

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: P332910-940

Luminaire Tested: **SA4XXRDIP-C575D810U940-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332910-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C575D810U940-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 810 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

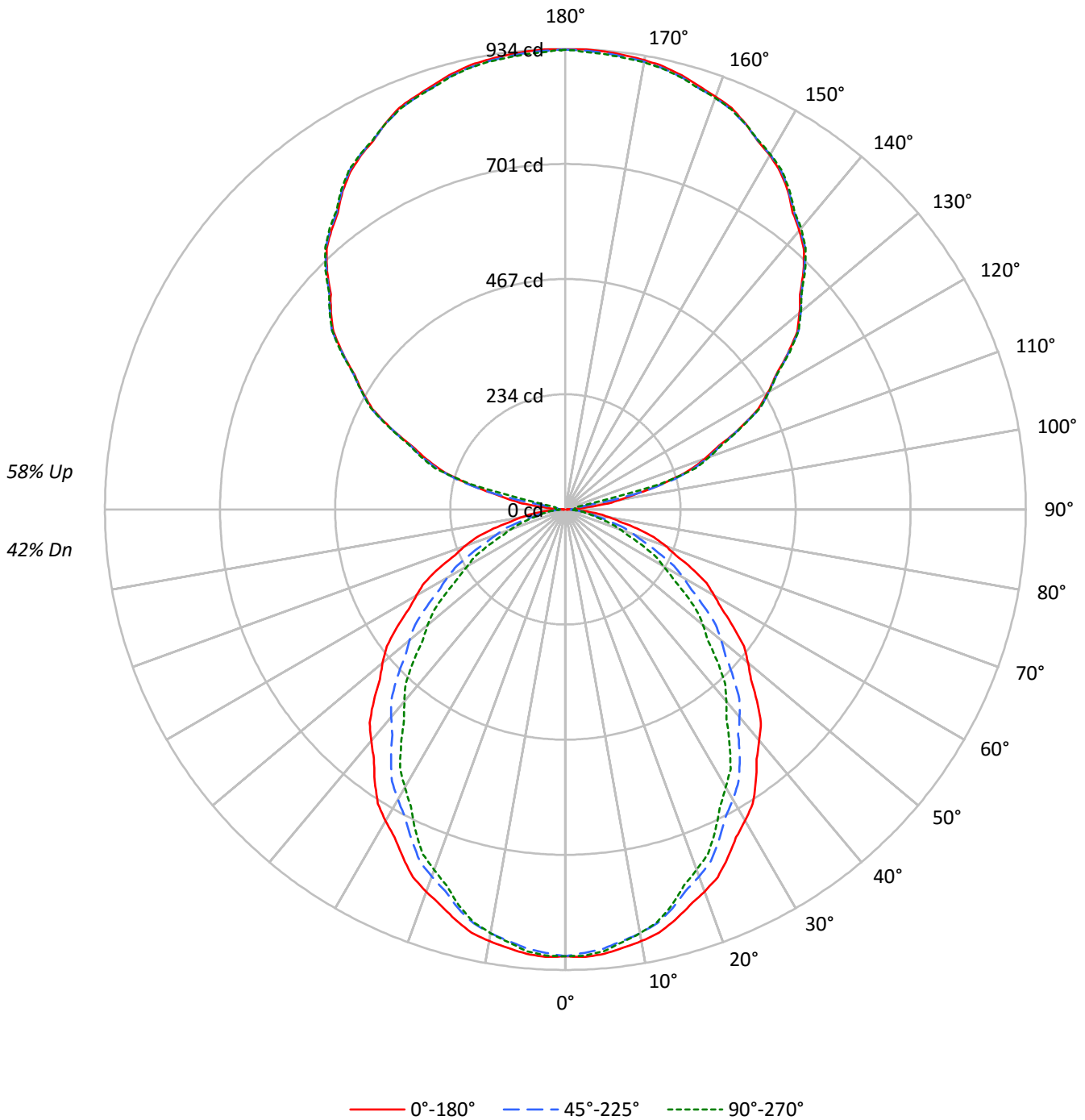
Lumens per Lamp: N/A
Luminaire Lumens: 4980.0 lumens
Efficiency: N/A
Efficacy: 129.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 38.4
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



TEST NUMBER: P332910-940
CATALOG NUMBER: SA4XXRDIP-C575D810U940-4F0-1E-UDD-F

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	50	30	10	0	
RCR																						
0	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42				
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	44	43	42	36				
2	88	81	75	70	80	74	69	64	61	57	54	49	47	45	39	37	35	30				
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	34	32	30	26				
4	73	63	55	49	67	58	51	46	48	43	39	39	36	33	31	28	26	22				
5	67	56	48	42	61	52	45	40	43	38	34	35	31	28	28	25	23	20				
6	62	50	42	37	57	46	39	34	39	34	30	32	28	25	25	23	20	17				
7	57	45	38	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15				
8	53	41	34	28	49	38	31	27	32	27	23	27	23	20	21	18	16	14				
9	50	38	30	25	45	35	28	24	29	24	21	24	21	18	20	17	15	13				
10	46	35	27	23	42	32	26	21	27	22	19	23	19	16	18	15	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7316	7316	7316
5°	7332	7243	7288
10°	7287	7156	7156
15°	7203	7005	6954
20°	7088	6808	6682
25°	6942	6576	6409
30°	6797	6332	6068
35°	6640	6080	5724
40°	6450	5792	5352
45°	6275	5505	4975
50°	6075	5176	4575
55°	5859	4835	4141
60°	5624	4459	3697
65°	5408	3989	3261
70°	5094	3472	2769
75°	4697	2879	2249
80°	4096	2194	2064
85°	3473	1991	1871



TEST NUMBER: P332910-940

CATALOG NUMBER: SA4XXRDIP-C575D810U940-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.1	1.7
10°-20°	237.4	4.8
20°-30°	342.8	6.9
30°-40°	388.6	7.8
40°-50°	375.2	7.5
50°-60°	312.0	6.3
60°-70°	215.4	4.3
70°-80°	109.2	2.2
80°-90°	30.7	0.6
90°-100°	31.9	0.6
100°-110°	203.3	4.1
110°-120°	388.9	7.8
120°-130°	493.7	9.9
130°-140°	528.2	10.6
140°-150°	493.9	9.9
150°-160°	398.3	8.0
160°-170°	256.9	5.2
170°-180°	88.5	1.8
0°-30°	665.3	13.4
0°-40°	1053.9	21.2
0°-60°	1741.1	35.0
0°-90°	2096.4	42.1
90°-120°	624.1	12.5
90°-150°	2139.8	43.0
90°-180°	2884.0	57.9
0°-180°	4980.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	905	902	894	900	899	86
15°	862	855	838	837	832	243
25°	779	766	738	727	720	359
35°	674	651	617	594	581	421
45°	550	523	482	449	436	424
55°	416	388	344	309	294	372
65°	283	252	209	180	171	279
75°	151	125	92	77	72	159
85°	38	24	22	20	20	42
90°	2	10	15	19	21	4
95°	38	16	15	19	20	49
105°	210	214	218	222	199	220
115°	392	394	393	395	395	385
125°	551	553	552	554	555	492
135°	683	683	685	687	688	526
145°	788	790	790	791	792	492
155°	864	864	862	865	863	398
165°	911	908	908	913	907	257
175°	932	928	929	934	927	89
180°	932	932	932	932	932	



TEST NUMBER: P332910-940

CATALOG NUMBER: SA4XXRDIP-C575D810U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2
2.5°	908.5	907.9	907.5	907.0	906.5	905.5	904.2	902.9	901.4	900.1	901.4
5°	904.8	904.2	903.6	902.9	902.4	901.2	899.3	897.4	895.5	893.8	895.3
7.5°	896.6	896.0	895.4	894.7	894.0	892.5	890.1	887.7	885.3	882.9	883.9
10°	888.9	888.1	887.3	886.5	885.8	884.0	881.3	878.4	875.7	872.9	873.5
12.5°	878.9	878.0	877.1	876.2	875.3	873.3	870.0	866.7	863.4	860.1	860.5
15°	861.8	860.4	859.1	857.6	856.2	853.6	849.8	846.0	842.0	838.2	837.9
17.5°	841.2	839.1	837.1	835.1	833.1	829.8	825.2	820.6	815.9	811.3	810.5
20°	825.0	823.0	821.0	819.0	817.0	813.4	808.2	802.9	797.6	792.5	791.2
22.5°	807.3	805.0	802.8	800.5	798.3	794.3	788.7	783.1	777.5	771.9	770.0
25°	779.3	776.5	773.6	770.9	768.1	763.6	757.2	750.9	744.6	738.3	735.7
27.5°	749.8	746.4	742.9	739.4	735.8	730.8	724.0	717.3	710.5	703.7	700.5
30°	729.2	725.4	721.6	717.7	713.9	708.3	701.1	693.8	686.5	679.3	675.5
32.5°	707.7	703.3	698.9	694.6	690.3	684.3	676.8	669.3	661.8	654.3	649.9
35°	673.8	668.9	663.9	659.0	654.1	647.7	640.0	632.3	624.6	616.9	611.6
37.5°	637.6	632.5	627.4	622.3	617.2	610.4	601.8	593.3	584.8	576.2	570.3
40°	612.0	606.9	601.8	596.7	591.7	584.7	576.0	567.1	558.4	549.6	543.1
42.5°	587.5	582.3	576.9	571.6	566.2	559.0	549.8	540.6	531.5	522.4	515.8
45°	549.6	543.9	538.1	532.4	526.7	519.2	510.0	500.8	491.5	482.2	474.7
47.5°	510.3	504.4	498.5	492.6	486.7	478.9	469.3	459.8	450.1	440.5	432.7
50°	483.7	477.6	471.6	465.6	459.6	451.7	441.8	431.9	422.0	412.1	404.5
52.5°	456.5	450.6	444.7	438.8	432.8	424.9	414.7	404.7	394.5	384.4	376.6
55°	416.3	410.2	404.0	397.8	391.6	383.5	373.5	363.6	353.5	343.5	335.5
57.5°	376.7	370.2	363.8	357.4	351.0	342.9	333.0	323.1	313.3	303.4	295.2
60°	348.3	342.1	336.0	329.8	323.7	315.7	305.8	295.9	286.1	276.2	268.1
62.5°	322.8	316.4	310.0	303.5	297.1	288.9	278.7	268.7	258.5	248.4	241.0
65°	283.1	276.5	269.8	263.2	256.5	248.3	238.4	228.6	218.7	208.8	202.2
67.5°	241.9	235.5	229.2	222.8	216.5	208.7	199.6	190.4	181.3	172.1	166.4
70°	215.8	209.3	202.9	196.4	189.9	182.3	173.4	164.7	155.9	147.1	142.0
72.5°	188.1	182.2	176.3	170.5	164.6	157.6	149.3	141.0	132.6	124.3	120.0
75°	150.6	144.9	139.2	133.5	127.8	121.3	114.0	106.7	99.5	92.3	88.7
77.5°	112.5	107.7	102.9	98.0	93.2	87.8	81.9	76.2	70.3	64.4	62.3
80°	88.1	83.6	79.2	74.7	70.3	65.7	61.1	56.4	51.8	47.2	46.7
82.5°	67.1	63.0	58.9	54.8	50.6	47.3	44.6	41.9	39.3	36.6	36.3
85°	37.5	34.4	31.3	28.2	25.1	23.4	22.9	22.5	21.9	21.5	21.2
87.5°	13.2	12.6	11.9	11.2	10.6	10.3	10.4	10.6	10.7	10.9	10.9
90°	2.1	3.8	5.5	7.2	8.9	10.3	11.6	12.8	14.1	15.3	16.2
92.5°	8.8	8.9	9.0	9.1	9.2	9.8	11.1	12.3	13.6	14.8	15.7
95°	38.3	33.1	27.8	22.6	17.3	14.7	14.9	15.1	15.2	15.3	16.2
97.5°	81.4	84.7	88.0	91.3	94.6	87.6	70.3	53.0	35.7	18.4	18.5
100°	114.3	117.2	119.9	122.7	125.5	116.2	94.8	73.5	52.1	30.7	28.0
102.5°	151.1	153.2	155.2	157.3	159.3	159.0	156.1	153.4	150.6	147.8	119.4
105°	209.8	210.8	211.7	212.7	213.6	214.5	215.2	216.0	216.8	217.5	218.9
107.5°	264.4	264.8	265.3	265.8	266.3	267.0	268.0	269.1	270.2	271.3	271.9
110°	301.2	301.7	302.1	302.6	303.1	303.7	304.7	305.6	306.6	307.5	307.8



TEST NUMBER: P332910-940

CATALOG NUMBER: SA4XXRDIP-C575D810U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	336.9	337.7	338.6	339.4	340.3	340.9	341.3	341.7	342.1	342.6	342.6
115°	391.8	392.3	392.8	393.2	393.7	393.9	393.7	393.5	393.4	393.2	393.5
117.5°	441.3	441.9	442.6	443.2	443.8	444.3	444.6	445.0	445.3	445.7	445.6
120°	474.8	475.5	476.1	476.7	477.2	477.5	477.3	477.2	477.1	476.9	477.2
122.5°	506.0	506.4	506.8	507.1	507.6	507.8	508.0	508.3	508.5	508.7	508.9
125°	550.8	551.4	552.1	552.7	553.3	553.4	553.1	552.9	552.5	552.2	552.7
127.5°	593.2	593.3	593.5	593.7	593.8	594.2	594.9	595.7	596.4	597.1	597.0
130°	620.5	620.7	620.8	621.0	621.2	621.4	621.9	622.4	622.9	623.3	623.5
132.5°	645.6	645.9	646.2	646.5	646.8	647.2	647.7	648.4	648.9	649.5	649.7
135°	683.3	683.1	683.0	682.8	682.7	682.9	683.5	684.1	684.7	685.4	685.6
137.5°	716.6	716.7	716.8	716.8	716.8	717.2	717.9	718.6	719.3	720.0	720.3
140°	738.3	738.7	739.0	739.3	739.6	739.9	740.2	740.6	740.8	741.1	741.6
142.5°	757.9	758.4	759.0	759.6	760.1	760.5	760.6	760.9	761.1	761.3	761.6
145°	787.8	788.4	788.8	789.3	789.7	790.0	790.0	790.0	790.0	790.0	790.1
147.5°	811.7	812.6	813.4	814.3	815.2	815.6	815.4	815.2	815.0	814.9	815.0
150°	829.0	829.6	830.3	830.9	831.4	831.7	831.5	831.4	831.3	831.1	831.1
152.5°	843.5	844.0	844.5	845.0	845.5	845.6	845.3	845.1	844.7	844.5	844.7
155°	863.9	864.0	864.2	864.3	864.5	864.3	863.9	863.4	862.9	862.5	863.1
157.5°	881.0	880.9	880.8	880.7	880.7	880.3	879.8	879.3	878.8	878.2	879.0
160°	891.1	890.6	890.1	889.7	889.2	888.9	888.8	888.6	888.4	888.2	889.2
162.5°	900.0	899.4	898.8	898.2	897.6	897.2	897.1	897.0	896.8	896.6	897.6
165°	911.2	910.5	909.7	908.9	908.2	907.8	907.8	907.8	907.8	907.8	909.0
167.5°	920.2	919.4	918.6	917.7	916.9	916.5	916.4	916.3	916.2	916.1	917.5
170°	925.2	924.3	923.4	922.4	921.5	921.1	921.2	921.4	921.6	921.8	922.9
172.5°	928.5	927.6	926.7	925.8	924.9	924.4	924.6	924.8	924.9	925.1	926.3
175°	932.2	931.2	930.3	929.4	928.4	928.1	928.3	928.4	928.5	928.7	930.1
177.5°	933.9	933.0	932.1	931.2	930.4	930.1	930.3	930.6	930.9	931.0	932.0
180°	932.2	932.2	932.2	932.2	932.2	932.2	932.2	932.2	932.2	932.2	932.2



TEST NUMBER: P332910-940

CATALOG NUMBER: SA4XXRDIP-C575D810U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2
2.5°	902.9	904.2	905.5	906.2	906.1	905.9	905.8	905.7
5°	896.8	898.4	899.9	900.5	900.2	899.9	899.6	899.3
7.5°	884.8	885.8	886.9	887.1	886.6	886.1	885.6	885.1
10°	874.1	874.8	875.4	875.4	874.8	874.1	873.5	872.9
12.5°	860.9	861.2	861.7	861.4	860.5	859.7	858.8	857.9
15°	837.6	837.3	837.0	836.3	835.2	834.1	833.0	832.0
17.5°	809.6	808.7	807.8	806.6	804.9	803.3	801.6	800.0
20°	790.0	788.7	787.5	785.9	783.9	781.9	779.9	777.8
22.5°	768.2	766.3	764.5	762.8	761.1	759.5	757.9	756.2
25°	733.1	730.4	727.8	725.8	724.2	722.6	721.1	719.5
27.5°	697.2	694.0	690.8	688.0	685.8	683.6	681.4	679.2
30°	671.6	667.7	663.9	660.8	658.3	655.8	653.4	650.9
32.5°	645.4	641.0	636.4	633.0	630.7	628.4	626.0	623.7
35°	606.4	601.1	595.9	591.9	589.2	586.3	583.5	580.8
37.5°	564.5	558.7	552.8	548.5	545.6	542.9	540.1	537.3
40°	536.6	530.1	523.6	519.1	516.2	513.4	510.7	507.9
42.5°	509.2	502.6	496.0	491.2	488.3	485.4	482.5	479.7
45°	467.2	459.6	452.0	446.8	444.1	441.3	438.5	435.8
47.5°	424.8	417.0	409.1	403.7	400.6	397.6	394.6	391.5
50°	396.7	389.1	381.3	376.0	373.1	370.1	367.2	364.3
52.5°	368.7	360.9	353.1	347.7	344.6	341.5	338.5	335.5
55°	327.4	319.4	311.4	305.9	303.0	300.1	297.1	294.2
57.5°	287.0	278.9	270.8	265.6	263.4	261.2	259.0	256.7
60°	260.1	252.1	244.1	238.9	236.4	233.9	231.5	229.0
62.5°	233.6	226.2	218.8	214.1	212.1	210.2	208.2	206.3
65°	195.6	189.0	182.4	178.1	176.3	174.4	172.5	170.7
67.5°	160.7	155.0	149.3	145.4	143.4	141.3	139.3	137.2
70°	137.0	131.9	126.7	123.4	121.9	120.4	118.8	117.3
72.5°	115.7	111.3	106.9	104.1	102.6	101.2	99.8	98.4
75°	85.2	81.7	78.1	75.9	74.9	74.0	73.1	72.1
77.5°	60.3	58.2	56.1	54.9	54.7	54.4	54.1	53.9
80°	46.3	45.8	45.3	45.0	44.9	44.7	44.6	44.4
82.5°	35.9	35.6	35.3	35.0	34.9	34.7	34.6	34.4
85°	20.9	20.6	20.2	20.2	20.2	20.2	20.2	20.2
87.5°	11.0	11.1	11.1	11.2	11.4	11.6	11.8	11.9
90°	17.2	18.1	19.1	19.7	20.0	20.3	20.6	21.0
92.5°	16.7	17.6	18.5	19.0	19.1	19.1	19.2	19.3
95°	17.2	18.1	19.1	19.6	19.8	19.9	20.1	20.2
97.5°	18.6	18.7	18.8	18.9	19.1	19.2	19.4	19.5
100°	25.4	22.7	20.2	18.9	19.1	19.2	19.4	19.5
102.5°	91.0	62.6	34.2	20.0	20.0	20.0	20.1	20.1
105°	220.3	221.7	223.1	221.1	215.4	209.8	204.3	198.7
107.5°	272.6	273.2	273.9	274.6	275.2	275.7	276.3	277.0
110°	308.1	308.4	308.7	309.1	309.6	310.0	310.5	310.9



TEST NUMBER: P332910-940

CATALOG NUMBER: SA4XXRDIP-C575D810U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	342.5	342.4	342.3	342.6	343.2	343.8	344.4	345.0
115°	393.9	394.1	394.5	394.7	394.7	394.7	394.7	394.7
117.5°	445.5	445.5	445.4	445.3	445.3	445.2	445.1	445.1
120°	477.5	477.9	478.1	478.1	477.9	477.5	477.2	476.9
122.5°	509.1	509.3	509.4	509.3	509.1	508.7	508.5	508.1
125°	553.1	553.6	554.0	554.4	554.6	554.6	554.8	555.0
127.5°	596.9	596.8	596.7	596.6	596.5	596.4	596.3	596.1
130°	623.7	623.8	623.9	624.0	624.0	624.0	624.0	624.0
132.5°	649.9	650.0	650.1	650.1	650.1	649.9	649.8	649.7
135°	686.0	686.3	686.6	686.9	687.2	687.5	687.9	688.1
137.5°	720.6	720.9	721.3	721.4	721.3	721.2	721.1	721.0
140°	742.1	742.5	743.0	743.3	743.5	743.6	743.8	744.0
142.5°	761.9	762.2	762.6	762.8	762.8	762.9	762.9	762.9
145°	790.2	790.4	790.6	790.8	791.1	791.4	791.8	792.0
147.5°	815.2	815.3	815.4	815.6	815.7	815.8	816.0	816.2
150°	831.1	831.1	831.1	831.2	831.3	831.4	831.6	831.8
152.5°	845.0	845.3	845.4	845.5	845.4	845.3	845.3	845.2
155°	863.7	864.3	865.0	865.0	864.5	864.1	863.6	863.2
157.5°	879.9	880.7	881.5	881.5	880.7	879.9	879.0	878.2
160°	890.1	891.1	892.0	892.0	891.1	890.1	889.2	888.2
162.5°	898.5	899.4	900.4	900.3	899.2	898.1	897.2	896.1
165°	910.3	911.5	912.8	912.7	911.2	909.9	908.5	907.0
167.5°	918.9	920.2	921.6	921.5	920.0	918.4	916.9	915.3
170°	924.2	925.4	926.7	926.5	925.0	923.5	921.9	920.3
172.5°	927.6	928.8	930.1	929.8	928.2	926.5	924.8	923.1
175°	931.5	932.9	934.2	934.1	932.2	930.3	928.4	926.6
177.5°	933.1	934.1	935.0	934.8	933.3	931.8	930.3	928.8
180°	932.2	932.2	932.2	932.2	932.2	932.2	932.2	932.2

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