2	991.2	991.2
2.5°	936.1	935.7	937.7	938.9
5°	881.4	880.2	878.6	879.4
7.5°	832.8	829.6	828.8	828.8
10°	789.8	786.6	785.8	784.6
12.5°	753.2	748.4	746.4	744.4
15°	718.7	717.9	713.4	709.0
17.5°	686.9	688.1	683.7	681.7
20°	660.4	656.8	655.2	654.3
22.5°	633.4	630.6	630.6	627.8
25°	609.3	606.9	607.3	604.5
27.5°	586.8	586.4	586.0	585.2
30°	565.9	564.3	562.7	563.5
32.5°	545.8	543.4	542.2	541.8
35°	524.9	524.1	522.5	521.7
37.5°	504.4	504.8	502.8	502.4
40°	482.3	481.9	481.5	480.7
42.5°	459.0	457.8	458.6	458.2
45°	435.7	434.5	435.3	434.1
47.5°	412.8	413.6	413.6	414.0
50°	390.3	391.9	391.9	393.1
52.5°	369.4	372.6	372.6	372.2
55°	346.9	350.5	351.7	352.1
57.5°	325.6	329.2	332.8	333.6
60°	302.7	309.1	312.7	313.5
62.5°	282.2	288.2	293.0	293.4
65°	259.2	266.5	270.9	272.5
67.5°	235.9	241.6	247.6	250.0
70°	209.4	216.2	220.3	221.9
72.5°	181.7	189.3	194.5	195.3
75°	155.1	160.8	164.8	165.6
77.5°	125.0	130.6	134.2	135.0
80°	94.9	99.7	102.1	103.7
82.5°	67.1	70.3	71.5	73.2
85°	41.4	43.8	44.2	44.2
87.5°	18.1	18.5	18.5	19.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)