

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: P334112

Luminaire Tested: **S124DS-S795D930-4F0-1E-UDD-A**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334112
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-21)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DS-S795D930-4F0-1E-UDD-A
Description: DEFINE 4 DIRECT LED LUMINAIRE, ASYMMETRIC DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 795 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

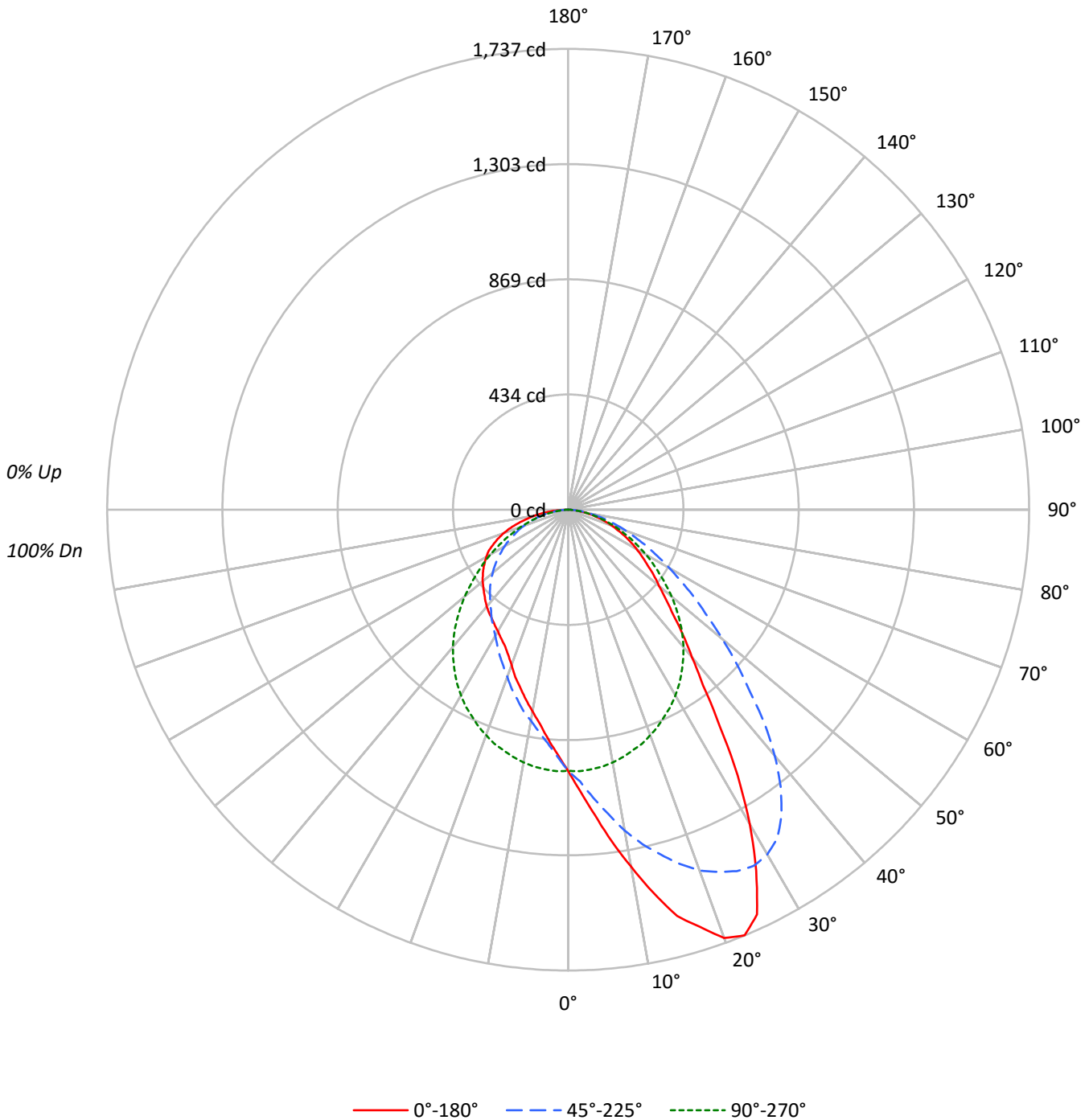
Lumens per Lamp: N/A
Luminaire Lumens: 2715.5 lumens
Efficiency: N/A
Efficacy: 103.2 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.22 / 1.41
Luminous Opening: Rectangular (W 4' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 26.3
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	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85					85			
2	100	92	86	80	98	90	84	79	87	82	78	84	79	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	62					62			
4	84	73	64	58	82	72	64	58	69	62	57	67	61	56	65	60	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	50	60	54	49	58	53	49	46					46			
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41					41			
7	67	54	45	39	65	53	45	39	52	44	39	50	44	39	49	43	38	36					36			
8	62	49	41	35	61	49	41	35	47	40	35	46	40	35	45	39	35	33					33			
9	58	45	37	32	57	45	37	32	44	37	32	43	36	32	42	36	31	30					30			
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27					27			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	7945	7945	7945
5°	9356	7964	7030
10°	11201	7930	6329
15°	13254	7850	5813
20°	14758	7768	5351
25°	14997	7647	5033
30°	12761	7532	4932
35°	9811	7344	4934
40°	7647	7123	5027
45°	6376	6791	5110
50°	5611	6384	5284
55°	5142	5899	5496
60°	4818	5464	5753
65°	4485	4976	5966
70°	4100	4494	6102
75°	3662	3955	6026
80°	3068	3240	5839
85°	2269	2343	5585



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.8	3.5
10°-20°	295.6	10.9
20°-30°	469.6	17.3
30°-40°	521.8	19.2
40°-50°	474.6	17.5
50°-60°	387.8	14.3
60°-70°	276.8	10.2
70°-80°	152.3	5.6
80°-90°	41.2	1.5
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°	861.0	31.7
0°-40°	1382.8	50.9
0°-60°	2245.2	82.7
0°-90°	2715.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2715.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	984	984	984	984	984	
5°	1154	1090	983	883	868	117
15°	1586	1346	939	740	696	448
25°	1684	1503	858	609	565	747
35°	996	1402	745	503	501	630
45°	558	968	595	417	448	439
55°	365	582	419	326	390	330
65°	235	324	260	226	312	232
75°	117	151	127	126	193	125
85°	24	31	25	36	60	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°	984.1	984.1	984.1	984.1	984.1	984.1	984.1	984.1	984.1	984.1	984.1
2.5°	1063.2	1062.7	1058.7	1057.9	1055.0	1051.3	1050.5	1044.0	1031.0	1024.8	1023.2
5°	1154.5	1162.6	1152.0	1150.0	1148.8	1135.3	1128.4	1120.2	1101.5	1090.5	1081.9
7.5°	1261.3	1261.7	1257.2	1252.7	1245.0	1233.6	1218.1	1200.1	1178.5	1156.5	1141.0
10°	1366.4	1369.7	1364.4	1363.6	1342.8	1329.8	1303.7	1281.7	1256.4	1228.3	1202.6
12.5°	1477.3	1470.8	1468.8	1447.2	1447.6	1421.1	1389.7	1366.9	1324.5	1291.0	1254.8
15°	1585.8	1576.8	1571.1	1547.0	1535.2	1502.2	1470.0	1445.1	1394.2	1345.7	1309.0
17.5°	1648.5	1659.6	1644.9	1635.1	1602.9	1581.3	1549.1	1498.1	1460.2	1399.9	1357.9
20°	1717.8	1718.7	1711.3	1701.1	1677.1	1647.7	1611.9	1554.8	1507.1	1447.2	1383.6
22.5°	1736.6	1736.6	1734.6	1725.2	1708.5	1686.0	1649.8	1604.5	1544.2	1477.7	1414.1
25°	1683.6	1682.0	1685.6	1696.2	1689.3	1682.0	1661.2	1625.7	1571.9	1503.0	1434.5
27.5°	1533.6	1544.2	1566.2	1592.3	1611.0	1627.8	1626.5	1611.4	1573.1	1513.6	1440.6
30°	1368.9	1382.8	1398.2	1424.3	1474.9	1503.8	1535.6	1559.7	1546.2	1501.0	1434.1
32.5°	1187.9	1188.7	1213.6	1244.2	1289.4	1351.8	1406.8	1461.8	1485.5	1467.1	1414.1
35°	995.5	1001.2	1026.1	1055.4	1112.1	1180.2	1256.0	1323.6	1379.5	1401.9	1373.4
37.5°	834.1	852.0	870.7	904.2	955.9	1017.5	1099.0	1183.4	1265.4	1315.1	1320.4
40°	725.6	735.8	748.4	772.5	814.9	875.2	942.9	1043.2	1131.6	1211.5	1237.6
42.5°	640.0	644.9	651.4	672.6	702.4	762.3	822.6	907.8	996.7	1096.2	1144.3
45°	558.5	564.6	577.6	590.3	614.7	656.3	713.8	786.4	875.6	967.8	1048.5
47.5°	497.3	501.4	509.6	523.4	545.4	573.6	622.5	684.0	771.3	860.6	947.0
50°	446.8	450.0	456.2	468.4	484.3	508.7	547.1	603.7	668.5	758.6	843.0
52.5°	406.8	407.7	411.7	419.1	430.9	450.5	480.2	524.6	583.8	661.6	745.6
55°	365.3	366.9	371.0	377.1	388.1	401.1	425.2	460.2	512.8	582.5	655.5
57.5°	331.0	332.6	335.9	338.4	348.1	359.1	378.7	404.0	445.2	507.1	573.6
60°	298.4	297.6	301.7	303.7	309.8	318.8	333.1	357.1	391.8	439.4	499.4
62.5°	266.6	265.4	268.6	271.5	274.3	281.7	292.7	310.2	336.7	378.7	428.4
65°	234.8	233.2	235.2	238.5	241.7	245.8	254.4	271.1	293.5	324.5	364.0
67.5°	202.2	204.2	204.2	206.3	208.3	214.0	220.1	233.2	249.1	274.3	309.4
70°	173.7	174.1	175.7	175.7	176.9	181.8	186.7	193.6	209.1	232.0	259.3
72.5°	145.1	147.2	145.9	147.6	148.4	151.2	154.5	161.0	173.7	189.2	211.2
75°	117.4	118.6	118.6	119.0	120.3	121.5	124.3	129.2	138.6	151.2	167.1
77.5°	90.5	90.5	91.3	92.9	92.9	95.0	97.4	101.1	106.4	115.8	126.0
80°	66.0	66.9	66.4	67.3	67.3	68.9	69.7	74.6	76.6	82.3	90.1
82.5°	44.0	44.8	44.8	46.1	46.9	46.9	48.1	49.3	51.4	56.3	58.3
85°	24.5	25.3	24.5	25.3	26.5	26.9	28.1	28.5	30.2	31.4	34.2
87.5°	9.0	10.2	10.2	10.6	11.4	11.8	12.2	11.8	13.5	13.9	15.5
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	984.1	984.1	984.1	984.1	984.1	984.1	984.1	984.1	984.1	984.1	984.1
2.5°	1023.6	1017.9	1013.8	1010.6	1001.6	996.3	992.2	986.5	980.0	973.1	964.5
5°	1073.3	1059.5	1049.3	1033.8	1019.1	1006.9	994.3	982.8	969.0	953.9	942.9
7.5°	1124.3	1105.1	1079.5	1059.5	1035.4	1014.6	996.3	977.1	956.8	937.2	918.8
10°	1172.4	1145.9	1116.6	1081.9	1049.3	1020.4	993.4	967.4	942.1	916.8	895.2
12.5°	1224.2	1189.5	1142.6	1100.7	1063.2	1022.0	988.1	954.7	922.9	896.0	869.9
15°	1269.4	1221.7	1171.6	1117.4	1069.3	1024.0	979.6	939.2	905.0	869.9	845.5
17.5°	1298.0	1238.9	1185.0	1128.4	1072.9	1016.3	970.2	925.0	882.6	848.3	817.8
20°	1326.1	1267.4	1196.1	1139.4	1070.1	1011.4	955.9	904.2	859.3	822.2	790.4
22.5°	1350.6	1280.4	1209.1	1130.0	1061.1	997.9	936.0	883.8	837.7	798.2	768.0
25°	1356.3	1278.4	1200.9	1126.8	1048.5	974.7	919.7	858.5	809.6	768.4	735.8
27.5°	1358.3	1276.0	1189.9	1109.2	1028.5	961.2	889.5	836.1	785.5	741.9	710.9
30°	1353.8	1267.0	1172.8	1083.5	1002.4	927.8	867.5	808.0	756.2	713.0	680.4
32.5°	1339.5	1248.2	1150.8	1055.0	970.2	897.6	834.9	779.0	728.9	686.5	651.8
35°	1309.4	1220.1	1117.0	1018.7	932.7	858.9	802.7	745.2	694.6	654.3	621.3
37.5°	1269.0	1185.9	1081.1	978.8	896.0	821.0	764.3	711.4	665.7	624.1	589.9
40°	1212.8	1141.8	1036.7	937.6	846.3	775.8	723.6	675.9	630.6	591.9	559.7
42.5°	1147.9	1088.4	993.4	887.1	799.8	728.9	678.3	636.8	594.8	559.7	527.5
45°	1068.5	1027.7	936.4	839.4	747.6	680.8	632.3	594.8	558.9	523.8	496.9
47.5°	980.0	957.2	877.7	784.7	696.7	629.8	587.8	552.0	519.3	488.8	464.7
50°	890.7	880.9	814.5	725.6	642.5	580.5	538.1	508.3	481.4	455.3	432.9
52.5°	802.7	804.7	746.4	666.9	591.5	532.4	490.4	463.1	440.7	420.7	401.1
55°	712.6	724.0	677.1	604.5	535.7	481.8	443.9	419.1	402.8	385.2	370.1
57.5°	629.8	649.0	608.2	541.8	483.5	432.1	398.7	379.5	361.6	350.2	338.4
60°	549.1	567.0	536.9	483.1	428.9	386.5	355.1	338.4	323.3	315.9	308.2
62.5°	477.4	492.9	472.5	423.6	378.3	337.9	312.7	296.8	287.8	279.6	275.2
65°	409.7	423.1	404.0	367.7	327.3	294.7	273.1	260.5	250.7	247.4	241.7
67.5°	342.8	355.1	344.9	313.1	278.8	253.2	236.0	222.6	216.9	213.6	209.9
70°	284.5	296.8	285.8	258.9	234.0	213.2	197.3	190.4	184.3	183.0	177.3
72.5°	235.2	242.6	231.5	212.0	191.6	174.9	163.5	156.1	153.7	151.2	148.8
75°	183.9	191.2	183.9	167.5	152.5	140.2	129.6	126.8	123.1	121.9	119.8
77.5°	137.8	144.7	139.0	128.0	116.2	106.0	99.9	95.8	95.4	92.9	93.8
80°	99.5	103.5	98.2	91.3	82.3	75.8	71.7	69.7	67.3	66.4	68.1
82.5°	64.4	65.6	63.6	59.5	53.4	49.7	47.3	44.8	44.8	45.2	44.8
85°	37.1	36.7	36.3	32.2	30.2	27.3	25.7	25.3	24.9	25.7	26.5
87.5°	15.5	15.9	15.5	13.9	12.6	11.4	11.0	10.6	11.0	11.4	11.8
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°	984.1	984.1	984.1	984.1	984.1	984.1	984.1	984.1	984.1	984.1	984.1
2.5°	960.4	956.8	951.5	944.1	938.0	931.5	929.9	927.4	932.3	928.2	927.0
5°	933.5	925.0	914.0	901.3	894.0	883.4	881.3	877.3	873.2	872.8	868.7
7.5°	905.4	893.6	879.7	866.7	855.3	843.8	836.5	835.7	829.2	825.9	821.8
10°	878.5	863.0	846.3	834.1	820.2	808.0	799.4	794.5	790.4	786.0	781.9
12.5°	846.7	830.0	816.9	803.5	786.4	777.8	762.3	752.9	752.9	754.2	741.9
15°	823.5	807.2	786.0	767.2	758.2	740.3	732.6	722.8	716.7	710.5	705.6
17.5°	794.9	774.9	758.6	737.4	720.7	707.3	696.7	691.4	681.6	672.6	666.5
20°	768.4	746.8	729.3	706.5	687.7	670.2	661.6	653.5	646.5	639.2	632.3
22.5°	741.5	718.7	696.3	674.3	657.1	638.4	630.2	618.4	611.9	608.6	601.7
25°	713.0	688.5	664.1	642.9	624.9	608.6	597.6	589.1	581.7	578.5	574.0
27.5°	682.0	658.0	634.7	610.3	589.5	577.6	568.7	561.7	557.3	552.4	550.3
30°	652.7	627.4	602.1	579.7	560.9	549.1	541.0	536.5	533.2	531.2	529.1
32.5°	622.9	598.0	571.1	551.1	534.8	524.6	518.9	514.5	513.2	512.8	512.4
35°	590.7	565.4	541.0	522.6	506.7	502.6	497.3	494.9	494.1	496.9	498.2
37.5°	559.7	536.1	513.2	494.9	484.3	477.8	475.7	475.3	478.2	480.6	483.5
40°	529.9	507.1	485.9	470.4	460.6	457.0	456.2	458.2	461.5	464.3	467.6
42.5°	501.0	478.6	459.8	445.6	439.4	436.2	437.0	439.0	443.9	447.6	452.9
45°	470.8	452.1	433.3	421.5	415.8	416.6	416.6	420.3	424.8	430.1	435.4
47.5°	442.7	423.6	407.7	397.5	394.6	393.4	395.4	400.3	406.4	412.5	419.9
50°	414.2	396.2	382.8	373.8	370.6	371.8	375.0	379.5	387.3	395.4	403.2
52.5°	385.2	369.3	357.1	349.0	346.9	349.4	352.6	360.4	366.9	375.9	385.6
55°	355.1	341.2	331.4	325.3	324.5	325.7	329.4	337.1	346.9	357.9	366.9
57.5°	325.3	313.5	304.1	299.6	300.0	300.8	306.6	315.9	325.7	337.5	349.0
60°	295.1	284.5	277.2	273.9	274.3	276.8	284.1	292.7	305.7	317.2	329.4
62.5°	266.6	257.6	250.7	247.9	247.0	253.2	260.1	269.1	282.1	295.1	308.6
65°	235.6	228.3	222.6	220.9	222.2	226.2	235.2	247.0	258.0	271.5	285.4
67.5°	205.5	199.3	195.3	196.1	197.3	203.0	210.8	220.9	233.2	247.0	261.3
70°	176.9	171.2	168.0	168.4	170.8	178.1	184.7	194.9	208.3	222.6	234.0
72.5°	147.6	144.3	141.5	143.5	145.9	150.4	159.0	169.2	180.6	193.6	205.9
75°	117.8	117.8	116.2	117.4	121.1	126.0	132.1	142.7	154.5	165.1	174.9
77.5°	92.5	91.3	92.1	93.4	95.8	101.9	108.8	116.6	126.0	137.0	145.1
80°	66.9	67.3	69.3	71.7	72.6	77.0	84.4	91.3	98.2	107.2	115.0
82.5°	46.1	46.5	47.3	50.5	51.4	56.3	60.3	67.3	73.4	78.7	84.8
85°	27.3	27.3	29.4	30.6	32.6	35.9	38.7	42.8	48.5	52.6	58.7
87.5°	13.0	13.0	14.7	15.5	16.7	18.8	19.6	24.1	25.7	27.7	31.4
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: P334112

CATALOG NUMBER: S124DS-S795D930-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	984.1	984.1	984.1	984.1
2.5°	926.2	925.4	922.5	922.1
5°	866.3	864.2	863.0	867.5
7.5°	821.0	819.4	815.7	814.5
10°	777.8	776.2	772.9	772.1
12.5°	736.2	732.6	732.6	733.8
15°	700.3	698.7	694.2	695.5
17.5°	663.7	662.0	655.9	662.0
20°	629.4	626.2	623.3	622.9
22.5°	596.8	593.9	594.4	591.1
25°	570.7	567.9	567.0	565.0
27.5°	549.5	547.9	546.3	547.1
30°	530.4	529.9	529.1	529.1
32.5°	514.5	514.5	515.3	515.3
35°	499.8	501.0	501.8	500.6
37.5°	486.7	487.6	488.8	490.0
40°	471.2	474.1	474.9	477.0
42.5°	456.6	459.8	462.3	462.3
45°	441.5	444.7	447.6	447.6
47.5°	426.0	430.5	433.3	433.7
50°	410.1	415.8	418.7	420.7
52.5°	394.6	400.3	404.4	405.2
55°	376.3	384.4	388.9	390.5
57.5°	360.0	367.3	372.2	373.4
60°	340.4	348.5	355.1	356.3
62.5°	320.4	329.0	334.7	338.4
65°	296.8	305.3	311.0	312.3
67.5°	271.9	280.9	284.5	287.0
70°	245.4	252.3	256.4	258.5
72.5°	215.2	222.6	227.5	227.5
75°	184.3	190.8	193.2	193.2
77.5°	152.1	155.7	159.0	159.8
80°	121.1	123.1	125.6	125.6
82.5°	89.3	90.9	93.4	92.9
85°	57.9	61.6	61.1	60.3
87.5°	32.6	33.0	34.2	35.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)