

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: P332768-830

Luminaire Tested: **S124DIW-S575D1340U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332768-830
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-S575D1340U830-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH 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: 6738.7 lumens
Efficiency: N/A
Efficacy: 125.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

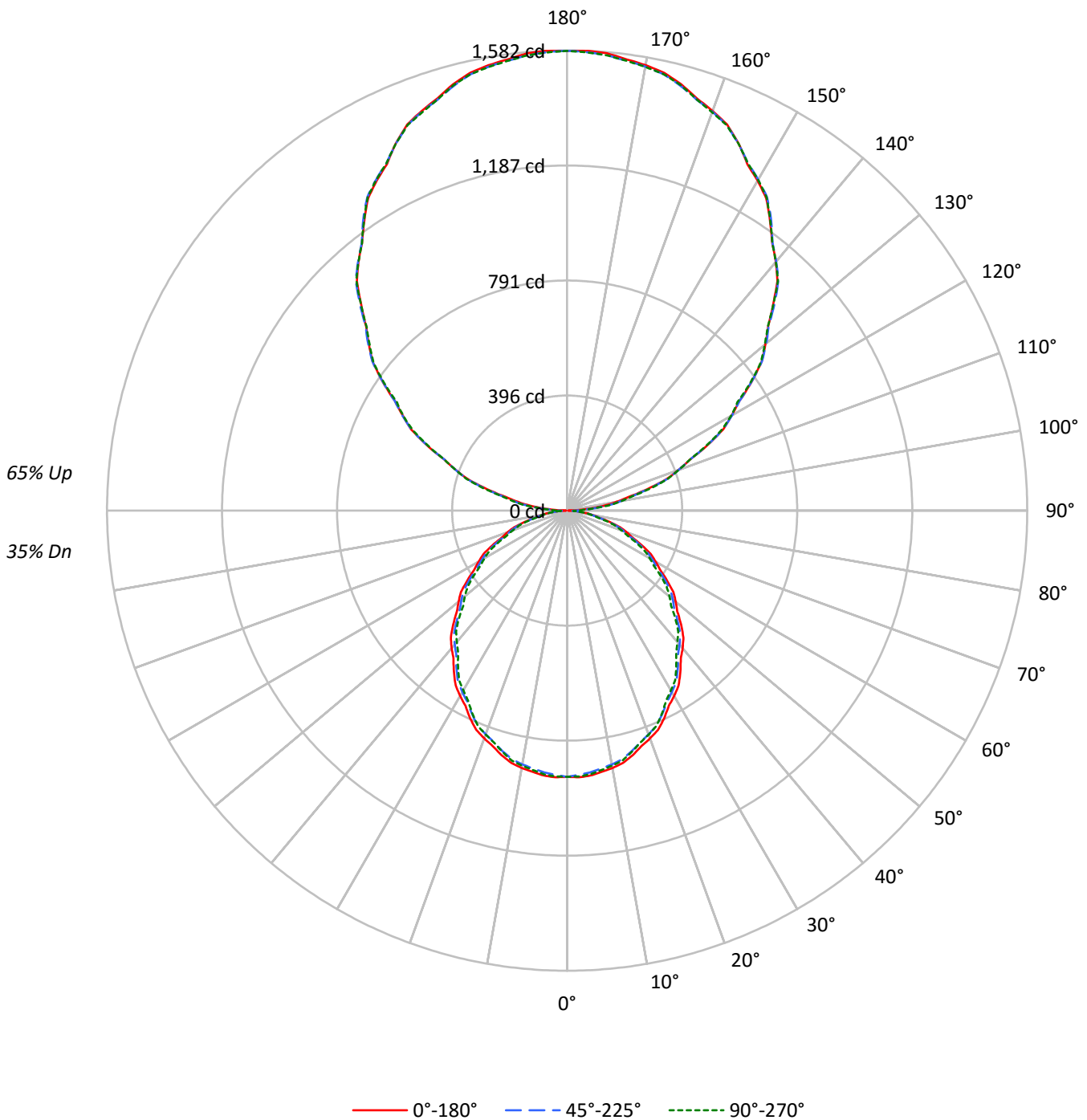
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	104	104	104	104	94	94	94	94	75	75	75	58	58	58	42	42	42	35
1	94	90	86	83	85	82	78	75	66	63	61	51	49	48	37	36	36	29
2	86	79	73	68	77	71	66	62	57	54	51	45	42	40	33	31	30	25
3	78	69	62	56	70	63	57	52	51	46	43	39	36	34	29	27	25	21
4	72	61	53	47	64	55	49	44	45	40	36	35	32	29	26	24	22	18
5	66	54	46	41	59	49	42	37	40	35	31	31	28	25	23	21	19	15
6	60	49	41	35	54	44	37	32	36	31	27	28	25	22	21	19	17	14
7	56	44	36	31	50	40	33	28	33	27	24	26	22	19	19	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	23	20	17	18	15	13	11
9	48	36	29	24	43	33	27	22	27	22	19	22	18	15	16	14	12	10
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7389	7389	7389
5°	7412	7323	7376
10°	7365	7263	7299
15°	7276	7160	7178
20°	7158	7032	7039
25°	7023	6886	6866
30°	6858	6715	6652
35°	6686	6535	6447
40°	6509	6330	6215
45°	6322	6130	6012
50°	6116	5951	5766
55°	5895	5719	5533
60°	5672	5459	5293
65°	5421	5213	5001
70°	5141	4881	4692
75°	4713	4482	4370
80°	4193	4021	3924
85°	3668	3538	3464



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.2	1.3
10°-20°	242.9	3.6
20°-30°	357.5	5.3
30°-40°	415.6	6.2
40°-50°	415.6	6.2
50°-60°	363.5	5.4
60°-70°	270.0	4.0
70°-80°	153.4	2.3
80°-90°	49.0	0.7
90°-100°	104.3	1.5
100°-110°	308.8	4.6
110°-120°	524.1	7.8
120°-130°	691.1	10.3
130°-140°	776.2	11.5
140°-150°	762.7	11.3
150°-160°	641.5	9.5
160°-170°	426.8	6.3
170°-180°	149.5	2.2
0°-30°	686.6	10.2
0°-40°	1102.1	16.4
0°-60°	1881.3	27.9
0°-90°	2353.6	34.9
90°-120°	937.2	13.9
90°-150°	3167.3	47.0
90°-180°	4385.0	65.1
0°-180°	6738.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	915	915	915	915	915	
5°	915	911	904	911	910	87
15°	871	867	857	861	859	245
25°	788	783	773	774	771	363
35°	678	673	663	658	654	424
45°	554	548	537	529	527	427
55°	419	416	406	398	393	375
65°	284	280	273	266	262	281
75°	151	147	144	141	140	161
85°	40	40	38	38	37	44
90°	4	17	27	34	37	7
95°	73	84	93	96	97	82
105°	285	286	291	295	298	302
115°	533	533	530	529	528	525
125°	776	776	775	772	770	692
135°	1001	1008	1008	1006	1002	774
145°	1216	1221	1222	1221	1218	761
155°	1394	1393	1392	1397	1392	641
165°	1517	1513	1511	1518	1513	427
175°	1578	1572	1571	1578	1571	150
180°	1580	1580	1580	1580	1580	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3
2.5°	917.7	917.3	916.9	916.5	916.2	915.2	913.8	912.4	910.9	909.5	910.8
5°	914.6	914.0	913.3	912.7	912.0	910.8	909.0	907.2	905.4	903.6	905.4
7.5°	906.1	905.4	904.8	904.2	903.5	902.2	900.2	898.2	896.2	894.2	895.7
10°	898.4	897.9	897.2	896.5	895.9	894.5	892.4	890.2	888.2	886.0	887.3
12.5°	888.5	887.9	887.2	886.6	885.9	884.5	882.2	880.0	877.7	875.4	876.8
15°	870.6	870.0	869.3	868.6	868.0	866.5	864.0	861.6	859.1	856.7	857.6
17.5°	849.0	848.2	847.4	846.6	845.7	844.2	841.9	839.6	837.3	835.0	835.6
20°	833.2	832.4	831.6	830.8	829.9	828.3	825.9	823.4	821.0	818.5	819.0
22.5°	816.1	815.1	814.1	812.9	811.9	810.1	807.7	805.2	802.8	800.3	801.3
25°	788.4	787.3	786.2	785.0	783.9	782.2	779.9	777.6	775.3	773.1	773.3
27.5°	756.8	755.6	754.4	753.3	752.1	750.5	748.3	746.2	744.0	742.0	741.6
30°	735.7	734.3	733.0	731.7	730.5	728.7	726.6	724.4	722.4	720.3	719.6
32.5°	713.3	712.2	711.0	709.8	708.7	706.9	704.7	702.5	700.2	698.0	697.2
35°	678.4	677.3	676.2	675.0	673.9	672.1	669.9	667.6	665.3	663.1	661.9
37.5°	641.6	640.6	639.5	638.5	637.4	635.7	633.3	630.8	628.4	625.9	624.7
40°	617.6	616.2	614.9	613.7	612.4	610.5	608.0	605.6	603.1	600.7	599.1
42.5°	591.7	591.0	590.2	589.4	588.6	586.8	584.2	581.5	578.7	576.1	574.2
45°	553.7	552.6	551.5	550.4	549.2	547.3	544.7	542.1	539.5	536.9	535.1
47.5°	514.0	513.2	512.5	511.6	510.9	509.3	506.9	504.4	502.0	499.6	497.6
50°	487.0	486.4	485.7	485.0	484.4	483.0	480.7	478.3	476.1	473.8	471.6
52.5°	460.6	459.9	459.0	458.3	457.5	455.9	453.5	451.1	448.7	446.2	444.2
55°	418.8	418.3	417.8	417.4	416.9	415.5	413.2	410.9	408.6	406.3	404.4
57.5°	378.9	378.3	377.8	377.2	376.6	375.3	373.1	370.8	368.5	366.3	364.4
60°	351.3	350.5	349.7	348.8	348.1	346.6	344.5	342.3	340.3	338.1	336.7
62.5°	324.3	323.7	322.9	322.3	321.6	320.1	317.9	315.7	313.4	311.1	309.8
65°	283.8	283.0	282.2	281.4	280.6	279.4	277.8	276.1	274.5	272.9	271.2
67.5°	243.1	242.3	241.6	240.8	240.1	238.9	237.3	235.8	234.2	232.6	231.1
70°	217.8	216.7	215.6	214.4	213.3	212.1	210.8	209.4	208.1	206.8	205.6
72.5°	190.9	189.7	188.6	187.4	186.2	185.2	184.2	183.1	182.1	181.0	179.9
75°	151.1	150.2	149.5	148.6	147.8	147.0	146.2	145.3	144.6	143.7	143.1
77.5°	113.1	112.7	112.4	112.1	111.7	111.1	110.4	109.7	109.0	108.3	108.0
80°	90.2	89.7	89.3	88.8	88.2	87.8	87.6	87.2	86.9	86.5	86.2
82.5°	68.0	67.7	67.5	67.2	67.0	66.8	66.8	66.7	66.6	66.6	66.4
85°	39.6	39.6	39.6	39.6	39.6	39.4	39.1	38.8	38.5	38.2	38.2
87.5°	16.0	16.5	17.0	17.4	17.8	18.3	18.6	18.9	19.1	19.4	19.8
90°	3.7	6.7	9.6	12.6	15.6	18.2	20.4	22.5	24.7	26.9	28.6
92.5°	26.2	29.6	33.0	36.4	39.9	42.3	43.8	45.3	46.8	48.4	49.4
95°	73.3	75.8	78.2	80.7	83.1	85.3	87.2	89.1	91.0	92.9	93.7
97.5°	128.1	130.1	132.1	133.9	135.9	138.0	140.3	142.5	144.7	146.9	147.9
100°	171.2	172.2	173.3	174.4	175.5	177.2	179.6	182.1	184.5	187.0	187.6
102.5°	216.1	216.6	217.0	217.4	217.8	219.1	221.4	223.7	225.8	228.1	228.8
105°	284.8	285.1	285.4	285.6	285.9	286.5	287.7	288.8	289.8	291.0	291.7
107.5°	356.9	357.2	357.6	357.9	358.3	358.4	358.6	358.8	359.0	359.1	359.9
110°	405.9	406.3	406.9	407.5	408.0	408.1	407.8	407.6	407.4	407.1	406.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	456.7	456.8	456.9	457.0	457.1	456.9	456.5	455.9	455.4	455.0	454.9
115°	532.9	532.9	532.9	532.9	532.9	532.7	532.2	531.6	531.0	530.5	530.3
117.5°	604.8	605.0	605.3	605.5	605.7	605.6	605.2	604.8	604.5	604.1	603.1
120°	652.7	653.8	654.9	656.0	657.0	657.2	656.4	655.6	654.8	653.9	652.6
122.5°	702.6	703.0	703.5	703.9	704.4	704.4	704.0	703.6	703.2	702.9	701.9
125°	776.2	776.2	776.2	776.2	776.2	776.1	775.8	775.5	775.2	775.0	774.4
127.5°	842.9	843.8	844.6	845.4	846.2	846.4	845.9	845.6	845.1	844.6	844.1
130°	889.9	890.7	891.6	892.3	893.2	893.5	893.5	893.5	893.5	893.5	893.0
132.5°	937.8	938.4	939.0	939.6	940.2	940.4	940.2	939.9	939.7	939.5	939.0
135°	1001.1	1002.8	1004.4	1006.0	1007.7	1008.4	1008.4	1008.4	1008.4	1008.4	1008.0
137.5°	1070.1	1070.8	1071.6	1072.3	1073.1	1073.7	1074.1	1074.6	1075.0	1075.4	1074.7
140°	1116.1	1116.5	1117.1	1117.7	1118.2	1118.4	1118.4	1118.4	1118.4	1118.4	1118.2
142.5°	1158.1	1158.6	1159.1	1159.7	1160.3	1160.4	1160.2	1160.0	1159.8	1159.5	1159.5
145°	1216.3	1217.4	1218.4	1219.6	1220.6	1221.3	1221.5	1221.8	1222.1	1222.4	1222.1
147.5°	1273.9	1275.3	1276.6	1277.9	1279.1	1279.7	1279.5	1279.3	1279.0	1278.8	1278.7
150°	1309.2	1310.2	1311.4	1312.4	1313.5	1314.0	1314.0	1314.0	1314.0	1314.0	1314.0
152.5°	1342.4	1343.0	1343.7	1344.3	1345.0	1345.5	1345.7	1345.9	1346.1	1346.3	1347.0
155°	1393.5	1393.5	1393.5	1393.5	1393.5	1393.4	1393.1	1392.8	1392.5	1392.3	1393.4
157.5°	1436.5	1436.1	1435.6	1435.0	1434.5	1434.3	1434.3	1434.2	1434.2	1434.1	1434.9
160°	1462.0	1461.7	1461.4	1461.1	1460.8	1460.6	1460.3	1460.1	1459.8	1459.5	1460.3
162.5°	1485.4	1484.7	1484.0	1483.3	1482.6	1482.1	1481.9	1481.6	1481.3	1481.0	1482.5
165°	1516.9	1516.2	1515.3	1514.5	1513.7	1513.1	1512.5	1511.9	1511.4	1510.8	1512.5
167.5°	1541.2	1540.0	1538.9	1537.8	1536.6	1536.1	1536.2	1536.2	1536.3	1536.3	1537.9
170°	1554.8	1553.5	1552.2	1550.8	1549.4	1548.9	1549.2	1549.4	1549.7	1549.9	1551.6
172.5°	1564.6	1563.5	1562.4	1561.2	1560.1	1559.5	1559.6	1559.6	1559.7	1559.7	1561.6
175°	1578.1	1576.7	1575.4	1574.0	1572.6	1571.8	1571.6	1571.3	1571.0	1570.7	1572.6
177.5°	1582.4	1581.4	1580.3	1579.2	1578.1	1577.6	1577.6	1577.6	1577.6	1577.6	1579.1
180°	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3
2.5°	912.1	913.4	914.7	915.3	915.1	915.0	914.9	914.7
5°	907.2	909.0	910.8	911.5	911.2	910.9	910.5	910.2
7.5°	897.1	898.5	899.9	900.6	900.4	900.2	900.0	899.8
10°	888.6	889.9	891.3	891.7	891.4	891.1	890.7	890.4
12.5°	878.4	879.8	881.2	881.7	881.2	880.7	880.3	879.9
15°	858.7	859.6	860.5	860.8	860.4	859.9	859.3	858.8
17.5°	836.2	836.8	837.4	837.5	837.3	836.9	836.6	836.3
20°	819.5	820.0	820.5	820.6	820.2	819.9	819.6	819.3
22.5°	802.1	803.0	803.9	804.0	803.4	802.9	802.3	801.6
25°	773.4	773.5	773.7	773.5	772.8	772.1	771.5	770.8
27.5°	741.2	740.7	740.4	739.8	739.0	738.2	737.4	736.5
30°	719.0	718.3	717.7	716.9	716.0	715.3	714.4	713.6
32.5°	696.4	695.6	694.8	694.0	693.2	692.4	691.5	690.8
35°	660.7	659.6	658.5	657.5	656.7	655.8	655.1	654.2
37.5°	623.5	622.2	620.9	619.8	618.8	617.6	616.6	615.5
40°	597.5	595.8	594.2	593.0	592.1	591.4	590.5	589.7
42.5°	572.3	570.3	568.4	567.2	566.8	566.2	565.6	565.1
45°	533.3	531.5	529.7	528.6	528.1	527.6	527.1	526.6
47.5°	495.6	493.5	491.5	489.9	488.7	487.4	486.2	484.9
50°	469.2	466.9	464.7	463.1	462.0	461.1	460.1	459.1
52.5°	442.1	440.2	438.2	436.5	435.3	434.0	432.8	431.6
55°	402.5	400.5	398.5	397.0	396.1	395.1	394.1	393.1
57.5°	362.6	360.7	358.8	357.4	356.5	355.5	354.6	353.6
60°	335.2	333.8	332.2	331.1	330.3	329.5	328.7	327.8
62.5°	308.5	307.1	305.8	304.7	303.9	303.1	302.3	301.4
65°	269.6	268.0	266.4	265.1	264.3	263.4	262.7	261.8
67.5°	229.5	228.0	226.4	225.5	225.3	225.1	224.8	224.6
70°	204.2	202.9	201.6	200.8	200.2	199.7	199.3	198.8
72.5°	178.9	177.9	176.8	176.1	175.6	175.1	174.7	174.1
75°	142.4	141.8	141.2	140.7	140.5	140.4	140.3	140.1
77.5°	107.8	107.6	107.4	107.2	106.7	106.3	105.8	105.5
80°	85.9	85.6	85.2	85.0	84.8	84.6	84.5	84.4
82.5°	66.2	66.0	65.8	65.6	65.5	65.3	65.1	64.9
85°	38.2	38.2	38.2	38.1	37.9	37.7	37.6	37.4
87.5°	20.1	20.5	20.7	21.0	21.1	21.2	21.3	21.4
90°	30.2	31.8	33.4	34.5	35.1	35.6	36.1	36.7
92.5°	50.3	51.4	52.3	53.0	53.3	53.6	53.9	54.3
95°	94.5	95.4	96.1	96.6	96.6	96.6	96.6	96.6
97.5°	148.9	149.9	150.8	151.4	151.4	151.4	151.4	151.4
100°	188.1	188.7	189.2	189.5	189.5	189.5	189.5	189.5
102.5°	229.6	230.4	231.1	231.6	231.9	232.1	232.2	232.5
105°	292.6	293.4	294.2	295.0	295.8	296.6	297.5	298.2
107.5°	360.6	361.4	362.2	362.5	362.5	362.4	362.4	362.3
110°	406.0	405.4	404.9	405.0	405.9	406.6	407.5	408.3



TEST NUMBER: P332768-830

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	454.8	454.7	454.5	454.6	454.7	454.9	455.1	455.2
115°	530.0	529.7	529.4	529.1	528.9	528.6	528.3	528.1
117.5°	602.3	601.3	600.4	599.6	599.1	598.6	598.0	597.5
120°	651.3	649.9	648.6	648.1	648.7	649.2	649.8	650.3
122.5°	701.0	700.1	699.2	698.2	697.2	696.3	695.3	694.3
125°	773.9	773.4	772.8	772.2	771.8	771.2	770.6	770.1
127.5°	843.6	843.0	842.4	842.0	841.6	841.1	840.7	840.3
130°	892.5	891.9	891.4	890.6	889.5	888.3	887.3	886.2
132.5°	938.4	937.9	937.4	936.9	936.4	935.9	935.6	935.1
135°	1007.4	1006.8	1006.3	1005.6	1004.8	1004.0	1003.1	1002.3
137.5°	1074.0	1073.4	1072.6	1072.3	1072.5	1072.7	1072.8	1073.0
140°	1117.9	1117.7	1117.4	1117.1	1116.8	1116.5	1116.3	1116.1
142.5°	1159.4	1159.4	1159.3	1159.2	1159.2	1159.1	1159.1	1159.0
145°	1221.8	1221.5	1221.3	1220.8	1219.9	1219.1	1218.3	1217.5
147.5°	1278.4	1278.2	1278.0	1277.7	1277.4	1277.1	1277.0	1276.7
150°	1314.0	1314.0	1314.0	1313.9	1313.6	1313.3	1313.1	1312.9
152.5°	1347.6	1348.3	1349.0	1348.9	1348.2	1347.5	1346.8	1346.0
155°	1394.5	1395.5	1396.7	1396.7	1395.5	1394.5	1393.4	1392.3
157.5°	1435.7	1436.5	1437.4	1437.3	1436.3	1435.4	1434.5	1433.6
160°	1461.1	1462.0	1462.7	1462.4	1461.1	1459.8	1458.4	1457.1
162.5°	1483.9	1485.4	1486.9	1487.0	1485.5	1484.2	1482.9	1481.5
165°	1514.1	1515.7	1517.4	1517.7	1516.6	1515.4	1514.4	1513.3
167.5°	1539.5	1541.2	1542.8	1542.8	1541.1	1539.4	1537.8	1536.1
170°	1553.2	1554.8	1556.5	1556.3	1554.4	1552.6	1550.7	1548.8
172.5°	1563.4	1565.3	1567.2	1567.1	1565.2	1563.3	1561.4	1559.5
175°	1574.5	1576.4	1578.4	1578.4	1576.4	1574.5	1572.6	1570.7
177.5°	1580.6	1582.2	1583.7	1583.6	1581.9	1580.1	1578.4	1576.6
180°	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5

(END OF REPORT)