

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: P331546-940

Luminaire Tested: **S122DIW-S675D1240U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331546-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S675D1240U940-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6232.9 lumens
Efficiency: N/A
Efficacy: 101.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

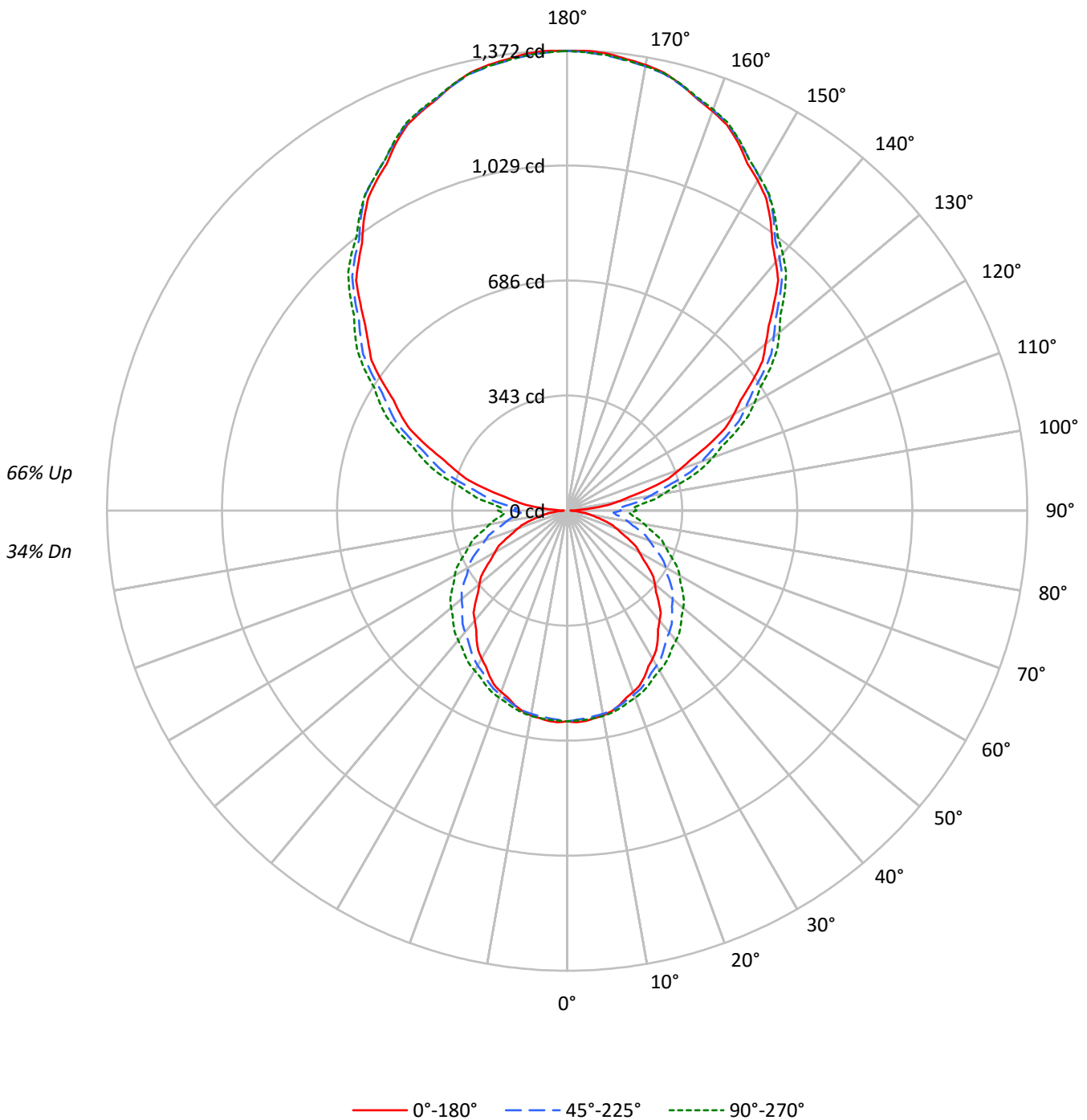
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	93	93	93	75	75	75	57	57	57	42	42	42	34
1	93	89	84	81	84	80	76	73	64	61	59	49	47	46	35	34	33	27
2	84	77	70	65	76	69	64	59	55	51	48	42	40	37	30	29	27	22
3	77	67	59	54	69	61	54	49	48	44	40	37	34	31	27	24	23	18
4	70	59	51	45	63	53	46	41	43	38	34	33	29	26	23	21	19	15
5	64	52	44	38	57	47	40	35	38	33	29	29	25	22	21	18	16	13
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	19	16	14	11
7	54	42	34	28	49	38	31	26	31	25	22	24	20	17	17	15	13	10
8	50	38	30	25	45	34	28	23	28	23	19	22	18	15	16	13	11	9
9	47	35	27	22	42	31	25	20	25	20	17	20	16	13	15	12	10	8
10	43	32	24	20	39	29	22	18	23	18	15	18	15	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10141	10141	10141
5°	10191	9762	9724
10°	10126	9474	9367
15°	9987	9168	8990
20°	9810	8841	8627
25°	9637	8525	8298
30°	9392	8201	7967
35°	9142	7888	7735
40°	8880	7621	7501
45°	8632	7383	7302
50°	8365	7166	7106
55°	8089	6934	6906
60°	7745	6695	6695
65°	7391	6412	6445
70°	6992	6110	6173
75°	6483	5811	5925
80°	5680	5509	5672
85°	4908	5245	5473



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	1.0
10°-20°	170.7	2.7
20°-30°	258.6	4.1
30°-40°	315.0	5.1
40°-50°	338.9	5.4
50°-60°	329.1	5.3
60°-70°	287.4	4.6
70°-80°	221.2	3.5
80°-90°	153.9	2.5
90°-100°	189.1	3.0
100°-110°	344.3	5.5
110°-120°	510.3	8.2
120°-130°	633.7	10.2
130°-140°	691.8	11.1
140°-150°	669.1	10.7
150°-160°	559.5	9.0
160°-170°	371.1	6.0
170°-180°	129.7	2.1
0°-30°	488.8	7.8
0°-40°	803.8	12.9
0°-60°	1471.8	23.6
0°-90°	2134.4	34.2
90°-120°	1043.7	16.7
90°-150°	3038.3	48.7
90°-180°	4099.0	65.8
0°-180°	6232.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	628	628	628	628	628	
5°	630	627	622	627	626	60
15°	601	602	603	610	610	169
25°	546	553	561	571	574	251
35°	471	486	503	523	530	294
45°	386	411	442	470	480	298
55°	296	329	376	408	420	264
65°	202	247	300	336	350	201
75°	112	163	221	259	272	118
85°	33	89	148	184	198	35
90°	10	78	161	194	207	9
95°	67	122	179	212	222	75
105°	253	284	333	365	377	268
115°	466	484	522	547	554	461
125°	675	686	711	731	739	603
135°	872	884	896	913	918	673
145°	1057	1065	1072	1078	1078	660
155°	1208	1212	1215	1220	1218	556
165°	1315	1314	1314	1321	1316	371
175°	1368	1364	1362	1369	1363	130
180°	1370	1370	1370	1370	1370	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	631.8	631.2	630.8	630.3	629.8	629.0	627.9	626.7	625.6	624.5	625.3
5°	629.9	629.3	628.7	628.1	627.5	626.6	625.4	624.2	622.9	621.7	622.9
7.5°	624.3	623.8	623.5	623.0	622.7	622.0	621.1	620.1	619.2	618.3	619.7
10°	619.9	619.5	619.1	618.7	618.3	617.8	617.2	616.6	616.0	615.4	617.0
12.5°	612.6	612.7	612.8	612.9	613.0	612.8	612.3	611.9	611.4	611.0	612.6
15°	600.8	601.2	601.6	602.0	602.4	602.6	602.6	602.6	602.6	602.6	604.4
17.5°	585.5	586.4	587.2	588.1	588.9	589.7	590.3	590.9	591.6	592.3	594.1
20°	575.3	576.3	577.3	578.4	579.3	580.2	581.0	581.9	582.7	583.5	585.8
22.5°	564.4	565.5	566.8	567.9	569.1	570.2	571.4	572.5	573.6	574.8	577.0
25°	546.2	547.6	549.0	550.5	551.9	553.5	555.3	557.1	558.9	560.7	563.2
27.5°	524.3	526.6	529.0	531.3	533.6	535.8	538.0	540.1	542.2	544.4	547.4
30°	509.8	512.4	515.1	517.6	520.3	522.9	525.6	528.2	530.8	533.4	536.6
32.5°	493.7	496.7	499.6	502.6	505.6	508.6	511.8	514.8	517.9	521.0	524.8
35°	470.6	474.0	477.5	480.9	484.4	488.0	491.9	495.7	499.5	503.4	507.8
37.5°	445.5	449.5	453.4	457.4	461.4	465.8	470.8	475.8	480.7	485.7	490.7
40°	428.7	433.2	437.7	442.1	446.6	451.5	457.0	462.4	467.9	473.3	478.6
42.5°	412.8	417.1	421.6	426.1	430.5	435.9	442.2	448.4	454.7	461.0	466.7
45°	385.9	391.5	396.9	402.3	407.8	414.1	421.2	428.3	435.3	442.4	448.7
47.5°	359.5	365.5	371.5	377.4	383.3	390.5	398.8	407.1	415.4	423.7	430.3
50°	341.3	347.7	353.9	360.2	366.4	374.2	383.3	392.4	401.4	410.5	417.4
52.5°	323.9	330.5	337.1	343.7	350.3	358.4	367.9	377.6	387.1	396.7	403.8
55°	295.9	303.1	310.4	317.7	324.9	333.9	344.4	354.9	365.4	375.9	383.3
57.5°	268.1	276.4	284.6	292.8	301.0	310.5	321.2	331.9	342.7	353.4	361.2
60°	248.5	257.2	265.9	274.6	283.3	293.5	305.0	316.5	328.0	339.6	347.2
62.5°	231.0	240.0	249.1	258.1	267.2	277.4	288.9	300.4	312.0	323.5	331.7
65°	202.1	212.0	221.9	231.8	241.7	252.6	264.6	276.5	288.5	300.4	308.7
67.5°	175.5	185.8	196.3	206.6	217.0	228.2	240.4	252.6	264.8	277.1	285.4
70°	156.6	167.1	177.6	188.2	198.7	210.2	222.7	235.2	247.8	260.4	269.0
72.5°	139.1	149.9	160.8	171.7	182.4	194.2	207.0	219.6	232.4	245.0	253.6
75°	112.0	123.3	134.6	146.0	157.3	169.4	182.4	195.3	208.2	221.2	229.9
77.5°	85.8	97.6	109.5	121.3	133.1	145.7	158.8	172.0	185.1	198.2	207.0
80°	68.3	80.6	92.9	105.3	117.6	130.4	143.6	156.7	169.8	183.0	191.5
82.5°	53.7	65.9	78.0	90.2	102.5	115.1	128.5	141.8	155.1	168.4	176.9
85°	32.8	45.3	57.9	70.4	82.9	95.7	108.6	121.5	134.6	147.5	156.0
87.5°	18.1	30.8	43.4	56.1	68.8	82.1	96.2	110.3	124.4	138.5	146.6
90°	10.3	25.1	39.9	54.8	69.6	86.2	104.9	123.4	142.0	160.6	168.2
92.5°	29.0	42.2	55.3	68.5	81.7	95.1	109.0	122.8	136.6	150.3	158.4
95°	67.4	79.5	91.6	103.6	115.7	128.0	140.7	153.4	166.0	178.7	186.4
97.5°	116.2	126.9	137.7	148.4	159.1	170.8	183.4	196.0	208.7	221.2	228.7
100°	153.2	162.7	172.3	181.8	191.4	202.2	214.3	226.4	238.5	250.6	258.1
102.5°	191.4	199.8	208.3	216.8	225.2	235.5	247.4	259.5	271.4	283.4	291.0
105°	253.2	259.8	266.4	273.0	279.7	288.6	299.5	310.6	321.6	332.7	340.3
107.5°	316.3	322.2	328.0	333.8	339.7	347.6	357.7	367.7	377.8	387.9	394.8
110°	356.3	361.9	367.5	373.1	378.6	386.4	396.3	406.2	416.2	426.1	432.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	400.7	405.6	410.5	415.5	420.4	427.6	436.8	445.9	455.2	464.4	470.3
115°	466.1	469.9	473.7	477.4	481.2	487.4	496.0	504.5	513.2	521.7	527.5
117.5°	530.5	534.0	537.4	541.0	544.5	549.7	556.7	563.7	570.7	577.7	583.0
120°	573.9	576.8	579.6	582.5	585.4	589.8	595.8	601.9	608.0	613.9	619.6
122.5°	613.7	616.4	619.3	622.1	624.8	629.3	635.5	641.7	647.8	654.0	658.9
125°	674.8	677.1	679.4	681.7	684.0	688.0	693.8	699.4	705.1	710.8	715.5
127.5°	735.1	737.8	740.6	743.2	746.0	749.5	753.9	758.1	762.4	766.7	770.8
130°	773.0	776.1	779.3	782.5	785.6	789.0	792.7	796.5	800.2	804.0	808.3
132.5°	815.6	818.1	820.6	823.1	825.6	828.6	832.0	835.4	838.7	842.1	845.7
135°	871.6	874.4	877.2	880.0	882.9	885.6	888.1	890.6	893.1	895.7	899.6
137.5°	931.5	933.7	936.0	938.3	940.6	942.4	944.0	945.6	947.1	948.7	952.2
140°	967.5	969.6	971.7	973.8	976.0	977.9	979.5	981.2	982.9	984.6	987.8
142.5°	1004.5	1006.7	1008.7	1010.8	1013.0	1014.5	1015.5	1016.4	1017.4	1018.3	1021.1
145°	1056.8	1058.6	1060.4	1062.2	1064.0	1065.7	1067.2	1068.7	1070.3	1071.8	1073.3
147.5°	1104.2	1106.3	1108.5	1110.7	1112.9	1114.5	1115.4	1116.5	1117.5	1118.6	1119.3
150°	1136.6	1138.1	1139.7	1141.2	1142.7	1144.1	1145.0	1146.1	1147.1	1148.2	1148.9
152.5°	1165.3	1166.8	1168.3	1169.8	1171.4	1172.8	1174.0	1175.3	1176.5	1177.8	1178.8
155°	1208.3	1209.1	1209.8	1210.6	1211.4	1212.1	1212.9	1213.6	1214.4	1215.2	1216.5
157.5°	1245.0	1245.5	1246.1	1246.6	1247.1	1247.6	1248.0	1248.5	1248.9	1249.5	1251.2
160°	1267.2	1267.7	1268.3	1268.8	1269.3	1269.7	1269.9	1270.2	1270.4	1270.7	1272.2
162.5°	1287.5	1287.7	1287.8	1287.9	1288.0	1288.2	1288.4	1288.7	1289.0	1289.2	1290.9
165°	1314.6	1314.4	1314.1	1313.8	1313.6	1313.5	1313.5	1313.5	1313.5	1313.5	1315.3
167.5°	1337.3	1336.5	1335.8	1335.0	1334.2	1333.8	1333.7	1333.7	1333.6	1333.6	1335.4
170°	1349.3	1348.5	1347.8	1347.0	1346.2	1345.8	1345.5	1345.2	1345.0	1344.7	1346.5
172.5°	1357.6	1356.9	1356.1	1355.3	1354.6	1354.1	1353.8	1353.5	1353.3	1353.0	1354.9
175°	1367.8	1367.1	1366.3	1365.5	1364.8	1364.1	1363.6	1363.1	1362.5	1362.0	1363.9
177.5°	1372.0	1371.4	1370.7	1370.1	1369.5	1369.0	1368.6	1368.2	1367.8	1367.3	1368.6
180°	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	626.1	626.9	627.7	627.9	627.6	627.3	627.0	626.7
5°	624.2	625.4	626.6	627.1	626.9	626.7	626.5	626.2
7.5°	621.2	622.7	624.1	624.7	624.6	624.3	624.1	623.9
10°	618.6	620.2	621.9	622.5	622.3	622.1	622.0	621.7
12.5°	614.2	615.8	617.5	618.1	618.0	617.8	617.6	617.3
15°	606.3	608.1	609.9	610.7	610.6	610.3	610.1	609.9
17.5°	596.0	598.0	599.9	600.8	600.8	600.8	600.8	600.8
20°	588.0	590.2	592.4	593.5	593.5	593.5	593.5	593.5
22.5°	579.3	581.5	583.6	585.0	585.2	585.6	585.9	586.2
25°	565.6	568.0	570.4	571.9	572.6	573.2	573.8	574.4
27.5°	550.5	553.6	556.7	558.4	558.8	559.3	559.7	560.2
30°	539.9	543.1	546.4	548.3	548.9	549.6	550.1	550.7
32.5°	528.5	532.3	535.9	538.3	539.5	540.6	541.6	542.7
35°	512.3	516.7	521.2	524.1	525.6	527.0	528.3	529.8
37.5°	495.6	500.5	505.5	508.7	510.2	511.7	513.2	514.7
40°	483.8	489.1	494.4	497.9	499.7	501.6	503.4	505.2
42.5°	472.4	478.2	483.9	487.8	489.5	491.4	493.2	495.0
45°	455.0	461.2	467.5	471.6	473.7	475.7	477.7	479.7
47.5°	436.8	443.4	449.9	454.2	456.5	458.7	460.9	463.2
50°	424.3	431.1	438.1	442.6	444.9	447.1	449.2	451.5
52.5°	410.8	417.9	424.9	429.6	431.9	434.4	436.8	439.2
55°	390.5	397.8	405.1	410.0	412.7	415.3	417.9	420.5
57.5°	369.1	376.9	384.8	390.0	392.7	395.4	398.1	400.7
60°	354.9	362.6	370.3	375.6	378.4	381.2	384.1	386.9
62.5°	339.8	348.0	356.2	361.7	364.3	366.9	369.6	372.3
65°	317.0	325.3	333.6	339.0	341.7	344.3	347.0	349.6
67.5°	293.8	302.2	310.6	316.2	318.9	321.6	324.4	327.2
70°	277.8	286.4	295.2	300.7	303.1	305.6	308.0	310.4
72.5°	262.2	270.6	279.2	284.9	287.8	290.8	293.6	296.6
75°	238.6	247.3	256.0	261.6	264.3	266.9	269.6	272.2
77.5°	215.6	224.3	232.9	238.6	241.5	244.3	247.1	249.9
80°	199.9	208.5	217.0	222.7	225.4	228.3	231.1	234.0
82.5°	185.4	193.9	202.4	207.9	210.6	213.3	216.0	218.6
85°	164.4	173.0	181.5	187.1	189.9	192.8	195.6	198.4
87.5°	154.7	162.9	171.0	176.5	179.1	181.7	184.4	187.0
90°	175.8	183.3	190.9	196.1	198.8	201.4	204.1	206.8
92.5°	166.5	174.5	182.5	187.8	190.2	192.7	195.2	197.7
95°	194.0	201.7	209.5	214.2	216.2	218.0	220.0	221.9
97.5°	236.2	243.7	251.2	256.1	258.4	260.8	263.1	265.5
100°	265.6	273.0	280.5	285.3	287.2	289.2	291.1	293.1
102.5°	298.5	306.0	313.5	318.3	320.2	322.2	324.2	326.2
105°	347.9	355.4	363.0	367.9	370.1	372.4	374.6	376.8
107.5°	401.9	408.8	415.9	419.9	421.0	422.0	423.0	424.1
110°	439.0	445.5	451.9	455.9	457.4	458.8	460.3	461.7



TEST NUMBER: P331546-940

CATALOG NUMBER: S122DIW-S675D1240U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	476.2	482.0	487.9	491.6	493.3	494.9	496.6	498.2
115°	533.3	539.1	545.0	548.6	550.1	551.5	552.9	554.5
117.5°	588.4	593.8	599.1	602.4	603.8	605.0	606.4	607.6
120°	625.3	631.0	636.6	640.2	641.7	643.1	644.5	646.0
122.5°	663.8	668.7	673.5	676.6	678.0	679.3	680.6	682.0
125°	720.2	724.9	729.6	732.7	734.2	735.8	737.4	739.0
127.5°	774.9	779.0	783.1	785.6	786.6	787.5	788.5	789.4
130°	812.6	817.0	821.4	823.8	824.4	824.9	825.5	826.2
132.5°	849.3	852.8	856.4	858.5	859.3	860.1	860.9	861.7
135°	903.7	907.7	911.7	914.1	914.9	915.8	916.6	917.5
137.5°	955.7	959.2	962.8	964.7	965.0	965.4	965.7	966.1
140°	991.0	994.3	997.6	999.3	999.4	999.6	999.9	1000.1
142.5°	1023.9	1026.7	1029.5	1030.9	1030.9	1030.9	1031.0	1031.0
145°	1074.8	1076.2	1077.7	1078.4	1078.4	1078.4	1078.3	1078.3
147.5°	1120.0	1120.7	1121.4	1121.6	1121.1	1120.6	1120.1	1119.6
150°	1149.7	1150.5	1151.2	1151.2	1150.5	1149.7	1148.9	1148.2
152.5°	1179.7	1180.6	1181.6	1181.6	1180.6	1179.7	1178.8	1177.8
155°	1217.8	1219.1	1220.3	1220.6	1219.9	1219.1	1218.3	1217.5
157.5°	1252.9	1254.6	1256.4	1256.7	1255.4	1254.2	1252.9	1251.7
160°	1273.8	1275.3	1276.8	1277.1	1276.1	1275.1	1274.1	1273.0
162.5°	1292.7	1294.4	1296.2	1296.5	1295.2	1294.0	1292.7	1291.6
165°	1317.1	1318.8	1320.7	1320.9	1319.6	1318.4	1317.1	1315.8
167.5°	1337.2	1339.0	1340.8	1341.0	1339.7	1338.4	1337.0	1335.7
170°	1348.3	1350.1	1351.9	1352.0	1350.5	1349.0	1347.4	1345.9
172.5°	1356.6	1358.4	1360.2	1360.3	1358.8	1357.3	1355.8	1354.2
175°	1365.7	1367.4	1369.2	1369.4	1367.8	1366.3	1364.8	1363.2
177.5°	1369.8	1371.1	1372.3	1372.3	1371.1	1369.8	1368.6	1367.3
180°	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1

(END OF REPORT)