

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: P332802-930

Luminaire Tested: **S124DIW-S795D1560U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332802-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D1560U930-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7054.7 lumens
Efficiency: N/A
Efficacy: 103.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

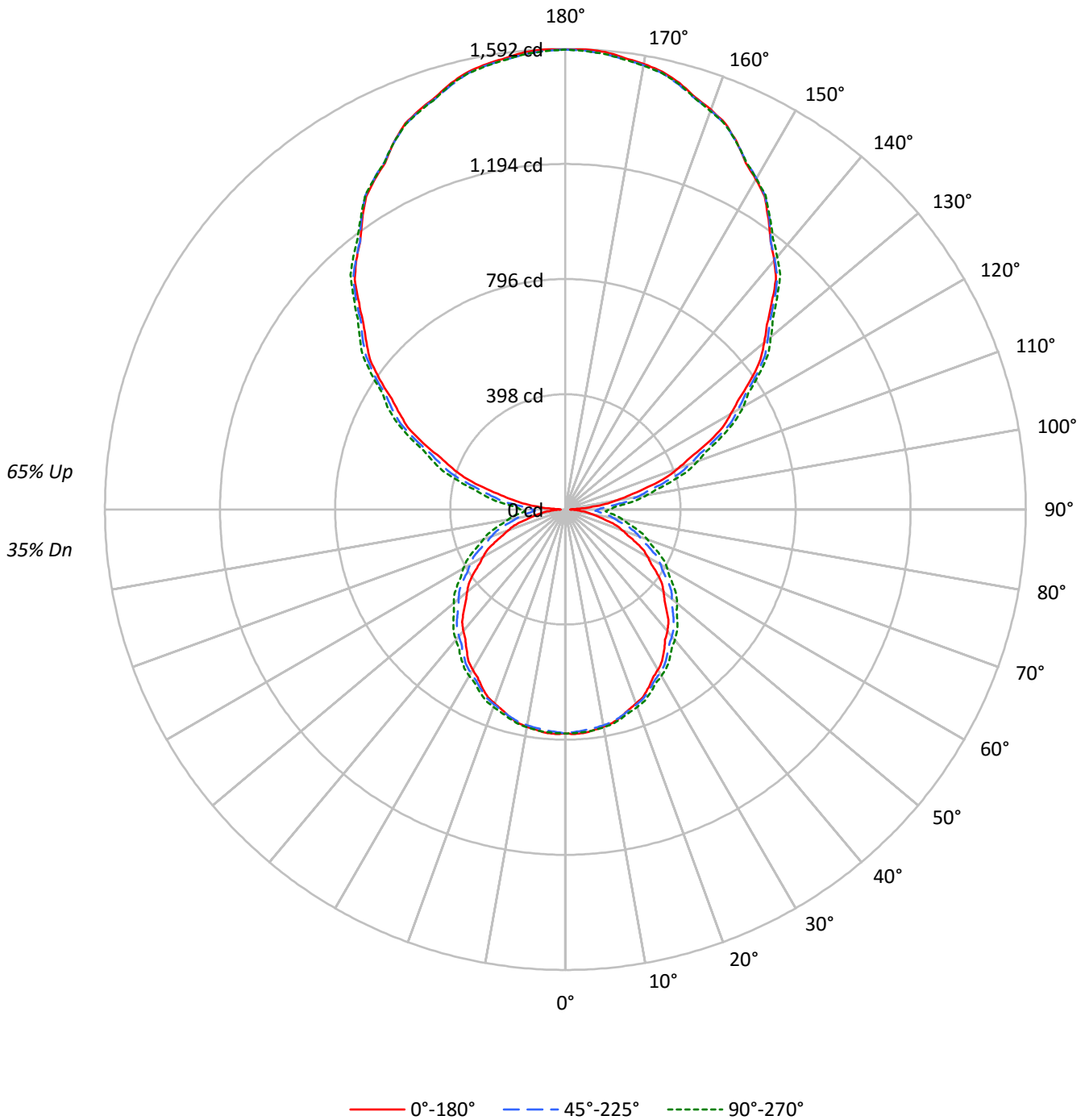
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332802-930

CATALOG NUMBER: S124DIW-S795D1560U930-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P332802-930

CATALOG NUMBER: S124DIW-S795D1560U930-4F0-1E-UDD-D1

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	0	
RCR																						
0	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	35				
1	94	89	85	81	84	81	77	74	64	62	60	50	48	47	36	35	34	28				
2	85	77	71	66	76	70	65	60	56	52	49	43	41	38	31	30	28	23				
3	77	68	60	54	69	61	55	50	49	44	41	38	35	32	27	25	24	19				
4	70	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	16				
5	65	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	14				
6	59	47	39	33	53	43	36	31	35	29	25	27	23	20	20	17	15	12				
7	55	43	35	29	49	39	32	27	31	26	22	24	21	18	18	15	13	10				
8	51	38	31	26	46	35	28	24	28	23	20	22	18	16	16	14	12	9				
9	47	35	28	23	42	32	25	21	26	21	17	20	17	14	15	13	11	8				
10	44	32	25	20	40	29	23	19	24	19	16	19	15	13	14	11	10	8				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6252	6252	6252
5°	6271	6110	6128
10°	6233	6010	6006
15°	6177	5894	5862
20°	6093	5766	5723
25°	5998	5624	5569
30°	5895	5481	5411
35°	5779	5336	5274
40°	5685	5196	5129
45°	5547	5069	5005
50°	5430	4922	4876
55°	5310	4783	4722
60°	5121	4605	4583
65°	4915	4414	4411
70°	4666	4197	4210
75°	4318	3960	4029
80°	3929	3731	3851
85°	3441	3526	3748



TEST NUMBER: P332802-930

CATALOG NUMBER: S124DIW-S795D1560U930-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.3	1.0
10°-20°	210.1	3.0
20°-30°	317.7	4.5
30°-40°	384.4	5.4
40°-50°	406.4	5.8
50°-60°	382.5	5.4
60°-70°	317.3	4.5
70°-80°	222.9	3.2
80°-90°	130.8	1.9
90°-100°	179.7	2.5
100°-110°	366.0	5.2
110°-120°	564.3	8.0
120°-130°	716.1	10.2
130°-140°	789.7	11.2
140°-150°	768.9	10.9
150°-160°	645.2	9.1
160°-170°	429.2	6.1
170°-180°	150.3	2.1
0°-30°	601.2	8.5
0°-40°	985.6	14.0
0°-60°	1774.4	25.2
0°-90°	2445.4	34.7
90°-120°	1109.9	15.7
90°-150°	3384.6	48.0
90°-180°	4609.0	65.3
0°-180°	7054.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	774	774	774	774	774	
5°	775	772	767	773	773	74
15°	743	744	741	749	748	209
25°	680	685	688	697	698	313
35°	595	605	614	626	629	372
45°	496	513	529	543	548	383
55°	388	407	433	449	455	346
65°	269	297	326	347	355	266
75°	149	182	218	241	250	159
85°	46	83	121	146	156	49
90°	18	66	113	144	155	14
95°	85	125	169	195	204	91
105°	294	314	350	374	386	313
115°	541	550	574	591	597	534
125°	784	784	804	817	820	699
135°	1008	1016	1022	1033	1035	780
145°	1224	1228	1229	1233	1233	766
155°	1401	1401	1400	1405	1400	645
165°	1526	1522	1520	1526	1522	430
175°	1587	1581	1580	1587	1580	151
180°	1590	1590	1590	1590	1590	



TEST NUMBER: P332802-930

CATALOG NUMBER: S124DIW-S795D1560U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5
2.5°	777.2	776.7	776.2	775.8	775.3	774.5	773.2	772.0	770.8	769.6	770.6
5°	775.3	774.7	774.1	773.6	773.0	772.0	770.6	769.3	767.9	766.6	768.2
7.5°	768.7	768.3	768.0	767.7	767.3	766.5	765.5	764.3	763.2	762.1	763.9
10°	763.1	763.0	762.8	762.5	762.4	761.8	760.8	759.9	758.9	757.9	759.7
12.5°	755.5	755.5	755.5	755.4	755.4	755.0	754.4	753.7	753.0	752.4	754.0
15°	743.2	743.4	743.6	743.8	744.0	743.8	743.2	742.7	742.0	741.4	743.2
17.5°	726.4	726.9	727.5	728.1	728.7	728.9	728.8	728.7	728.6	728.5	730.3
20°	714.6	715.2	715.8	716.3	716.9	717.3	717.5	717.6	717.9	718.0	720.0
22.5°	701.4	702.1	702.9	703.6	704.3	704.9	705.2	705.6	705.9	706.3	708.2
25°	679.9	681.0	682.2	683.4	684.5	685.4	686.0	686.6	687.1	687.7	689.8
27.5°	656.0	657.6	659.3	661.0	662.8	664.1	665.0	665.8	666.7	667.6	669.5
30°	640.0	641.6	643.1	644.7	646.2	647.6	649.0	650.3	651.7	653.0	655.1
32.5°	622.6	624.5	626.4	628.2	630.1	631.7	633.2	634.7	636.3	637.7	640.2
35°	594.9	597.2	599.6	601.9	604.1	606.3	608.2	610.2	612.0	614.0	616.7
37.5°	567.0	569.6	572.3	574.9	577.6	580.2	582.5	584.9	587.3	589.7	592.5
40°	548.9	551.5	553.9	556.4	559.0	561.6	564.3	567.0	569.6	572.3	575.3
42.5°	528.2	530.9	533.8	536.5	539.4	542.3	545.5	548.7	551.9	555.0	558.2
45°	496.0	499.7	503.4	507.0	510.7	514.4	518.0	521.7	525.3	529.0	532.3
47.5°	465.4	469.1	472.9	476.7	480.5	484.5	488.7	492.9	497.2	501.4	504.8
50°	443.1	447.4	451.6	455.8	460.1	464.3	468.6	472.8	477.0	481.3	485.2
52.5°	420.9	425.2	429.4	433.7	437.9	442.5	447.3	452.2	457.1	461.9	465.7
55°	388.5	392.6	396.6	400.6	404.7	409.6	415.4	421.2	427.0	432.8	436.6
57.5°	352.3	357.3	362.3	367.3	372.3	377.6	383.4	389.1	394.9	400.6	405.2
60°	328.6	333.7	338.7	343.7	348.7	354.4	360.8	367.1	373.5	379.8	384.3
62.5°	305.7	311.3	316.7	322.2	327.7	333.6	340.0	346.3	352.7	359.1	363.5
65°	268.8	275.0	281.2	287.3	293.5	299.9	306.4	313.0	319.5	326.0	330.8
67.5°	233.3	239.9	246.4	252.9	259.5	266.3	273.3	280.3	287.3	294.3	299.2
70°	209.0	215.6	222.1	228.7	235.2	242.1	249.5	256.8	264.1	271.4	276.6
72.5°	185.4	192.1	198.9	205.5	212.2	219.5	227.3	235.1	242.9	250.6	255.7
75°	149.2	156.3	163.4	170.6	177.7	185.3	193.4	201.5	209.6	217.7	223.1
77.5°	115.4	122.9	130.4	138.0	145.5	153.6	162.1	170.6	179.0	187.5	193.0
80°	94.5	102.2	109.9	117.6	125.4	133.5	141.9	150.4	158.9	167.4	173.2
82.5°	73.7	81.7	89.8	97.8	105.7	114.1	122.5	131.0	139.5	148.0	153.8
85°	46.0	54.1	62.1	70.3	78.4	86.7	95.4	104.0	112.8	121.4	127.2
87.5°	26.4	34.9	43.4	51.8	60.3	68.9	77.8	86.7	95.6	104.4	110.4
90°	17.5	28.3	39.0	49.7	60.4	71.0	81.4	92.0	102.4	112.9	120.1
92.5°	39.5	49.9	60.3	70.6	81.0	91.1	100.9	110.7	120.6	130.4	136.8
95°	85.0	93.8	102.6	111.5	120.3	129.6	139.4	149.3	159.1	168.8	174.9
97.5°	139.1	146.5	153.9	161.3	168.8	177.6	187.7	197.7	207.7	217.8	223.9
100°	181.6	187.8	193.9	200.0	206.0	214.1	224.0	234.1	244.0	254.0	259.8
102.5°	226.9	231.7	236.5	241.4	246.2	253.4	263.0	272.6	282.3	291.8	297.7
105°	294.2	298.4	302.5	306.6	310.7	316.9	325.1	333.4	341.6	349.8	355.5
107.5°	366.6	370.1	373.6	377.1	380.6	385.7	392.6	399.6	406.5	413.4	418.9
110°	415.1	418.3	421.6	424.8	428.0	432.9	439.4	445.9	452.3	458.8	462.7



TEST NUMBER: P332802-930

CATALOG NUMBER: S124DIW-S795D1560U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	465.5	468.1	470.5	473.0	475.5	479.7	485.7	491.6	497.6	503.5	507.7
115°	541.2	542.9	544.7	546.4	548.1	551.8	557.4	563.0	568.7	574.3	578.3
117.5°	613.3	614.6	615.8	617.1	618.3	621.7	627.0	632.3	637.7	643.1	646.2
120°	660.8	662.5	664.1	665.9	667.5	670.7	675.5	680.3	685.0	689.7	692.3
122.5°	710.9	711.5	712.1	712.7	713.1	715.9	720.8	725.7	730.6	735.5	738.4
125°	784.1	783.9	783.7	783.5	783.3	785.5	790.0	794.6	799.2	803.7	806.8
127.5°	851.0	851.7	852.3	853.0	853.5	855.5	858.8	862.0	865.3	868.5	871.5
130°	897.6	898.2	898.8	899.4	900.1	901.9	905.0	908.1	911.2	914.3	917.2
132.5°	945.7	946.2	946.6	947.0	947.4	948.7	951.0	953.2	955.4	957.7	960.5
135°	1008.5	1010.2	1011.9	1013.5	1015.1	1016.6	1018.0	1019.3	1020.7	1022.0	1024.6
137.5°	1077.9	1078.5	1079.0	1079.6	1080.2	1081.0	1082.1	1083.2	1084.3	1085.4	1087.5
140°	1124.1	1124.5	1124.9	1125.2	1125.5	1125.8	1126.0	1126.2	1126.4	1126.6	1128.8
142.5°	1165.7	1166.2	1166.7	1167.3	1167.8	1167.8	1167.5	1167.2	1166.9	1166.5	1168.7
145°	1224.1	1225.0	1225.9	1226.8	1227.7	1228.2	1228.5	1228.8	1229.1	1229.3	1230.2
147.5°	1282.1	1283.2	1284.3	1285.4	1286.5	1287.0	1286.8	1286.5	1286.4	1286.1	1286.1
150°	1317.5	1318.4	1319.3	1320.2	1321.1	1321.5	1321.5	1321.5	1321.5	1321.5	1321.5
152.5°	1350.2	1350.9	1351.4	1352.1	1352.7	1353.2	1353.3	1353.6	1353.8	1354.0	1354.6
155°	1401.4	1401.4	1401.4	1401.4	1401.4	1401.3	1401.0	1400.8	1400.5	1400.2	1401.3
157.5°	1444.7	1444.2	1443.7	1443.2	1442.8	1442.5	1442.4	1442.3	1442.3	1442.3	1443.1
160°	1470.3	1470.0	1469.7	1469.5	1469.2	1468.9	1468.7	1468.4	1468.1	1467.9	1468.7
162.5°	1493.9	1493.2	1492.5	1491.8	1491.0	1490.5	1490.3	1490.0	1489.7	1489.5	1490.9
165°	1525.6	1524.8	1524.0	1523.1	1522.3	1521.7	1521.1	1520.5	1520.0	1519.5	1521.1
167.5°	1550.0	1548.8	1547.7	1546.5	1545.4	1544.8	1544.9	1544.9	1545.0	1545.1	1546.7
170°	1563.7	1562.4	1561.0	1559.6	1558.3	1557.7	1558.0	1558.3	1558.5	1558.8	1560.4
172.5°	1573.5	1572.4	1571.2	1570.1	1569.0	1568.4	1568.5	1568.6	1568.6	1568.6	1570.5
175°	1587.1	1585.7	1584.4	1583.0	1581.6	1580.8	1580.5	1580.2	1580.0	1579.7	1581.6
177.5°	1591.5	1590.4	1589.3	1588.2	1587.1	1586.6	1586.6	1586.6	1586.6	1586.6	1588.1
180°	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5



TEST NUMBER: P332802-930

CATALOG NUMBER: S124DIW-S795D1560U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5
2.5°	771.7	772.8	773.9	774.4	774.2	774.0	773.9	773.7
5°	769.7	771.3	772.7	773.5	773.2	773.1	772.9	772.7
7.5°	765.6	767.3	769.1	769.8	769.6	769.4	769.2	769.1
10°	761.4	763.1	764.9	765.6	765.5	765.2	765.1	764.9
12.5°	755.5	757.2	758.7	759.5	759.5	759.4	759.4	759.3
15°	744.9	746.7	748.4	749.2	749.0	748.8	748.6	748.4
17.5°	732.0	733.8	735.6	736.4	736.2	736.1	735.9	735.7
20°	721.9	723.8	725.8	726.8	726.8	726.8	726.8	726.8
22.5°	710.1	712.0	714.0	715.1	715.4	715.7	716.0	716.3
25°	691.9	694.1	696.2	697.3	697.5	697.7	697.9	698.1
27.5°	671.5	673.4	675.5	676.5	676.8	677.0	677.3	677.4
30°	657.2	659.3	661.5	662.8	663.2	663.5	663.9	664.3
32.5°	642.6	645.1	647.4	648.9	649.2	649.6	650.0	650.4
35°	619.4	622.1	624.8	626.4	627.0	627.5	628.2	628.8
37.5°	595.2	597.9	600.6	602.3	602.9	603.6	604.1	604.8
40°	578.1	581.1	583.9	585.7	586.5	587.3	588.1	588.8
42.5°	561.4	564.6	567.8	569.7	570.3	571.0	571.6	572.2
45°	535.6	538.8	542.1	544.2	545.2	546.2	547.1	548.0
47.5°	508.2	511.6	515.0	517.2	518.4	519.6	520.7	521.9
50°	489.0	492.8	496.7	499.2	500.3	501.6	502.7	503.9
52.5°	469.6	473.4	477.3	479.8	480.9	482.1	483.2	484.5
55°	440.4	444.3	448.2	450.7	451.8	453.0	454.1	455.3
57.5°	409.9	414.4	419.0	421.8	422.9	424.0	425.1	426.2
60°	388.7	393.1	397.5	400.6	402.1	403.7	405.2	406.8
62.5°	367.9	372.3	376.7	379.8	381.3	382.9	384.3	385.9
65°	335.7	340.6	345.4	348.5	350.1	351.6	353.1	354.7
67.5°	304.1	309.0	313.9	317.1	318.6	320.1	321.6	323.1
70°	281.8	287.1	292.3	295.5	296.9	298.2	299.5	300.9
72.5°	260.7	265.8	270.8	274.1	275.6	277.1	278.6	280.1
75°	228.4	233.8	239.3	242.8	244.6	246.3	248.0	249.7
77.5°	198.4	203.9	209.4	213.0	214.9	216.7	218.6	220.5
80°	179.0	184.7	190.5	194.1	195.7	197.2	198.8	200.3
82.5°	159.8	165.8	171.7	175.5	177.2	178.9	180.6	182.3
85°	133.0	138.8	144.6	148.4	150.3	152.2	154.2	156.1
87.5°	116.3	122.2	128.1	132.0	133.8	135.6	137.4	139.2
90°	127.3	134.6	141.8	146.4	148.5	150.7	152.7	154.8
92.5°	143.2	149.6	156.0	160.2	162.1	164.0	165.8	167.7
95°	180.9	186.9	193.0	196.8	198.6	200.3	202.0	203.8
97.5°	229.9	235.9	242.0	245.8	247.4	249.2	250.8	252.4
100°	265.5	271.3	277.0	280.5	281.9	283.2	284.6	285.9
102.5°	303.5	309.2	315.1	318.9	320.6	322.3	324.0	325.7
105°	361.1	366.7	372.3	376.3	378.7	381.1	383.4	385.8
107.5°	424.4	429.9	435.4	438.8	440.2	441.5	442.8	444.2
110°	466.6	470.4	474.3	477.4	479.8	482.2	484.5	486.9



TEST NUMBER: P332802-930

CATALOG NUMBER: S124DIW-S795D1560U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	511.8	516.0	520.2	523.1	524.8	526.5	528.2	529.9
115°	582.2	586.2	590.2	592.6	593.8	594.8	595.9	597.0
117.5°	649.2	652.3	655.4	657.5	658.4	659.4	660.5	661.5
120°	694.8	697.2	699.8	702.1	704.1	706.2	708.3	710.4
122.5°	741.4	744.3	747.2	748.9	749.3	749.7	750.1	750.5
125°	809.9	813.0	816.1	818.0	818.6	819.2	819.9	820.4
127.5°	874.4	877.3	880.3	882.2	883.1	883.9	884.8	885.7
130°	920.1	923.0	925.9	927.4	927.5	927.6	927.6	927.7
132.5°	963.3	966.0	968.7	970.5	971.3	972.0	972.7	973.4
135°	1027.1	1029.6	1032.2	1033.6	1034.0	1034.3	1034.6	1034.9
137.5°	1089.6	1091.7	1093.8	1095.4	1096.6	1097.6	1098.8	1099.9
140°	1131.1	1133.3	1135.5	1136.9	1137.7	1138.3	1139.1	1139.7
142.5°	1170.8	1172.9	1175.1	1176.5	1177.3	1178.0	1178.8	1179.6
145°	1231.1	1232.0	1232.9	1233.3	1233.2	1233.2	1233.1	1233.1
147.5°	1286.0	1286.0	1285.9	1286.1	1286.4	1286.7	1287.0	1287.4
150°	1321.5	1321.5	1321.5	1321.4	1321.1	1320.9	1320.6	1320.3
152.5°	1355.3	1355.9	1356.6	1356.6	1355.8	1355.2	1354.5	1353.7
155°	1402.4	1403.5	1404.6	1404.6	1403.5	1402.4	1401.3	1400.2
157.5°	1443.9	1444.7	1445.5	1445.4	1444.5	1443.7	1442.7	1441.8
160°	1469.5	1470.3	1471.1	1470.8	1469.5	1468.1	1466.7	1465.3
162.5°	1492.4	1493.9	1495.3	1495.4	1494.0	1492.7	1491.3	1490.0
165°	1522.7	1524.4	1526.0	1526.3	1525.2	1524.1	1523.0	1521.9
167.5°	1548.3	1550.0	1551.6	1551.6	1549.9	1548.2	1546.5	1544.7
170°	1562.1	1563.7	1565.4	1565.2	1563.3	1561.4	1559.5	1557.5
172.5°	1572.4	1574.2	1576.1	1576.1	1574.1	1572.2	1570.3	1568.4
175°	1583.6	1585.4	1587.4	1587.4	1585.4	1583.6	1581.6	1579.7
177.5°	1589.7	1591.1	1592.7	1592.6	1590.8	1589.1	1587.4	1585.6
180°	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5

(END OF REPORT)