

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: P332766-940

Luminaire Tested: **S124DIW-S575D1340U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332766-940
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-S575D1340U940-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6265.3 lumens
Efficiency: N/A
Efficacy: 116.5 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

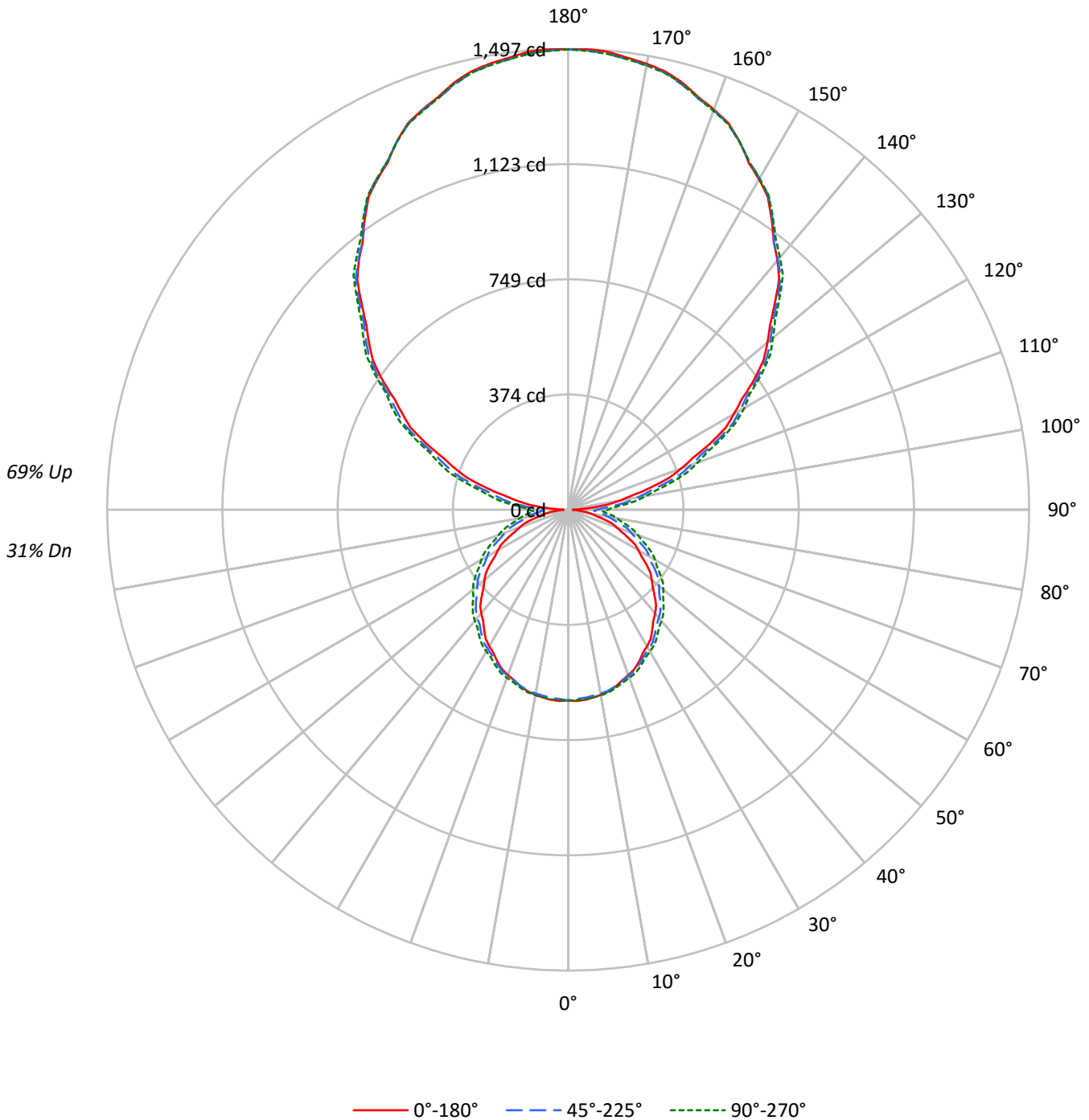
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31
1	93	88	84	81	83	80	76	73	63	60	58	47	46	45	33	32	31	25
2	84	77	71	65	75	69	64	59	55	51	48	41	39	37	29	27	26	20
3	77	67	60	54	69	61	54	49	48	43	40	36	33	31	25	23	22	17
4	70	59	51	45	62	53	47	41	42	37	34	32	29	26	23	20	19	14
5	64	53	45	39	57	47	40	35	38	33	29	29	25	22	20	18	16	12
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	18	16	14	11
7	54	42	34	29	49	38	31	26	31	25	22	23	20	17	17	14	12	9
8	50	38	31	25	45	35	28	23	28	23	19	21	18	15	15	13	11	8
9	47	35	27	22	42	31	25	21	25	20	17	19	16	13	14	12	10	8
10	43	32	25	20	39	29	22	18	23	18	15	18	14	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5002	5002	5002
5°	5018	4889	4903
10°	4987	4809	4805
15°	4943	4717	4690
20°	4875	4614	4579
25°	4799	4500	4456
30°	4717	4386	4330
35°	4624	4269	4220
40°	4550	4158	4105
45°	4439	4056	4005
50°	4344	3938	3901
55°	4249	3827	3778
60°	4098	3685	3667
65°	3933	3533	3529
70°	3733	3359	3369
75°	3453	3169	3224
80°	3143	2984	3082
85°	2746	2820	2999



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.7	0.9
10°-20°	168.1	2.7
20°-30°	254.2	4.1
30°-40°	307.6	4.9
40°-50°	325.2	5.2
50°-60°	306.0	4.9
60°-70°	253.9	4.1
70°-80°	178.3	2.8
80°-90°	105.3	1.7
90°-100°	158.5	2.5
100°-110°	336.5	5.4
110°-120°	525.6	8.4
120°-130°	670.6	10.7
130°-140°	741.6	11.8
140°-150°	723.1	11.5
150°-160°	606.9	9.7
160°-170°	403.8	6.4
170°-180°	141.4	2.3
0°-30°	481.0	7.7
0°-40°	788.6	12.6
0°-60°	1419.8	22.7
0°-90°	1957.3	31.2
90°-120°	1020.6	16.3
90°-150°	3155.9	50.4
90°-180°	4308.0	68.8
0°-180°	6265.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	620	620	620	620	620	
5°	620	618	613	619	618	59
15°	595	595	593	599	599	167
25°	544	548	550	558	559	250
35°	476	484	491	501	503	298
45°	397	410	423	435	438	307
55°	311	326	346	360	364	277
65°	215	237	261	278	284	213
75°	119	145	174	193	200	127
85°	37	66	97	117	125	39
90°	14	55	94	120	129	12
95°	78	112	148	170	177	84
105°	276	292	321	341	351	293
115°	508	515	534	548	552	501
125°	737	737	753	763	765	657
135°	948	955	960	969	970	734
145°	1151	1155	1156	1159	1159	720
155°	1318	1318	1317	1321	1317	606
165°	1435	1432	1429	1436	1432	404
175°	1493	1487	1486	1493	1486	142
180°	1495	1495	1495	1495	1495	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	621.9	621.5	621.2	620.7	620.4	619.7	618.8	617.8	616.7	615.7	616.6
5°	620.4	619.9	619.4	618.9	618.5	617.7	616.6	615.5	614.5	613.4	614.7
7.5°	615.1	614.7	614.5	614.2	613.9	613.4	612.5	611.6	610.6	609.8	611.2
10°	610.6	610.5	610.3	610.2	610.0	609.6	608.8	608.0	607.3	606.5	607.9
12.5°	604.5	604.5	604.5	604.4	604.4	604.1	603.6	603.1	602.5	602.0	603.2
15°	594.7	594.9	594.9	595.1	595.3	595.1	594.7	594.2	593.7	593.3	594.7
17.5°	581.2	581.7	582.1	582.6	583.1	583.3	583.2	583.1	583.0	582.9	584.2
20°	571.8	572.2	572.7	573.2	573.6	573.9	574.1	574.3	574.4	574.5	576.0
22.5°	561.2	561.8	562.4	562.9	563.6	564.0	564.3	564.5	564.8	565.1	566.7
25°	544.0	544.9	545.9	546.8	547.7	548.4	548.8	549.3	549.8	550.3	552.0
27.5°	524.9	526.2	527.5	529.0	530.3	531.3	532.0	532.7	533.4	534.1	535.7
30°	512.1	513.4	514.5	515.8	517.0	518.2	519.2	520.3	521.4	522.5	524.2
32.5°	498.2	499.7	501.1	502.7	504.2	505.5	506.7	507.9	509.1	510.3	512.2
35°	476.0	477.9	479.7	481.5	483.4	485.1	486.6	488.2	489.7	491.2	493.5
37.5°	453.7	455.8	457.9	460.0	462.2	464.2	466.1	468.1	469.9	471.8	474.0
40°	439.3	441.2	443.3	445.2	447.3	449.3	451.5	453.6	455.8	458.0	460.3
42.5°	422.6	424.8	427.0	429.4	431.6	434.0	436.5	439.0	441.6	444.1	446.7
45°	396.9	399.8	402.8	405.7	408.6	411.5	414.5	417.4	420.4	423.3	425.9
47.5°	372.4	375.3	378.4	381.4	384.4	387.6	391.0	394.4	397.8	401.2	403.9
50°	354.5	357.9	361.3	364.8	368.2	371.6	375.0	378.4	381.7	385.1	388.2
52.5°	336.8	340.2	343.6	347.0	350.4	354.0	357.9	361.8	365.7	369.5	372.6
55°	310.9	314.1	317.4	320.6	323.8	327.7	332.3	337.0	341.6	346.3	349.4
57.5°	281.9	285.9	289.9	293.9	297.9	302.2	306.7	311.4	316.0	320.6	324.2
60°	263.0	267.0	271.0	275.0	279.0	283.6	288.6	293.7	298.8	303.9	307.5
62.5°	244.7	249.1	253.4	257.8	262.2	266.9	272.0	277.1	282.2	287.3	290.8
65°	215.1	220.1	225.0	229.9	234.9	240.0	245.1	250.4	255.7	260.9	264.7
67.5°	186.6	191.9	197.2	202.4	207.6	213.0	218.6	224.3	229.9	235.5	239.4
70°	167.2	172.5	177.7	183.0	188.2	193.8	199.6	205.5	211.3	217.2	221.3
72.5°	148.4	153.7	159.1	164.4	169.8	175.6	181.8	188.1	194.3	200.5	204.6
75°	119.3	125.0	130.7	136.4	142.1	148.3	154.7	161.2	167.7	174.2	178.5
77.5°	92.3	98.4	104.4	110.4	116.5	122.9	129.7	136.4	143.2	150.0	154.4
80°	75.6	81.8	88.0	94.2	100.3	106.7	113.6	120.4	127.2	133.9	138.6
82.5°	58.9	65.4	71.8	78.2	84.6	91.2	98.0	104.8	111.6	118.4	123.1
85°	36.7	43.2	49.8	56.2	62.7	69.4	76.3	83.3	90.2	97.1	101.7
87.5°	21.2	28.1	35.0	41.8	48.7	55.6	62.9	70.0	77.1	84.4	89.1
90°	14.5	23.5	32.5	41.6	50.6	59.4	68.0	76.8	85.4	94.2	100.1
92.5°	35.3	44.1	52.9	61.7	70.4	78.9	86.9	95.1	103.1	111.2	116.5
95°	78.4	85.8	93.2	100.6	108.0	115.7	123.9	132.0	140.2	148.3	153.2
97.5°	129.4	135.6	141.9	148.1	154.3	161.6	170.0	178.3	186.7	195.1	200.0
100°	169.5	174.6	179.6	184.7	189.7	196.4	204.6	213.0	221.3	229.7	234.3
102.5°	212.0	216.1	220.0	223.9	227.8	233.8	241.7	249.8	257.8	265.7	270.5
105°	275.7	279.0	282.4	285.7	289.1	294.1	300.9	307.6	314.3	321.0	325.7
107.5°	343.8	346.6	349.5	352.3	355.2	359.4	364.9	370.4	375.9	381.6	386.0
110°	389.5	392.2	394.8	397.5	400.2	404.1	409.2	414.4	419.5	424.6	427.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	437.0	439.1	441.0	443.1	445.1	448.4	453.2	457.8	462.5	467.2	470.6
115°	508.4	509.8	511.1	512.6	513.9	516.8	521.2	525.7	530.1	534.5	537.6
117.5°	576.2	577.3	578.3	579.3	580.4	583.0	587.3	591.5	595.8	599.9	602.3
120°	621.0	622.5	624.0	625.4	627.0	629.5	633.3	636.9	640.7	644.4	646.1
122.5°	668.2	668.7	669.2	669.7	670.2	672.3	676.3	680.1	684.0	687.9	690.1
125°	737.1	737.0	736.8	736.6	736.5	738.2	741.8	745.4	749.0	752.6	755.0
127.5°	800.1	800.8	801.4	802.0	802.6	804.1	806.7	809.2	811.8	814.4	816.6
130°	844.0	844.6	845.2	845.8	846.4	848.0	850.4	852.9	855.4	857.8	860.1
132.5°	889.3	889.7	890.1	890.6	890.9	892.1	893.9	895.5	897.3	899.1	901.3
135°	948.5	950.0	951.6	953.1	954.7	956.0	957.1	958.1	959.2	960.3	962.2
137.5°	1013.7	1014.3	1014.9	1015.5	1016.0	1016.7	1017.7	1018.6	1019.6	1020.5	1022.1
140°	1057.2	1057.6	1057.9	1058.3	1058.6	1058.9	1059.1	1059.3	1059.4	1059.5	1061.3
142.5°	1096.4	1096.9	1097.4	1097.9	1098.4	1098.5	1098.1	1097.9	1097.6	1097.3	1098.9
145°	1151.4	1152.3	1153.1	1154.0	1154.9	1155.4	1155.7	1155.9	1156.2	1156.5	1157.1
147.5°	1205.9	1207.0	1208.1	1209.2	1210.2	1210.7	1210.5	1210.3	1210.1	1209.9	1209.8
150°	1239.2	1240.1	1241.0	1241.9	1242.8	1243.1	1243.1	1243.1	1243.1	1243.1	1243.1
152.5°	1270.2	1270.8	1271.3	1271.9	1272.5	1272.9	1273.1	1273.3	1273.5	1273.7	1274.3
155°	1318.3	1318.3	1318.3	1318.3	1318.3	1318.2	1317.9	1317.7	1317.4	1317.2	1318.2
157.5°	1359.1	1358.6	1358.2	1357.6	1357.2	1356.9	1356.9	1356.8	1356.8	1356.7	1357.5
160°	1383.1	1382.9	1382.6	1382.3	1382.1	1381.8	1381.5	1381.3	1381.1	1380.8	1381.5
162.5°	1405.3	1404.6	1404.0	1403.3	1402.7	1402.2	1401.9	1401.7	1401.4	1401.1	1402.6
165°	1435.1	1434.4	1433.6	1432.8	1432.1	1431.5	1430.9	1430.4	1429.9	1429.3	1430.9
167.5°	1458.0	1457.0	1455.9	1454.8	1453.8	1453.2	1453.3	1453.3	1453.4	1453.4	1455.0
170°	1471.0	1469.7	1468.5	1467.1	1465.9	1465.3	1465.6	1465.9	1466.2	1466.3	1467.9
172.5°	1480.2	1479.2	1478.1	1477.0	1476.0	1475.4	1475.5	1475.5	1475.6	1475.6	1477.4
175°	1493.0	1491.7	1490.4	1489.2	1487.8	1487.0	1486.8	1486.6	1486.3	1486.0	1487.8
177.5°	1497.1	1496.1	1495.0	1494.1	1493.0	1492.5	1492.5	1492.5	1492.5	1492.5	1494.0
180°	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	617.5	618.3	619.2	619.6	619.5	619.3	619.2	619.1
5°	615.9	617.1	618.3	618.8	618.8	618.6	618.4	618.2
7.5°	612.6	613.9	615.4	616.0	615.8	615.6	615.5	615.4
10°	609.2	610.6	612.0	612.6	612.5	612.3	612.2	612.0
12.5°	604.6	605.8	607.1	607.7	607.7	607.6	607.6	607.6
15°	596.0	597.4	598.8	599.4	599.3	599.1	599.0	598.8
17.5°	585.7	587.1	588.5	589.2	589.1	589.0	588.8	588.7
20°	577.7	579.2	580.7	581.5	581.5	581.5	581.5	581.5
22.5°	568.2	569.7	571.2	572.2	572.4	572.7	572.9	573.2
25°	553.7	555.4	557.1	557.9	558.1	558.3	558.4	558.6
27.5°	537.3	538.9	540.5	541.4	541.5	541.7	541.9	542.1
30°	525.9	527.6	529.3	530.3	530.6	530.9	531.2	531.5
32.5°	514.2	516.1	518.1	519.2	519.5	519.8	520.1	520.4
35°	495.6	497.8	499.9	501.2	501.7	502.1	502.6	503.1
37.5°	476.3	478.4	480.6	482.0	482.4	483.0	483.4	483.9
40°	462.6	464.9	467.3	468.7	469.3	469.9	470.6	471.2
42.5°	449.2	451.7	454.3	455.8	456.4	456.8	457.4	457.8
45°	428.6	431.1	433.7	435.4	436.2	437.0	437.7	438.5
47.5°	406.6	409.4	412.1	413.8	414.8	415.7	416.7	417.6
50°	391.3	394.4	397.4	399.5	400.4	401.3	402.3	403.1
52.5°	375.8	378.8	381.9	383.9	384.9	385.8	386.6	387.6
55°	352.4	355.5	358.6	360.6	361.5	362.5	363.4	364.3
57.5°	327.9	331.6	335.3	337.5	338.4	339.2	340.1	341.0
60°	311.0	314.6	318.1	320.5	321.7	323.0	324.2	325.5
62.5°	294.4	297.9	301.5	303.8	305.1	306.3	307.6	308.8
65°	268.6	272.5	276.3	278.8	280.1	281.3	282.6	283.8
67.5°	243.3	247.3	251.2	253.7	254.9	256.1	257.3	258.5
70°	225.5	229.7	233.8	236.5	237.6	238.6	239.7	240.8
72.5°	208.6	212.7	216.7	219.3	220.5	221.7	222.9	224.1
75°	182.8	187.1	191.5	194.3	195.6	197.1	198.5	199.8
77.5°	158.8	163.2	167.6	170.5	171.9	173.4	174.9	176.4
80°	143.2	147.8	152.4	155.3	156.6	157.8	159.1	160.3
82.5°	127.9	132.6	137.4	140.4	141.8	143.1	144.5	145.9
85°	106.4	111.0	115.7	118.8	120.3	121.8	123.3	124.9
87.5°	93.9	98.7	103.4	106.6	108.1	109.5	110.9	112.4
90°	106.2	112.2	118.2	122.1	123.9	125.6	127.3	129.0
92.5°	121.7	127.0	132.2	135.6	137.2	138.8	140.3	141.9
95°	158.1	163.1	168.0	171.1	172.5	174.0	175.3	176.7
97.5°	205.0	210.0	214.9	218.1	219.4	220.7	222.0	223.4
100°	239.1	243.7	248.3	251.3	252.4	253.4	254.5	255.6
102.5°	275.3	280.0	284.8	287.8	289.3	290.7	292.1	293.6
105°	330.3	334.9	339.6	342.9	344.8	346.9	348.8	350.9
107.5°	390.6	395.1	399.6	402.3	403.4	404.5	405.6	406.6
110°	430.7	433.7	436.8	439.3	441.3	443.3	445.3	447.3



TEST NUMBER: P332766-940

CATALOG NUMBER: S124DIW-S575D1340U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	473.9	477.2	480.5	482.9	484.2	485.6	487.0	488.4
115°	540.8	543.9	547.1	549.0	549.8	550.6	551.5	552.3
117.5°	604.7	607.0	609.3	610.8	611.5	612.2	613.0	613.7
120°	648.0	649.8	651.6	653.4	655.1	656.8	658.6	660.3
122.5°	692.2	694.5	696.7	697.9	698.1	698.3	698.5	698.7
125°	757.4	759.8	762.2	763.7	764.1	764.6	764.9	765.4
127.5°	818.9	821.2	823.4	824.8	825.5	826.2	826.8	827.4
130°	862.4	864.6	866.9	868.0	867.9	867.8	867.6	867.5
132.5°	903.4	905.5	907.7	909.0	909.5	910.0	910.5	911.1
135°	964.2	966.2	968.1	969.2	969.3	969.5	969.6	969.8
137.5°	1023.7	1025.2	1026.8	1028.1	1029.0	1029.9	1030.8	1031.8
140°	1063.0	1064.8	1066.5	1067.6	1068.2	1068.7	1069.2	1069.7
142.5°	1100.7	1102.4	1104.1	1105.3	1105.8	1106.4	1107.1	1107.7
145°	1157.8	1158.4	1159.1	1159.4	1159.2	1159.0	1159.0	1158.8
147.5°	1209.7	1209.6	1209.5	1209.6	1209.9	1210.1	1210.3	1210.6
150°	1243.1	1243.1	1243.1	1243.0	1242.8	1242.5	1242.2	1242.1
152.5°	1275.0	1275.6	1276.2	1276.1	1275.5	1274.8	1274.2	1273.5
155°	1319.3	1320.3	1321.3	1321.3	1320.3	1319.3	1318.2	1317.2
157.5°	1358.3	1359.1	1359.9	1359.8	1358.9	1358.0	1357.2	1356.3
160°	1382.3	1383.1	1383.8	1383.6	1382.3	1381.1	1379.7	1378.5
162.5°	1403.9	1405.3	1406.7	1406.8	1405.4	1404.2	1402.9	1401.6
165°	1432.4	1434.0	1435.6	1435.8	1434.8	1433.7	1432.7	1431.6
167.5°	1456.5	1458.0	1459.6	1459.6	1457.9	1456.3	1454.8	1453.2
170°	1469.5	1471.0	1472.6	1472.4	1470.6	1468.8	1467.0	1465.3
172.5°	1479.1	1480.9	1482.6	1482.6	1480.8	1479.0	1477.2	1475.4
175°	1489.6	1491.4	1493.3	1493.3	1491.4	1489.6	1487.8	1486.0
177.5°	1495.4	1496.8	1498.3	1498.2	1496.6	1494.9	1493.3	1491.6
180°	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3

(END OF REPORT)