

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: P333435-830

Luminaire Tested: **S125DIW-S1090D470U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333435-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-11,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DIW-S1090D470U830-4F0-1E-UDD-F1
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1090 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 470 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5718.2 lumens
Efficiency: N/A
Efficacy: 123.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')
CIE Type: Semi-Direct

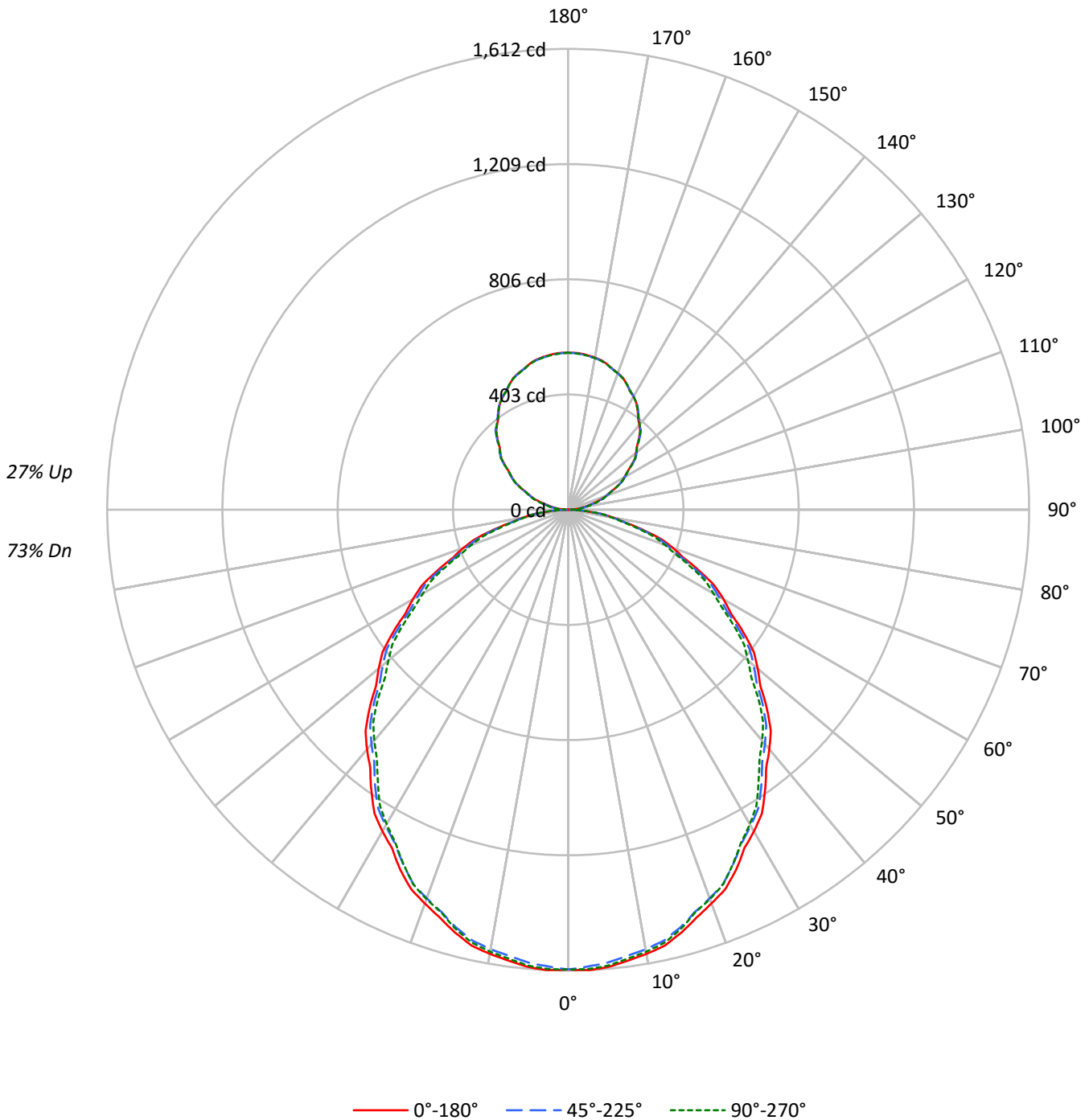
Input Watts (W): 46.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	113	113	113	113	107	107	107	107	96	96	96	86	86	86	77	77	77	73
1	103	98	94	91	97	94	90	87	84	82	79	76	74	72	68	67	65	61
2	94	86	79	74	89	82	76	71	74	69	65	67	63	60	60	57	55	51
3	85	76	68	62	81	72	65	59	65	60	55	59	55	51	53	50	47	44
4	78	67	59	52	74	64	56	51	58	52	47	53	48	44	48	44	40	37
5	72	60	51	45	68	57	49	44	52	46	41	47	42	38	43	39	35	32
6	66	54	45	39	63	51	44	38	47	40	36	43	37	33	39	34	31	28
7	62	49	40	35	58	47	39	34	43	36	31	39	34	29	36	31	28	25
8	57	44	36	31	54	43	35	30	39	33	28	36	30	26	33	28	25	23
9	53	41	33	28	51	39	32	27	36	30	25	33	28	24	30	26	22	20
10	50	37	30	25	47	36	29	24	33	27	23	31	25	22	28	24	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10388	10388	10388
5°	10410	10311	10377
10°	10347	10238	10297
15°	10235	10116	10158
20°	10074	9943	9961
25°	9902	9738	9729
30°	9688	9517	9470
35°	9460	9280	9150
40°	9226	9022	8893
45°	8972	8786	8611
50°	8694	8501	8246
55°	8425	8180	7952
60°	8103	7856	7576
65°	7719	7467	7213
70°	7353	7017	6775
75°	6697	6478	6253
80°	5962	5869	5724
85°	5180	5283	4994



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.6	2.7
10°-20°	428.4	7.5
20°-30°	632.5	11.1
30°-40°	738.0	12.9
40°-50°	741.2	13.0
50°-60°	650.7	11.4
60°-70°	484.8	8.5
70°-80°	277.2	4.8
80°-90°	81.8	1.4
90°-100°	36.8	0.6
100°-110°	108.6	1.9
110°-120°	183.9	3.2
120°-130°	242.0	4.2
130°-140°	271.2	4.7
140°-150°	265.8	4.6
150°-160°	223.2	3.9
160°-170°	148.4	2.6
170°-180°	51.9	0.9
0°-30°	1212.5	21.2
0°-40°	1950.5	34.1
0°-60°	3342.4	58.5
0°-90°	4186.3	73.2
90°-120°	329.3	5.8
90°-150°	1108.3	19.4
90°-180°	1532.0	26.8
0°-180°	5718.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1608	1608	1608	1608	1608	
5°	1606	1603	1590	1601	1601	152
15°	1531	1526	1513	1519	1519	431
25°	1390	1383	1367	1369	1365	639
35°	1200	1194	1177	1170	1160	750
45°	982	977	962	947	943	757
55°	748	744	726	715	706	668
65°	505	502	489	477	472	501
75°	268	266	260	256	251	286
85°	70	71	71	70	67	78
90°	0	4	7	9	10	5
95°	28	29	33	36	37	30
105°	97	100	102	105	106	104
115°	184	186	187	186	186	182
125°	269	271	272	271	270	241
135°	349	352	352	352	351	269
145°	423	425	426	426	425	265
155°	484	484	485	486	484	223
165°	527	526	526	528	526	149
175°	548	546	546	548	546	52
180°	549	549	549	549	549	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1608.4	1608.4	1608.4	1608.4	1608.4	1608.4	1608.4	1608.4	1608.4	1608.4	1608.4
2.5°	1612.4	1611.7	1611.0	1610.3	1609.7	1608.2	1605.9	1603.6	1601.4	1599.1	1601.4
5°	1605.8	1605.2	1604.7	1604.1	1603.5	1601.9	1599.0	1596.2	1593.4	1590.5	1593.1
7.5°	1591.0	1590.4	1589.9	1589.3	1588.7	1586.9	1583.8	1580.6	1577.5	1574.4	1577.0
10°	1577.8	1577.3	1576.7	1576.1	1575.6	1573.7	1570.6	1567.4	1564.3	1561.2	1563.5
12.5°	1561.5	1560.5	1559.4	1558.4	1557.5	1555.5	1552.6	1549.7	1546.8	1543.9	1545.8
15°	1530.7	1529.8	1529.0	1528.1	1527.3	1525.3	1522.2	1519.1	1516.0	1512.9	1514.3
17.5°	1495.3	1494.1	1492.8	1491.6	1490.3	1488.1	1484.9	1481.7	1478.5	1475.2	1477.0
20°	1465.8	1465.3	1464.7	1464.1	1463.6	1461.4	1457.7	1454.1	1450.4	1446.7	1448.7
22.5°	1436.2	1435.3	1434.3	1433.2	1432.2	1429.9	1426.5	1423.1	1419.7	1416.2	1417.5
25°	1389.5	1388.1	1386.7	1385.3	1383.8	1381.3	1377.6	1373.9	1370.3	1366.6	1367.2
27.5°	1334.7	1333.9	1333.0	1332.2	1331.3	1329.1	1325.2	1321.4	1317.7	1313.9	1314.0
30°	1299.1	1298.3	1297.4	1296.6	1295.7	1293.2	1288.9	1284.7	1280.4	1276.2	1275.6
32.5°	1260.5	1259.1	1257.8	1256.5	1255.3	1252.7	1248.9	1245.1	1241.3	1237.6	1236.5
35°	1199.9	1198.7	1197.6	1196.5	1195.3	1192.8	1188.8	1184.9	1180.9	1177.0	1175.5
37.5°	1137.0	1135.6	1134.2	1132.7	1131.3	1128.8	1125.0	1121.3	1117.6	1113.9	1111.7
40°	1094.3	1092.9	1091.5	1090.1	1088.6	1085.9	1081.9	1078.0	1074.0	1070.1	1067.5
42.5°	1048.5	1047.3	1046.1	1044.9	1043.7	1041.1	1037.2	1033.2	1029.3	1025.3	1022.9
45°	982.3	981.2	980.1	978.9	977.8	975.5	972.1	968.7	965.4	962.0	958.6
47.5°	911.1	911.1	911.2	911.3	911.3	909.3	905.2	901.1	897.0	893.0	889.5
50°	865.3	864.4	863.6	862.7	861.9	859.7	856.3	852.9	849.5	846.1	842.4
52.5°	818.4	817.7	817.2	816.5	816.0	813.8	810.2	806.5	803.0	799.3	796.1
55°	748.2	747.3	746.5	745.6	744.8	742.3	738.4	734.4	730.5	726.5	724.0
57.5°	674.1	673.6	673.3	672.8	672.3	670.4	667.0	663.7	660.4	657.0	653.7
60°	627.3	626.1	625.0	623.9	622.7	620.7	617.6	614.4	611.3	608.2	605.4
62.5°	578.4	577.5	576.6	575.7	574.9	573.1	570.3	567.7	565.1	562.4	559.3
65°	505.1	504.5	504.0	503.4	502.8	501.1	497.9	494.8	491.7	488.6	486.1
67.5°	434.1	432.9	431.8	430.6	429.4	427.6	425.3	423.0	420.7	418.4	416.2
70°	389.4	388.0	386.5	385.1	383.7	381.7	379.2	376.6	374.1	371.6	369.9
72.5°	340.5	339.5	338.6	337.6	336.7	335.4	333.8	332.1	330.5	328.8	326.9
75°	268.4	267.9	267.3	266.7	266.2	265.2	263.8	262.4	261.0	259.6	258.7
77.5°	202.1	201.8	201.6	201.4	201.1	200.7	199.8	199.1	198.3	197.5	197.0
80°	160.3	160.3	160.3	160.3	160.3	160.0	159.5	158.9	158.3	157.8	157.5
82.5°	123.7	123.2	122.8	122.3	121.9	121.6	121.5	121.4	121.2	121.1	120.6
85°	69.9	70.2	70.5	70.8	71.1	71.3	71.3	71.3	71.3	71.3	71.0
87.5°	27.5	27.7	27.9	28.0	28.2	28.2	28.1	28.0	27.9	27.8	27.9
90°	0.5	1.2	2.0	2.7	3.5	4.1	4.8	5.5	6.1	6.9	7.4
92.5°	10.4	10.8	11.4	12.0	12.4	13.1	13.9	14.8	15.6	16.4	17.1
95°	27.8	28.0	28.2	28.4	28.6	29.1	30.1	31.0	32.0	32.9	33.6
97.5°	46.1	46.2	46.3	46.4	46.5	47.1	48.4	49.8	51.1	52.4	53.0
100°	59.9	59.9	59.9	59.9	59.9	60.4	61.6	62.9	64.1	65.3	66.3
102.5°	74.5	74.8	75.3	75.7	76.1	76.5	77.2	77.8	78.4	79.0	79.9
105°	97.4	97.8	98.3	98.8	99.3	99.8	100.4	100.9	101.5	102.1	102.6
107.5°	122.7	123.2	123.7	124.1	124.6	125.1	125.5	125.9	126.4	126.8	127.1
110°	140.2	140.6	141.1	141.6	142.0	142.4	142.7	143.0	143.3	143.5	143.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	157.9	158.2	158.3	158.6	158.9	159.2	159.6	159.9	160.2	160.6	160.8
115°	184.1	184.5	184.9	185.3	185.7	186.0	186.2	186.3	186.5	186.7	186.6
117.5°	210.5	210.6	210.8	210.9	211.1	211.3	211.5	211.6	211.8	212.0	212.1
120°	226.9	227.3	227.8	228.3	228.8	229.0	229.1	229.2	229.3	229.4	229.4
122.5°	244.6	244.8	245.0	245.2	245.2	245.5	245.7	246.0	246.3	246.5	246.4
125°	268.7	269.3	269.8	270.4	271.0	271.4	271.5	271.5	271.6	271.7	271.5
127.5°	294.4	294.6	295.0	295.3	295.7	295.9	296.0	296.1	296.1	296.3	296.2
130°	309.7	310.2	310.7	311.1	311.6	312.0	312.2	312.4	312.5	312.7	312.6
132.5°	325.1	325.8	326.7	327.4	328.2	328.6	328.6	328.5	328.5	328.4	328.3
135°	349.4	350.1	350.6	351.2	351.8	352.0	352.1	352.2	352.3	352.4	352.4
137.5°	372.3	372.9	373.4	374.0	374.6	374.9	375.1	375.3	375.5	375.8	375.9
140°	387.0	387.5	388.0	388.4	388.9	389.4	389.6	389.9	390.2	390.5	390.7
142.5°	401.7	402.1	402.6	402.9	403.3	403.7	404.1	404.4	404.8	405.2	405.3
145°	423.4	423.8	424.1	424.5	424.9	425.2	425.5	425.7	426.0	426.3	426.3
147.5°	443.4	443.6	443.7	443.9	444.2	444.4	444.6	444.9	445.1	445.4	445.5
150°	456.7	456.6	456.5	456.4	456.3	456.5	456.9	457.2	457.6	458.0	458.0
152.5°	467.6	467.8	467.9	468.0	468.2	468.3	468.4	468.6	468.7	468.9	469.1
155°	484.5	484.5	484.5	484.5	484.5	484.5	484.6	484.7	484.7	484.8	485.2
157.5°	499.5	499.3	499.1	498.9	498.6	498.6	498.7	498.8	498.9	499.0	499.4
160°	508.4	508.1	507.7	507.5	507.2	507.1	507.2	507.3	507.4	507.5	507.9
162.5°	516.2	516.0	515.9	515.6	515.4	515.3	515.3	515.3	515.4	515.4	515.9
165°	526.7	526.5	526.3	526.1	525.9	525.9	526.0	526.1	526.2	526.3	526.7
167.5°	535.6	535.3	534.9	534.5	534.1	534.0	534.0	534.0	534.0	534.0	534.5
170°	540.4	540.0	539.6	539.2	538.9	538.7	538.7	538.7	538.7	538.7	539.2
172.5°	543.8	543.5	543.1	542.7	542.3	542.2	542.2	542.2	542.2	542.2	542.7
175°	547.7	547.2	546.9	546.5	546.1	545.9	545.9	545.9	545.9	545.9	546.5
177.5°	549.6	549.3	549.0	548.7	548.4	548.2	548.2	548.1	548.0	547.9	548.4
180°	548.9	548.9	548.9	548.9	548.9	548.9	548.9	548.9	548.9	548.9	548.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1608.4	1608.4	1608.4	1608.4	1608.4	1608.4	1608.4	1608.4
2.5°	1603.6	1605.9	1608.2	1609.2	1609.0	1608.7	1608.5	1608.4
5°	1595.6	1598.2	1600.7	1601.9	1601.6	1601.3	1601.0	1600.7
7.5°	1579.4	1582.0	1584.4	1585.5	1585.3	1585.0	1584.7	1584.4
10°	1565.8	1568.0	1570.3	1571.3	1571.0	1570.7	1570.5	1570.2
12.5°	1547.6	1549.4	1551.1	1552.1	1552.0	1551.9	1551.9	1551.8
15°	1515.7	1517.1	1518.5	1519.3	1519.3	1519.3	1519.3	1519.3
17.5°	1478.8	1480.5	1482.2	1482.4	1481.0	1479.6	1478.2	1476.8
20°	1450.7	1452.6	1454.6	1454.9	1453.5	1452.1	1450.7	1449.3
22.5°	1418.8	1420.1	1421.4	1421.5	1420.6	1419.7	1418.7	1417.7
25°	1367.7	1368.3	1368.9	1368.7	1367.8	1367.0	1366.1	1365.3
27.5°	1314.1	1314.2	1314.4	1314.0	1313.2	1312.3	1311.5	1310.6
30°	1275.1	1274.5	1273.9	1273.3	1272.4	1271.6	1270.7	1269.9
32.5°	1235.5	1234.4	1233.5	1232.2	1230.7	1229.2	1227.6	1226.1
35°	1174.1	1172.7	1171.3	1169.5	1167.2	1165.0	1162.7	1160.5
37.5°	1109.7	1107.6	1105.5	1103.8	1102.5	1101.2	1099.9	1098.6
40°	1065.0	1062.4	1059.9	1058.2	1057.3	1056.5	1055.6	1054.8
42.5°	1020.7	1018.3	1016.1	1014.2	1013.0	1011.6	1010.3	1009.0
45°	955.2	951.8	948.4	946.2	945.4	944.5	943.7	942.8
47.5°	886.1	882.6	879.2	876.5	874.5	872.5	870.5	868.6
50°	838.8	835.1	831.4	828.6	826.6	824.6	822.7	820.7
52.5°	792.9	789.7	786.5	783.7	781.5	779.3	777.1	774.9
55°	721.4	718.9	716.3	714.1	712.1	710.1	708.1	706.2
57.5°	650.5	647.2	643.9	641.8	640.7	639.6	638.6	637.4
60°	602.6	599.7	596.9	594.5	592.5	590.5	588.5	586.5
62.5°	556.3	553.3	550.2	547.9	546.4	544.9	543.3	541.8
65°	483.5	481.0	478.4	476.5	475.4	474.3	473.2	472.0
67.5°	414.1	411.9	409.7	408.3	407.6	407.0	406.3	405.7
70°	368.2	366.5	364.8	363.4	362.2	361.1	360.0	358.8
72.5°	325.0	323.0	321.1	319.6	318.5	317.4	316.2	315.1
75°	257.9	257.0	256.2	255.1	254.0	252.9	251.8	250.6
77.5°	196.4	196.0	195.5	194.8	194.0	193.2	192.4	191.6
80°	157.2	156.9	156.7	156.2	155.6	155.0	154.5	153.9
82.5°	120.1	119.6	119.1	118.8	118.7	118.6	118.5	118.3
85°	70.7	70.4	70.1	69.7	69.1	68.5	68.0	67.4
87.5°	28.0	28.1	28.2	28.1	27.7	27.2	26.9	26.5
90°	7.8	8.3	8.8	9.1	9.4	9.7	10.0	10.3
92.5°	17.6	18.3	18.9	19.3	19.5	19.7	20.0	20.2
95°	34.2	34.9	35.5	36.0	36.2	36.4	36.6	36.8
97.5°	53.6	54.3	54.9	55.2	55.3	55.5	55.6	55.7
100°	67.1	68.0	68.8	69.3	69.5	69.7	69.8	70.0
102.5°	80.9	81.8	82.8	83.3	83.6	83.9	84.2	84.5
105°	103.2	103.8	104.3	104.8	105.1	105.4	105.7	105.9
107.5°	127.3	127.6	127.9	128.1	128.1	128.0	128.0	128.0
110°	144.1	144.4	144.7	144.8	144.7	144.6	144.5	144.4



TEST NUMBER: P333435-830

CATALOG NUMBER: S125DIW-S1090D470U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	160.9	161.0	161.2	161.2	161.0	160.8	160.6	160.4
115°	186.5	186.4	186.3	186.2	186.2	186.1	186.0	185.9
117.5°	212.2	212.2	212.3	212.2	211.8	211.4	210.9	210.6
120°	229.4	229.4	229.4	229.2	228.8	228.5	228.1	227.7
122.5°	246.4	246.3	246.2	246.0	245.7	245.4	245.1	244.8
125°	271.4	271.2	271.0	270.8	270.7	270.6	270.5	270.4
127.5°	296.1	296.1	296.0	295.8	295.6	295.4	295.2	295.0
130°	312.5	312.5	312.4	312.2	312.0	311.8	311.6	311.4
132.5°	328.2	328.1	328.0	327.9	327.6	327.3	327.1	326.8
135°	352.4	352.4	352.4	352.2	351.9	351.5	351.1	350.7
137.5°	376.0	376.1	376.3	376.1	375.6	375.1	374.6	374.1
140°	390.9	391.1	391.2	391.1	390.6	390.1	389.6	389.2
142.5°	405.4	405.5	405.6	405.4	404.9	404.4	404.0	403.5
145°	426.3	426.3	426.3	426.2	425.9	425.7	425.4	425.1
147.5°	445.7	446.0	446.2	446.0	445.4	444.7	444.0	443.5
150°	458.0	458.0	458.0	457.9	457.7	457.5	457.3	457.1
152.5°	469.4	469.6	469.8	469.8	469.4	469.1	468.7	468.3
155°	485.6	486.0	486.4	486.4	485.9	485.4	484.9	484.5
157.5°	499.7	500.1	500.5	500.4	499.7	499.1	498.5	497.9
160°	508.3	508.7	509.1	509.0	508.5	508.0	507.6	507.1
162.5°	516.3	516.7	517.2	517.2	516.6	516.0	515.5	514.9
165°	527.1	527.4	527.8	527.7	527.2	526.6	526.0	525.5
167.5°	535.1	535.6	536.2	536.2	535.6	535.0	534.4	533.9
170°	539.8	540.4	541.0	540.9	540.3	539.6	538.9	538.3
172.5°	543.3	543.8	544.4	544.4	543.8	543.2	542.6	542.1
175°	547.1	547.7	548.3	548.2	547.5	546.9	546.2	545.5
177.5°	548.8	549.3	549.8	549.7	549.2	548.7	548.1	547.6
180°	548.9	548.9	548.9	548.9	548.9	548.9	548.9	548.9

(END OF REPORT)