

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: P332917-840

Luminaire Tested: **S124RDIP-S575D1035U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332917-840
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: S124RDIP-S575D1035U840-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1035 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5991.1 lumens
Efficiency: N/A
Efficacy: 134.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

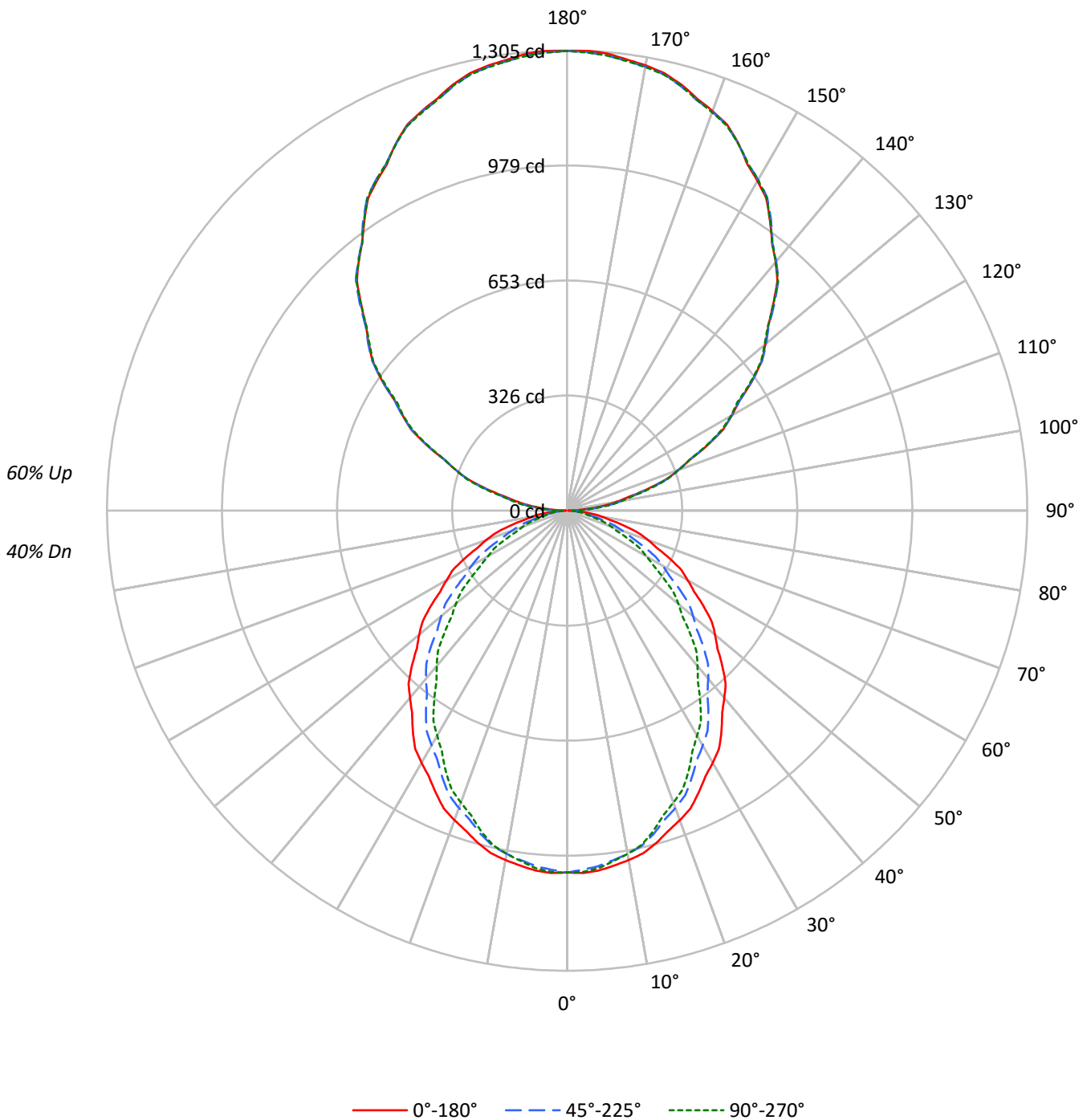
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	95	95	95	95	78	78	78	61	61	61	47	47	47	40
1	96	91	88	84	87	83	80	77	68	66	64	54	53	52	41	41	40	34
2	87	80	74	69	79	73	68	64	60	56	53	48	45	43	37	35	34	29
3	80	71	63	58	72	64	58	53	53	49	45	43	39	37	33	31	29	24
4	73	62	55	49	66	57	51	45	47	42	38	38	34	32	29	27	25	21
5	67	56	48	42	61	51	44	39	42	37	33	34	30	28	27	24	22	18
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	24	21	19	16
7	57	45	37	32	52	41	35	30	35	29	26	28	24	21	22	19	17	15
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	20	18	16	13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	32	25	21	27	22	18	22	18	16	17	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8285	8285	8285
5°	8304	8203	8253
10°	8252	8104	8104
15°	8157	7934	7875
20°	8027	7710	7568
25°	7861	7448	7259
30°	7699	7171	6871
35°	7521	6885	6482
40°	7304	6559	6062
45°	7106	6235	5634
50°	6880	5863	5181
55°	6636	5475	4690
60°	6370	5050	4187
65°	6124	4518	3692
70°	5769	3932	3135
75°	5321	3260	2548
80°	4640	2483	2338
85°	3927	2251	2112



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.4	1.6
10°-20°	268.8	4.5
20°-30°	388.2	6.5
30°-40°	440.0	7.3
40°-50°	424.9	7.1
50°-60°	353.4	5.9
60°-70°	244.0	4.1
70°-80°	123.7	2.1
80°-90°	35.6	0.6
90°-100°	86.0	1.4
100°-110°	254.7	4.3
110°-120°	432.2	7.2
120°-130°	569.9	9.5
130°-140°	640.1	10.7
140°-150°	629.0	10.5
150°-160°	529.0	8.8
160°-170°	352.0	5.9
170°-180°	123.2	2.1
0°-30°	753.5	12.6
0°-40°	1193.5	19.9
0°-60°	1971.8	32.9
0°-90°	2375.1	39.6
90°-120°	772.9	12.9
90°-150°	2611.8	43.6
90°-180°	3616.0	60.4
0°-180°	5991.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1026	1026	1026	1026	1026	
5°	1025	1021	1012	1020	1018	97
15°	976	968	949	948	942	275
25°	882	867	836	823	815	406
35°	763	737	699	673	658	477
45°	622	592	546	509	494	480
55°	472	439	389	350	333	422
65°	321	286	236	204	193	317
75°	171	141	104	87	82	180
85°	42	28	24	23	23	48
90°	3	14	22	28	30	6
95°	60	69	77	80	80	67
105°	235	236	240	243	246	249
115°	440	439	438	436	436	433
125°	640	640	639	637	635	570
135°	826	831	832	830	827	638
145°	1003	1007	1008	1007	1004	627
155°	1149	1149	1148	1152	1148	528
165°	1251	1248	1246	1251	1248	352
175°	1301	1297	1295	1302	1295	123
180°	1303	1303	1303	1303	1303	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3
2.5°	1028.9	1028.2	1027.7	1027.1	1026.6	1025.5	1024.0	1022.5	1020.9	1019.4	1020.9
5°	1024.7	1024.0	1023.3	1022.6	1022.0	1020.6	1018.4	1016.3	1014.2	1012.2	1013.9
7.5°	1015.4	1014.7	1014.0	1013.3	1012.5	1010.8	1008.0	1005.3	1002.6	999.9	1001.0
10°	1006.6	1005.8	1004.9	1004.0	1003.2	1001.2	998.0	994.8	991.7	988.6	989.3
12.5°	995.3	994.3	993.3	992.3	991.3	989.0	985.2	981.5	977.9	974.1	974.5
15°	976.0	974.4	972.9	971.3	969.7	966.7	962.4	958.1	953.6	949.3	949.0
17.5°	952.6	950.3	948.1	945.7	943.5	939.8	934.5	929.3	924.0	918.8	917.9
20°	934.3	932.1	929.8	927.6	925.2	921.2	915.2	909.3	903.3	897.5	896.1
22.5°	914.2	911.7	909.2	906.6	904.0	899.6	893.2	886.9	880.5	874.1	872.0
25°	882.5	879.4	876.2	873.0	869.9	864.7	857.6	850.4	843.2	836.2	833.1
27.5°	849.2	845.3	841.3	837.4	833.3	827.6	819.9	812.3	804.7	797.0	793.3
30°	825.9	821.5	817.2	812.8	808.5	802.1	794.0	785.8	777.5	769.3	765.0
32.5°	801.4	796.5	791.5	786.6	781.7	775.0	766.5	758.0	749.5	741.0	736.0
35°	763.1	757.5	751.8	746.3	740.7	733.6	724.8	716.1	707.3	698.6	692.7
37.5°	722.1	716.3	710.5	704.8	698.9	691.3	681.6	671.9	662.3	652.6	645.9
40°	693.1	687.3	681.6	675.8	670.0	662.2	652.3	642.3	632.4	622.4	615.0
42.5°	665.4	659.4	653.4	647.3	641.3	633.1	622.7	612.3	602.0	591.6	584.1
45°	622.4	615.9	609.5	603.0	596.5	588.0	577.5	567.1	556.6	546.1	537.6
47.5°	577.9	571.3	564.5	557.8	551.2	542.4	531.5	520.7	509.8	498.9	490.0
50°	547.8	540.9	534.1	527.3	520.5	511.5	500.3	489.2	478.0	466.8	458.1
52.5°	516.9	510.3	503.6	497.0	490.2	481.2	469.7	458.3	446.8	435.4	426.5
55°	471.5	464.5	457.6	450.5	443.5	434.3	423.0	411.7	400.3	389.0	379.9
57.5°	426.6	419.3	412.0	404.8	397.5	388.3	377.1	365.9	354.8	343.6	334.4
60°	394.5	387.5	380.5	373.5	366.6	357.5	346.3	335.1	324.0	312.8	303.7
62.5°	365.6	358.3	351.0	343.8	336.5	327.2	315.7	304.3	292.8	281.3	273.0
65°	320.6	313.2	305.6	298.1	290.5	281.2	270.0	258.9	247.7	236.5	229.0
67.5°	274.0	266.7	259.5	252.4	245.2	236.4	226.0	215.6	205.3	194.9	188.4
70°	244.4	237.0	229.7	222.4	215.1	206.4	196.4	186.5	176.5	166.6	160.9
72.5°	213.0	206.3	199.7	193.1	186.4	178.4	169.1	159.7	150.2	140.8	135.9
75°	170.6	164.1	157.6	151.2	144.7	137.3	129.2	120.9	112.7	104.5	100.5
77.5°	127.4	122.0	116.5	111.0	105.5	99.5	92.8	86.2	79.6	72.9	70.6
80°	99.8	94.7	89.7	84.6	79.6	74.4	69.2	63.9	58.7	53.4	52.9
82.5°	75.9	71.3	66.7	62.0	57.4	53.5	50.5	47.5	44.5	41.5	41.1
85°	42.4	39.0	35.4	31.9	28.5	26.5	26.0	25.4	24.8	24.3	24.0
87.5°	15.0	14.4	13.8	13.2	12.5	12.3	12.6	12.8	13.0	13.2	13.3
90°	3.0	5.5	8.0	10.4	12.9	15.0	16.8	18.6	20.4	22.2	23.5
92.5°	21.6	24.4	27.2	30.0	32.8	34.9	36.2	37.4	38.7	39.9	40.7
95°	60.5	62.5	64.5	66.6	68.6	70.3	71.9	73.5	75.0	76.6	77.3
97.5°	105.6	107.2	108.9	110.5	112.1	113.8	115.6	117.4	119.4	121.2	122.0
100°	141.1	142.0	142.9	143.8	144.7	146.1	148.1	150.2	152.2	154.2	154.7
102.5°	178.2	178.5	178.9	179.3	179.7	180.8	182.6	184.4	186.2	188.1	188.7
105°	234.9	235.1	235.3	235.5	235.8	236.3	237.2	238.1	239.0	239.9	240.5
107.5°	294.4	294.6	294.9	295.2	295.4	295.6	295.8	295.9	296.0	296.2	296.8
110°	334.7	335.1	335.6	336.0	336.5	336.6	336.3	336.1	335.9	335.7	335.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	376.6	376.7	376.8	376.9	377.0	376.8	376.4	376.0	375.6	375.2	375.1
115°	439.5	439.5	439.5	439.5	439.5	439.3	438.8	438.4	437.9	437.5	437.3
117.5°	498.8	499.0	499.1	499.3	499.5	499.4	499.1	498.8	498.5	498.2	497.4
120°	538.3	539.2	540.1	541.0	541.9	542.0	541.3	540.6	540.0	539.3	538.2
122.5°	579.4	579.8	580.1	580.5	580.8	580.9	580.6	580.2	579.9	579.6	578.9
125°	640.1	640.1	640.1	640.1	640.1	640.0	639.7	639.5	639.2	639.0	638.6
127.5°	695.1	695.8	696.4	697.1	697.8	697.9	697.6	697.2	696.9	696.5	696.1
130°	733.8	734.5	735.2	735.8	736.5	736.8	736.8	736.8	736.8	736.8	736.4
132.5°	773.4	773.9	774.3	774.8	775.3	775.5	775.3	775.1	774.9	774.8	774.3
135°	825.6	826.9	828.2	829.6	830.9	831.6	831.6	831.6	831.6	831.6	831.1
137.5°	882.4	883.0	883.6	884.2	884.9	885.3	885.8	886.2	886.5	886.9	886.3
140°	920.3	920.7	921.2	921.6	922.1	922.3	922.3	922.3	922.3	922.3	922.1
142.5°	954.9	955.4	955.8	956.3	956.7	956.8	956.7	956.5	956.3	956.1	956.1
145°	1002.9	1003.8	1004.7	1005.6	1006.5	1007.0	1007.3	1007.5	1007.7	1007.9	1007.7
147.5°	1050.6	1051.6	1052.7	1053.8	1054.8	1055.3	1055.1	1054.9	1054.7	1054.6	1054.4
150°	1079.5	1080.5	1081.4	1082.3	1083.2	1083.6	1083.6	1083.6	1083.6	1083.6	1083.6
152.5°	1107.0	1107.5	1108.0	1108.6	1109.1	1109.4	1109.6	1109.8	1110.0	1110.1	1110.8
155°	1149.1	1149.1	1149.1	1149.1	1149.1	1149.0	1148.7	1148.5	1148.3	1148.1	1149.0
157.5°	1184.6	1184.2	1183.8	1183.4	1183.0	1182.8	1182.7	1182.7	1182.7	1182.6	1183.3
160°	1205.6	1205.3	1205.1	1204.9	1204.7	1204.5	1204.2	1204.0	1203.8	1203.6	1204.2
162.5°	1224.9	1224.4	1223.8	1223.1	1222.5	1222.1	1221.9	1221.7	1221.5	1221.2	1222.4
165°	1250.9	1250.2	1249.6	1248.9	1248.2	1247.7	1247.2	1246.8	1246.3	1245.9	1247.2
167.5°	1270.9	1269.9	1269.0	1268.1	1267.1	1266.7	1266.7	1266.8	1266.8	1266.9	1268.2
170°	1282.1	1281.0	1279.9	1278.8	1277.7	1277.2	1277.5	1277.7	1277.9	1278.1	1279.5
172.5°	1290.2	1289.3	1288.4	1287.4	1286.5	1286.0	1286.1	1286.1	1286.2	1286.2	1287.7
175°	1301.3	1300.2	1299.1	1298.0	1296.9	1296.2	1296.0	1295.7	1295.5	1295.3	1296.9
177.5°	1304.9	1304.0	1303.1	1302.2	1301.3	1300.9	1300.9	1300.9	1300.9	1300.9	1302.1
180°	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3
2.5°	1022.5	1024.0	1025.5	1026.2	1026.1	1025.9	1025.8	1025.7
5°	1015.6	1017.4	1019.2	1019.9	1019.5	1019.2	1018.8	1018.4
7.5°	1002.1	1003.2	1004.4	1004.6	1004.1	1003.5	1003.0	1002.4
10°	990.0	990.7	991.4	991.4	990.7	990.0	989.3	988.6
12.5°	974.9	975.3	975.8	975.5	974.5	973.6	972.6	971.6
15°	948.6	948.3	947.9	947.2	945.8	944.6	943.4	942.2
17.5°	916.9	915.8	914.8	913.4	911.6	909.8	907.9	906.1
20°	894.6	893.2	891.8	890.0	887.8	885.4	883.2	880.9
22.5°	870.0	867.9	865.8	863.8	861.9	860.1	858.3	856.4
25°	830.2	827.2	824.3	821.9	820.1	818.4	816.7	814.9
27.5°	789.6	786.0	782.3	779.2	776.7	774.2	771.7	769.2
30°	760.6	756.2	751.8	748.3	745.5	742.7	739.9	737.1
32.5°	730.9	725.9	720.7	716.9	714.3	711.7	708.9	706.3
35°	686.7	680.8	674.9	670.3	667.2	664.0	660.9	657.7
37.5°	639.2	632.7	626.0	621.2	617.9	614.8	611.7	608.5
40°	607.7	600.4	593.0	587.8	584.6	581.5	578.3	575.2
42.5°	576.6	569.2	561.7	556.3	553.0	549.8	546.4	543.2
45°	529.1	520.5	511.9	506.0	502.9	499.8	496.7	493.5
47.5°	481.1	472.2	463.3	457.2	453.7	450.3	446.9	443.3
50°	449.3	440.6	431.8	425.9	422.5	419.2	415.9	412.5
52.5°	417.6	408.7	399.9	393.7	390.2	386.8	383.3	379.9
55°	370.8	361.7	352.6	346.5	343.2	339.8	336.5	333.2
57.5°	325.1	315.9	306.7	300.8	298.3	295.8	293.3	290.7
60°	294.6	285.5	276.4	270.5	267.7	264.9	262.2	259.3
62.5°	264.6	256.2	247.8	242.5	240.2	238.0	235.8	233.6
65°	221.6	214.0	206.5	201.7	199.7	197.5	195.4	193.3
67.5°	182.0	175.5	169.1	164.7	162.4	160.1	157.7	155.4
70°	155.1	149.4	143.5	139.8	138.0	136.3	134.5	132.8
72.5°	131.0	126.0	121.1	117.9	116.2	114.6	113.0	111.4
75°	96.4	92.5	88.5	85.9	84.8	83.8	82.8	81.7
77.5°	68.3	65.9	63.5	62.2	61.9	61.6	61.3	61.0
80°	52.4	51.9	51.3	51.0	50.8	50.6	50.5	50.3
82.5°	40.7	40.3	40.0	39.7	39.5	39.3	39.2	39.0
85°	23.6	23.3	22.9	22.8	22.8	22.8	22.8	22.8
87.5°	13.5	13.6	13.7	13.9	14.1	14.4	14.6	14.8
90°	24.8	26.3	27.6	28.5	28.9	29.4	29.8	30.2
92.5°	41.5	42.3	43.1	43.7	43.9	44.2	44.5	44.7
95°	78.0	78.7	79.3	79.7	79.7	79.7	79.7	79.7
97.5°	122.8	123.6	124.4	124.8	124.8	124.8	124.8	124.8
100°	155.1	155.5	156.0	156.2	156.2	156.2	156.2	156.2
102.5°	189.3	190.0	190.6	191.0	191.2	191.4	191.6	191.7
105°	241.3	242.0	242.6	243.3	243.9	244.6	245.3	245.9
107.5°	297.4	298.0	298.6	298.9	298.9	298.8	298.8	298.7
110°	334.8	334.3	333.9	334.0	334.7	335.3	336.0	336.7



TEST NUMBER: P332917-840

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	375.0	374.9	374.9	374.9	375.0	375.1	375.3	375.4
115°	437.0	436.8	436.6	436.4	436.2	435.9	435.7	435.5
117.5°	496.7	495.8	495.1	494.5	494.0	493.6	493.1	492.7
120°	537.0	535.9	534.8	534.4	534.9	535.3	535.8	536.2
122.5°	578.0	577.3	576.5	575.7	574.9	574.1	573.3	572.5
125°	638.1	637.7	637.2	636.8	636.4	635.9	635.5	635.0
127.5°	695.6	695.2	694.7	694.3	694.0	693.6	693.3	692.9
130°	736.0	735.5	735.1	734.4	733.5	732.6	731.6	730.7
132.5°	773.9	773.4	773.0	772.5	772.1	771.8	771.4	771.1
135°	830.7	830.2	829.8	829.2	828.6	827.9	827.2	826.6
137.5°	885.7	885.0	884.5	884.2	884.4	884.5	884.6	884.8
140°	921.9	921.6	921.4	921.2	921.0	920.7	920.5	920.3
142.5°	956.0	956.0	956.0	955.9	955.9	955.8	955.8	955.7
145°	1007.5	1007.3	1007.0	1006.6	1005.9	1005.3	1004.6	1003.9
147.5°	1054.2	1054.0	1053.8	1053.6	1053.4	1053.2	1053.0	1052.8
150°	1083.6	1083.6	1083.6	1083.5	1083.3	1083.0	1082.8	1082.6
152.5°	1111.3	1111.8	1112.4	1112.4	1111.8	1111.2	1110.5	1109.9
155°	1149.9	1150.7	1151.7	1151.7	1150.7	1149.9	1149.0	1148.1
157.5°	1183.9	1184.6	1185.3	1185.2	1184.5	1183.7	1183.0	1182.1
160°	1204.9	1205.6	1206.2	1206.0	1204.9	1203.8	1202.6	1201.5
162.5°	1223.7	1224.9	1226.1	1226.2	1225.1	1224.0	1222.8	1221.6
165°	1248.6	1249.9	1251.2	1251.4	1250.6	1249.7	1248.8	1247.9
167.5°	1269.5	1270.9	1272.2	1272.2	1270.8	1269.4	1268.0	1266.7
170°	1280.8	1282.1	1283.5	1283.3	1281.8	1280.2	1278.7	1277.1
172.5°	1289.2	1290.7	1292.3	1292.2	1290.7	1289.1	1287.6	1286.0
175°	1298.4	1300.0	1301.5	1301.5	1300.0	1298.4	1296.9	1295.3
177.5°	1303.4	1304.6	1306.0	1305.9	1304.4	1302.9	1301.5	1300.1
180°	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3

(END OF REPORT)