

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: P243274

Luminaire Tested: **S122RDR-H675D935-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243274
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-68)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDR-H675D935-X4F0-XX-UDD-A-W
Description: DEFINE 2 REGRESSED 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: 2070.3 lumens
Efficiency: N/A
Efficacy: 87.7 lumens/watt
Spacing Criteria (0/90/45): 0.81 / 1.17 / 0.99
Luminous Opening: Rectangular (W 3.88' x L: 0.15' x H: 0')
CIE Type: Direct

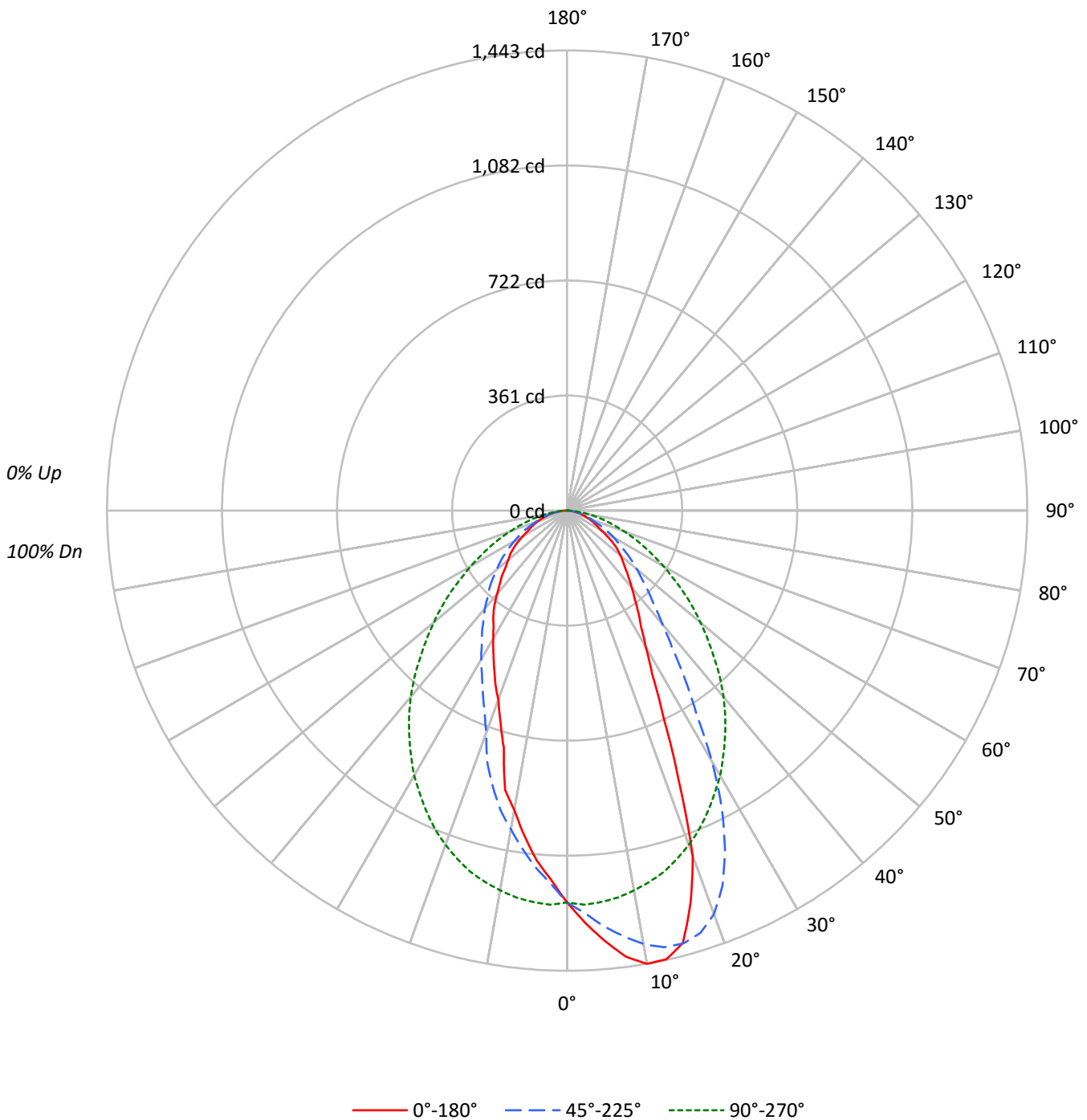
Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87
2	102	95	89	84	100	93	88	83	90	85	81	86	83	79	84	80	78	76
3	94	85	78	72	92	84	77	72	81	75	70	78	73	69	76	72	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	65	61	69	64	60	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38
9	62	50	43	38	61	50	42	37	48	42	37	47	41	37	46	41	37	35
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	44	38	34	33

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	23398	23398	23398
5°	25901	23556	21029
10°	27912	23394	18442
15°	27665	23121	15157
20°	23335	22609	12792
25°	15004	21914	11387
30°	10839	21104	10203
35°	9029	20086	9385
40°	7835	18970	8496
45°	6996	17552	7774
50°	6457	16165	7147
55°	5795	14765	6808
60°	4625	13291	6126
65°	4241	11939	5652
70°	3893	10542	5374
75°	3547	9229	5085
80°	3082	7667	4761
85°	2470	6141	4393



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.3	5.6
10°-20°	318.2	15.4
20°-30°	401.0	19.4
30°-40°	385.0	18.6
40°-50°	331.6	16.0
50°-60°	253.5	12.2
60°-70°	161.3	7.8
70°-80°	81.8	3.9
80°-90°	21.6	1.0
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°	835.5	40.4
0°-40°	1220.5	59.0
0°-60°	1805.6	87.2
0°-90°	2070.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2070.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1228	1228	1228	1228	1228	
5°	1355	1307	1232	1124	1100	132
15°	1403	1406	1172	898	769	380
25°	714	1171	1043	626	542	341
35°	388	643	864	466	404	245
45°	260	360	652	345	289	202
55°	174	220	445	240	205	154
65°	94	121	265	147	125	94
75°	48	55	125	76	69	51
85°	11	13	28	21	20	13
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°	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4
2.5°	1293.5	1295.1	1295.9	1293.9	1289.5	1289.9	1285.9	1279.0	1270.6	1263.0	1267.4
5°	1354.6	1356.6	1356.2	1352.6	1348.2	1344.2	1337.3	1327.7	1317.6	1307.2	1305.2
7.5°	1410.9	1415.3	1414.1	1407.3	1404.1	1398.4	1386.8	1375.9	1360.6	1345.8	1339.7
10°	1443.1	1446.7	1444.7	1443.1	1439.4	1433.8	1423.4	1412.9	1396.0	1380.3	1371.5
12.5°	1440.6	1443.9	1445.5	1447.1	1445.9	1443.9	1439.4	1430.6	1416.9	1402.5	1391.2
15°	1402.9	1397.6	1394.0	1404.1	1407.7	1421.3	1424.6	1425.8	1416.5	1405.7	1402.9
17.5°	1287.9	1289.5	1317.2	1312.8	1318.8	1352.2	1365.5	1383.6	1391.2	1388.8	1393.6
20°	1151.2	1132.3	1146.0	1166.1	1185.0	1233.6	1265.8	1294.3	1327.3	1345.8	1363.5
22.5°	913.3	913.7	946.6	979.6	1022.2	1074.9	1123.9	1178.6	1237.2	1273.0	1314.4
25°	713.9	733.2	747.7	762.1	824.0	874.7	956.3	1022.6	1103.4	1171.3	1240.9
27.5°	577.2	597.3	599.7	632.3	668.9	709.9	763.3	867.8	950.6	1050.3	1136.4
30°	492.8	496.8	505.3	513.7	540.6	578.8	636.3	701.8	793.9	907.6	1023.0
32.5°	431.7	430.9	439.3	452.6	467.5	493.2	525.8	580.0	663.2	753.7	888.3
35°	388.3	387.1	393.1	397.9	406.8	427.7	457.0	492.8	552.7	642.7	747.3
37.5°	347.3	349.7	353.3	358.6	370.2	383.5	403.2	432.9	480.3	539.8	639.9
40°	315.1	318.0	322.0	325.6	334.4	345.3	358.6	382.3	414.0	465.9	542.7
42.5°	286.2	287.4	290.6	295.8	302.3	311.9	324.8	342.9	369.4	405.6	472.7
45°	259.7	259.7	263.3	268.1	272.1	281.4	291.4	308.7	329.2	360.2	408.0
47.5°	237.2	237.6	239.6	240.4	244.8	253.2	264.1	277.8	294.6	318.4	363.0
50°	217.9	219.5	220.3	221.5	223.1	227.5	235.1	245.6	264.1	285.0	314.7
52.5°	197.8	199.8	201.4	203.8	206.2	206.6	212.2	219.1	231.9	253.6	277.8
55°	174.5	176.1	179.3	181.3	184.5	187.3	191.7	196.6	205.0	219.5	244.4
57.5°	147.9	148.3	151.5	153.6	160.0	166.4	170.4	175.7	181.7	191.7	210.6
60°	121.4	122.6	123.0	124.6	130.2	137.1	145.1	153.1	159.6	168.4	181.7
62.5°	106.9	107.3	108.5	110.1	110.5	113.8	116.2	125.8	137.1	145.9	154.8
65°	94.1	94.5	94.5	95.7	97.3	98.9	100.1	103.7	108.5	121.0	131.8
67.5°	82.0	81.6	82.4	83.6	84.0	85.2	87.2	89.2	92.5	96.1	107.3
70°	69.9	69.9	69.5	70.7	72.0	72.4	73.6	75.6	77.6	80.8	84.4
72.5°	57.9	58.7	58.7	59.5	59.9	61.5	62.3	63.1	65.9	67.5	70.3
75°	48.2	47.8	49.0	48.6	49.4	49.8	51.0	52.3	53.1	54.7	57.1
77.5°	38.6	37.8	38.6	38.2	39.0	39.8	39.8	41.0	41.8	43.4	44.6
80°	28.1	28.1	28.5	29.3	29.3	29.7	30.5	30.1	31.8	32.2	33.4
82.5°	19.3	19.7	19.7	20.1	20.1	20.1	20.9	20.9	21.3	22.1	22.5
85°	11.3	10.9	11.3	11.3	11.3	11.7	12.1	11.7	12.5	13.3	13.3
87.5°	3.2	3.2	3.6	4.0	4.0	4.4	4.4	4.4	4.8	4.8	5.2
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°	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4
2.5°	1267.4	1265.4	1260.2	1255.3	1246.5	1239.3	1236.8	1237.2	1226.4	1215.1	1211.9
5°	1302.4	1295.1	1284.7	1273.8	1260.6	1247.3	1238.9	1232.0	1215.1	1198.3	1188.6
7.5°	1331.3	1319.6	1304.4	1287.1	1269.8	1250.1	1236.4	1223.6	1200.3	1177.4	1164.9
10°	1357.8	1341.4	1320.5	1297.9	1275.0	1249.3	1229.6	1209.5	1180.2	1154.4	1133.1
12.5°	1383.2	1357.0	1335.7	1303.2	1277.8	1242.9	1215.9	1192.6	1158.1	1125.9	1102.2
15°	1385.6	1367.1	1338.5	1304.8	1266.2	1233.6	1199.9	1172.5	1133.1	1097.4	1056.8
17.5°	1385.2	1370.7	1341.0	1306.4	1260.2	1217.5	1181.0	1145.2	1100.2	1058.4	1023.4
20°	1370.7	1360.6	1334.9	1293.9	1247.3	1198.3	1157.7	1115.4	1062.8	1019.8	981.6
22.5°	1336.5	1338.9	1318.8	1282.3	1232.0	1177.4	1130.3	1081.7	1027.8	978.4	930.1
25°	1278.6	1304.4	1298.3	1264.2	1210.7	1150.8	1097.4	1042.7	984.8	932.2	887.5
27.5°	1206.7	1254.9	1265.4	1238.9	1187.8	1120.7	1060.0	1000.5	941.4	884.7	838.9
30°	1121.5	1193.4	1220.0	1205.5	1158.5	1088.1	1017.8	959.5	894.8	834.5	786.2
32.5°	1014.2	1115.0	1161.7	1166.1	1127.5	1051.9	974.0	911.3	844.9	787.8	736.0
35°	894.4	1018.2	1094.1	1114.6	1086.9	1012.1	930.1	863.8	793.1	735.6	683.3
37.5°	773.8	919.3	1019.0	1058.8	1040.3	967.9	881.1	814.0	744.0	685.3	636.3
40°	662.8	801.1	930.5	992.9	987.2	920.1	832.5	762.9	691.8	637.5	583.7
42.5°	563.6	697.0	839.3	922.9	927.3	868.6	779.0	709.1	640.7	586.9	530.6
45°	485.2	602.5	743.6	843.3	862.6	814.4	723.5	651.6	589.3	538.6	482.4
47.5°	422.5	513.7	644.7	761.7	795.9	753.7	666.9	598.5	539.8	496.4	443.4
50°	368.2	453.8	565.2	673.3	723.5	691.8	610.6	545.5	492.4	450.6	404.0
52.5°	320.0	386.3	482.8	586.5	654.0	625.1	555.9	496.0	446.2	407.2	368.2
55°	280.2	335.6	420.9	513.3	575.6	559.5	498.0	444.6	400.8	363.8	332.0
57.5°	239.2	285.8	354.5	436.9	498.0	495.6	445.0	393.5	359.0	324.0	301.1
60°	203.4	241.2	297.1	367.0	428.5	428.9	389.5	348.9	319.2	289.0	267.3
62.5°	171.6	201.8	250.4	306.7	355.7	368.2	338.9	303.5	279.4	256.1	237.6
65°	144.3	166.8	203.4	254.4	293.0	309.9	290.6	264.9	244.8	223.9	207.4
67.5°	119.0	135.5	162.4	202.6	241.2	253.6	245.6	225.9	211.4	194.1	181.7
70°	93.7	107.7	126.6	156.8	188.5	205.8	203.4	189.3	177.3	164.8	153.1
72.5°	74.4	82.4	96.9	118.6	143.9	163.2	164.0	156.8	146.7	136.3	128.6
75°	59.9	63.5	70.3	87.2	107.3	123.4	129.0	125.4	117.4	110.9	105.7
77.5°	46.2	49.4	53.9	61.9	77.6	90.0	96.9	97.3	92.5	86.8	82.8
80°	34.6	35.8	39.0	43.0	51.0	61.9	69.9	69.9	67.1	64.3	61.9
82.5°	23.7	24.9	26.5	28.5	32.6	39.0	46.2	47.4	45.8	45.0	41.8
85°	13.3	14.5	15.3	16.5	18.1	21.3	26.5	28.1	28.5	26.1	24.5
87.5°	5.2	5.2	5.6	6.0	6.4	7.6	9.6	12.1	12.1	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°	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4	1228.4
2.5°	1207.9	1202.3	1195.0	1188.6	1179.8	1170.9	1169.3	1172.5	1173.3	1169.3	1170.5
5°	1179.4	1168.9	1160.1	1145.6	1136.4	1124.3	1116.3	1116.3	1116.3	1110.2	1104.6
7.5°	1149.6	1135.5	1118.7	1105.0	1086.1	1070.4	1062.8	1059.2	1051.9	1045.9	1039.1
10°	1115.0	1095.4	1074.4	1053.1	1036.7	1015.0	1002.1	994.1	981.6	976.4	966.3
12.5°	1074.4	1054.8	1029.4	994.9	990.0	963.5	945.4	930.5	915.3	902.8	898.4
15°	1041.9	1007.7	974.0	949.4	913.7	898.0	871.5	869.0	856.6	820.0	791.5
17.5°	989.2	958.7	921.3	894.0	865.4	830.5	802.3	774.6	748.1	722.3	721.5
20°	942.6	906.8	871.5	841.7	791.9	742.0	724.7	699.4	683.7	663.2	657.2
22.5°	891.6	854.2	810.0	766.5	708.3	676.9	658.0	637.9	622.2	613.0	603.7
25°	840.1	802.7	744.0	690.6	650.8	626.3	610.2	588.5	577.2	569.2	557.1
27.5°	789.9	742.4	680.5	637.9	605.8	578.0	563.6	545.9	533.4	523.0	515.3
30°	740.0	674.9	622.2	589.3	556.3	539.0	520.1	506.9	497.6	488.0	475.5
32.5°	685.3	617.0	582.8	542.2	523.0	498.0	484.4	470.7	458.6	451.8	447.4
35°	621.8	566.8	536.2	506.5	482.0	465.5	446.2	437.7	431.3	418.0	412.4
37.5°	568.0	528.2	496.0	469.5	447.0	429.3	420.5	406.0	396.7	392.3	386.3
40°	523.4	488.0	460.2	433.3	414.4	401.6	385.9	378.2	366.2	361.8	356.9
42.5°	484.8	452.2	423.3	402.8	386.3	368.6	360.6	347.7	342.5	331.6	327.6
45°	445.8	416.8	391.5	371.4	355.7	344.9	330.4	322.4	313.1	307.5	296.6
47.5°	406.8	381.1	360.2	343.3	329.6	316.3	304.3	297.5	285.8	279.8	274.1
50°	376.6	351.7	332.0	315.1	301.1	287.8	280.2	268.9	258.5	251.6	249.6
52.5°	340.9	319.2	301.1	288.2	274.1	264.5	254.0	241.6	236.4	229.5	227.9
55°	309.1	291.4	276.1	262.5	250.4	239.6	227.5	218.7	214.6	211.4	209.0
57.5°	279.4	262.5	248.4	236.0	225.5	214.2	204.2	199.0	195.4	191.7	189.3
60°	250.0	234.7	221.9	211.4	200.6	189.7	182.5	178.1	175.3	170.0	168.4
62.5°	223.9	209.8	196.6	186.9	176.9	168.4	162.4	156.4	151.9	147.9	139.5
65°	195.4	182.9	172.8	163.2	153.6	147.1	140.3	133.5	127.8	127.8	127.8
67.5°	170.0	159.2	148.7	140.3	131.8	124.2	117.4	117.0	115.0	114.2	113.0
70°	144.3	136.7	127.0	117.8	109.3	105.7	104.5	102.5	100.1	99.7	98.1
72.5°	121.0	112.1	103.3	95.3	93.7	92.0	89.6	87.6	86.0	84.8	84.0
75°	98.9	90.0	82.8	80.8	78.8	76.0	74.0	72.4	71.5	71.5	71.1
77.5°	75.6	70.3	67.1	63.9	62.3	60.7	59.5	58.7	57.5	57.9	57.1
80°	55.5	53.9	51.0	49.0	48.2	46.6	45.8	45.4	44.6	44.6	44.2
82.5°	39.8	37.0	35.8	34.6	33.8	33.0	33.4	33.0	32.6	32.2	32.6
85°	22.9	22.5	21.7	21.7	21.7	21.3	21.3	21.3	20.9	20.5	20.5
87.5°	10.0	10.5	10.5	9.6	10.9	10.9	10.5	10.5	10.0	10.9	10.0
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: P243274

CATALOG NUMBER: S122RDR-H675D935-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1228.4	1228.4	1228.4	1228.4
2.5°	1165.3	1164.9	1162.5	1158.5
5°	1102.2	1100.6	1096.6	1099.8
7.5°	1034.7	1030.2	1026.2	1028.2
10°	962.3	960.7	958.3	953.5
12.5°	882.3	888.7	881.9	897.2
15°	763.7	792.3	756.5	768.6
17.5°	704.6	705.0	700.2	694.6
20°	649.2	635.1	640.3	631.1
22.5°	595.7	592.5	590.9	587.7
25°	547.9	541.8	539.8	541.8
27.5°	512.5	509.7	502.1	500.8
30°	468.3	467.1	464.7	463.9
32.5°	440.6	435.3	434.1	429.3
35°	409.6	406.8	404.8	403.6
37.5°	378.6	377.0	373.4	375.4
40°	353.3	345.3	342.1	341.7
42.5°	325.6	321.2	314.7	312.7
45°	293.4	291.4	289.4	288.6
47.5°	265.3	264.1	261.7	260.5
50°	245.2	242.0	241.6	241.2
52.5°	225.9	224.7	223.5	225.1
55°	207.8	206.2	205.0	205.0
57.5°	188.1	185.3	182.9	183.3
60°	165.2	163.6	161.6	160.8
62.5°	138.7	138.7	138.3	138.3
65°	126.2	125.4	125.0	125.4
67.5°	112.5	111.7	110.5	110.9
70°	96.9	96.5	96.9	96.5
72.5°	82.8	82.4	82.8	83.6
75°	69.9	69.5	69.1	69.1
77.5°	56.7	56.3	55.5	56.3
80°	44.2	43.8	43.4	43.4
82.5°	31.4	31.8	31.4	31.4
85°	20.5	20.9	20.5	20.1
87.5°	10.5	10.9	10.0	9.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)