

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: P332548-935

Luminaire Tested: **S124DIP-S575D590U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332548-935  
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: S124DIP-S575D590U935-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3803.1 lumens  
Efficiency: N/A  
Efficacy: 115.9 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: General Diffuse

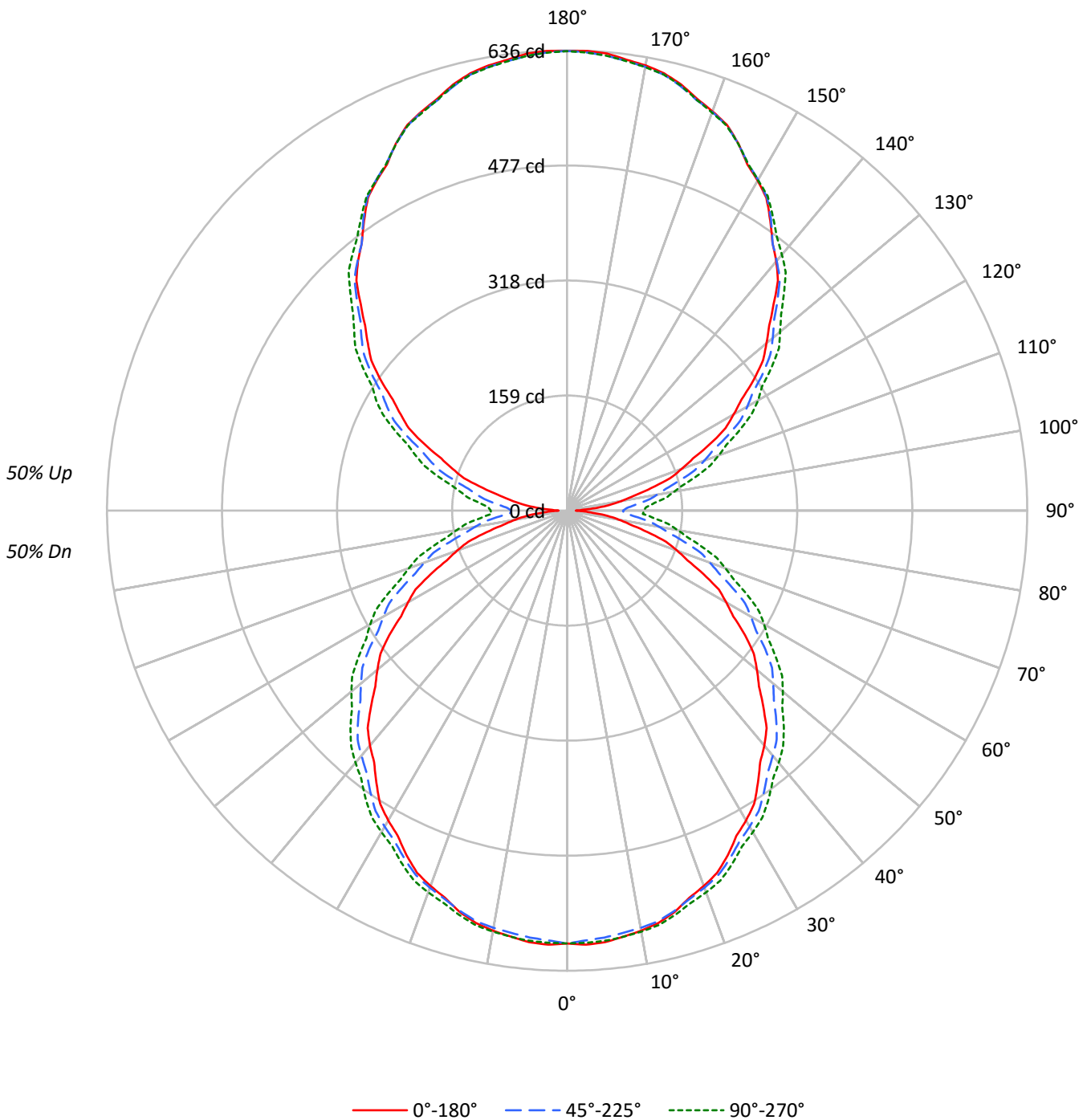
Input Watts (W): 32.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332548-935

CATALOG NUMBER: S124DIP-S575D590U935-4F0-1E-UDD-D1

### 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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	73	68	80	74	68	63	62	58	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	36	34	31	27
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	27	23
5	67	55	46	40	61	50	43	37	43	37	32	36	31	28	29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	33	28	35	29	25	29	25	21	24	20	18	15
8	52	40	32	26	48	37	30	25	32	26	22	27	22	19	22	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	17	23	18	15	19	15	13	11

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4830	4830	4830
5°	4845	4721	4734
10°	4816	4644	4639
15°	4772	4554	4529
20°	4707	4455	4422
25°	4634	4345	4302
30°	4555	4235	4181
35°	4464	4122	4074
40°	4393	4015	3964
45°	4286	3916	3867
50°	4195	3803	3767
55°	4102	3695	3648
60°	3957	3557	3541
65°	3798	3411	3409
70°	3603	3243	3253
75°	3334	3060	3114
80°	3035	2882	2977
85°	2656	2725	2896



TEST NUMBER: P332548-935

CATALOG NUMBER: S124DIP-S575D590U935-4F0-1E-UDD-D1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.7	1.5
10°-20°	162.3	4.3
20°-30°	245.5	6.5
30°-40°	297.0	7.8
40°-50°	314.0	8.3
50°-60°	295.5	7.8
60°-70°	245.2	6.4
70°-80°	172.2	4.5
80°-90°	99.2	2.6
90°-100°	99.7	2.6
100°-110°	166.9	4.4
110°-120°	239.3	6.3
120°-130°	293.9	7.7
130°-140°	318.8	8.4
140°-150°	307.8	8.1
150°-160°	257.7	6.8
160°-170°	171.5	4.5
170°-180°	60.0	1.6
0°-30°	464.5	12.2
0°-40°	761.4	20.0
0°-60°	1370.9	36.0
0°-90°	1887.5	49.6
90°-120°	505.8	13.3
90°-150°	1426.3	37.5
90°-180°	1916.0	50.4
0°-180°	3803.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	598	598	598	598	598	
5°	599	597	592	597	597	57
15°	574	575	573	578	578	162
25°	525	529	531	538	539	242
35°	460	468	474	483	486	288
45°	383	396	409	420	423	296
55°	300	314	334	347	352	267
65°	208	229	252	268	274	206
75°	115	140	168	186	193	123
85°	36	64	94	113	121	38
90°	12	44	77	99	106	9
95°	38	65	96	114	121	40
105°	120	135	161	179	186	128
115°	218	225	245	258	263	215
125°	314	315	330	341	345	280
135°	404	407	411	420	423	312
145°	489	490	491	494	496	306
155°	560	560	559	561	559	258
165°	609	608	607	610	608	172
175°	634	632	631	634	631	60
180°	635	635	635	635	635	



TEST NUMBER: P332548-935

CATALOG NUMBER: S124DIP-S575D590U935-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
2.5°	600.5	600.1	599.8	599.3	599.0	598.4	597.4	596.5	595.5	594.5	595.4
5°	599.0	598.6	598.1	597.6	597.2	596.4	595.4	594.3	593.3	592.3	593.5
7.5°	593.9	593.6	593.3	593.1	592.8	592.3	591.4	590.6	589.6	588.8	590.1
10°	589.6	589.4	589.3	589.2	589.0	588.6	587.8	587.0	586.3	585.6	586.9
12.5°	583.7	583.7	583.7	583.6	583.6	583.3	582.8	582.3	581.8	581.3	582.5
15°	574.2	574.4	574.5	574.6	574.8	574.6	574.2	573.8	573.3	572.8	574.2
17.5°	561.2	561.6	562.1	562.5	563.0	563.2	563.1	563.0	562.9	562.8	564.1
20°	552.1	552.5	552.9	553.5	553.9	554.1	554.3	554.5	554.6	554.7	556.2
22.5°	541.9	542.4	543.0	543.5	544.2	544.6	544.8	545.1	545.4	545.6	547.2
25°	525.3	526.2	527.1	528.0	528.8	529.5	529.9	530.4	530.9	531.3	533.0
27.5°	506.8	508.1	509.4	510.7	512.0	513.0	513.7	514.4	515.1	515.7	517.3
30°	494.5	495.7	496.8	498.0	499.2	500.3	501.4	502.4	503.4	504.5	506.2
32.5°	481.0	482.5	483.9	485.3	486.8	488.1	489.2	490.4	491.5	492.8	494.6
35°	459.6	461.4	463.2	464.9	466.7	468.4	469.8	471.4	472.9	474.3	476.5
37.5°	438.1	440.1	442.1	444.2	446.3	448.2	450.0	451.9	453.7	455.6	457.7
40°	424.1	426.0	428.0	429.9	431.9	433.9	435.9	438.0	440.1	442.2	444.4
42.5°	408.0	410.2	412.3	414.6	416.7	419.0	421.5	423.9	426.4	428.8	431.3
45°	383.2	386.1	388.9	391.8	394.5	397.4	400.2	403.0	405.9	408.7	411.2
47.5°	359.6	362.4	365.3	368.2	371.2	374.3	377.5	380.8	384.1	387.4	390.0
50°	342.3	345.6	348.9	352.2	355.5	358.8	362.1	365.3	368.6	371.9	374.8
52.5°	325.2	328.5	331.7	335.0	338.3	341.8	345.6	349.3	353.1	356.8	359.8
55°	300.1	303.2	306.4	309.5	312.6	316.4	320.9	325.4	329.8	334.3	337.3
57.5°	272.2	276.0	279.9	283.8	287.7	291.8	296.2	300.7	305.1	309.5	313.1
60°	253.9	257.8	261.7	265.5	269.4	273.8	278.7	283.6	288.5	293.4	296.9
62.5°	236.3	240.5	244.7	248.9	253.1	257.7	262.6	267.5	272.5	277.4	280.8
65°	207.7	212.5	217.2	222.0	226.8	231.7	236.7	241.8	246.8	251.9	255.6
67.5°	180.2	185.3	190.4	195.4	200.4	205.7	211.1	216.5	222.0	227.4	231.2
70°	161.4	166.5	171.6	176.7	181.8	187.1	192.7	198.4	204.1	209.7	213.7
72.5°	143.3	148.4	153.6	158.8	163.9	169.5	175.6	181.6	187.6	193.6	197.5
75°	115.2	120.7	126.2	131.7	137.2	143.2	149.4	155.7	162.0	168.2	172.4
77.5°	89.1	95.0	100.8	106.6	112.4	118.6	125.2	131.7	138.3	144.8	149.0
80°	73.0	79.0	85.0	90.9	96.9	103.1	109.7	116.2	122.8	129.3	133.8
82.5°	56.9	63.1	69.3	75.5	81.7	88.1	94.6	101.2	107.7	114.3	118.9
85°	35.5	41.8	48.0	54.2	60.5	67.0	73.7	80.4	87.1	93.8	98.2
87.5°	20.1	26.4	32.7	39.1	45.4	51.9	58.5	65.3	72.0	78.7	83.1
90°	12.2	19.4	26.5	33.7	40.8	48.0	55.3	62.6	69.8	77.1	82.1
92.5°	20.7	27.5	34.2	40.9	47.6	54.5	61.6	68.5	75.5	82.6	87.1
95°	38.1	44.1	49.9	55.9	61.7	68.1	75.0	81.9	88.8	95.6	100.0
97.5°	59.4	64.4	69.4	74.4	79.4	85.4	92.4	99.3	106.2	113.1	117.4
100°	76.1	80.4	84.7	89.0	93.3	98.9	105.6	112.4	119.2	126.1	130.3
102.5°	94.2	97.7	101.3	104.9	108.5	113.6	120.1	126.7	133.3	139.9	144.0
105°	120.5	123.6	126.7	129.8	132.8	137.3	143.3	149.2	155.2	161.1	165.1
107.5°	149.3	151.9	154.5	157.0	159.5	163.5	168.8	174.1	179.3	184.6	188.6
110°	168.4	170.7	173.0	175.3	177.6	181.3	186.4	191.5	196.7	201.7	204.9



TEST NUMBER: P332548-935

CATALOG NUMBER: S124DIP-S575D590U935-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	188.3	190.2	192.1	194.0	195.9	199.1	204.0	208.7	213.5	218.3	221.5
115°	218.1	219.5	220.8	222.1	223.5	226.4	231.0	235.5	240.0	244.6	247.8
117.5°	246.8	247.8	248.7	249.5	250.5	253.0	257.3	261.6	265.9	270.2	272.9
120°	265.6	266.5	267.3	268.2	269.1	271.6	275.5	279.6	283.5	287.5	290.0
122.5°	285.6	285.9	286.1	286.4	286.7	288.8	292.7	296.6	300.6	304.4	307.1
125°	314.5	314.4	314.2	314.1	313.9	315.6	319.3	322.9	326.5	330.1	332.7
127.5°	341.2	341.4	341.6	341.7	341.9	343.4	346.0	348.7	351.4	354.0	356.5
130°	359.5	359.7	359.9	360.1	360.2	361.5	363.9	366.3	368.7	371.0	373.5
132.5°	378.8	378.8	378.9	379.0	379.1	380.0	381.9	383.7	385.6	387.4	389.7
135°	403.6	404.2	404.8	405.5	406.1	407.0	408.0	409.1	410.1	411.1	413.4
137.5°	431.2	431.4	431.5	431.7	431.9	432.3	432.9	433.6	434.3	435.0	436.9
140°	449.7	449.8	449.8	449.9	450.0	450.0	450.2	450.4	450.6	450.6	452.5
142.5°	466.1	466.2	466.4	466.6	466.8	466.8	466.7	466.5	466.3	466.1	467.8
145°	489.3	489.6	489.8	490.2	490.4	490.6	490.8	490.9	490.9	491.0	491.9
147.5°	512.5	512.8	513.2	513.6	513.9	514.1	514.0	513.9	513.8	513.8	513.8
150°	526.6	526.9	527.2	527.4	527.8	527.9	527.9	527.9	527.9	527.9	527.9
152.5°	539.4	539.7	539.9	540.1	540.4	540.5	540.6	540.7	540.8	540.9	541.1
155°	559.8	559.8	559.8	559.8	559.8	559.7	559.6	559.6	559.5	559.3	559.7
157.5°	577.1	576.9	576.7	576.5	576.4	576.2	576.2	576.2	576.2	576.1	576.4
160°	587.3	587.2	587.1	587.0	586.9	586.8	586.7	586.6	586.4	586.3	586.7
162.5°	596.8	596.5	596.2	595.9	595.6	595.4	595.3	595.2	595.1	595.0	595.6
165°	609.4	609.1	608.7	608.5	608.1	607.9	607.6	607.4	607.2	607.0	607.6
167.5°	619.1	618.7	618.2	617.8	617.3	617.1	617.1	617.2	617.2	617.2	617.9
170°	624.7	624.1	623.5	623.0	622.4	622.2	622.3	622.4	622.6	622.7	623.4
172.5°	628.5	628.1	627.7	627.2	626.7	626.5	626.5	626.5	626.5	626.6	627.3
175°	634.0	633.4	632.9	632.3	631.8	631.5	631.4	631.3	631.1	631.0	631.8
177.5°	635.8	635.3	634.9	634.5	634.0	633.8	633.8	633.8	633.8	633.8	634.4
180°	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0



TEST NUMBER: P332548-935

CATALOG NUMBER: S124DIP-S575D590U935-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
2.5°	596.2	597.0	597.9	598.2	598.1	598.0	597.9	597.8
5°	594.7	595.8	597.0	597.5	597.4	597.3	597.1	596.9
7.5°	591.5	592.8	594.2	594.8	594.6	594.4	594.3	594.2
10°	588.2	589.6	590.9	591.5	591.4	591.2	591.1	590.9
12.5°	583.8	585.0	586.2	586.8	586.8	586.7	586.7	586.7
15°	575.5	576.9	578.2	578.8	578.7	578.5	578.3	578.2
17.5°	565.5	566.9	568.3	568.9	568.8	568.7	568.5	568.4
20°	557.8	559.2	560.7	561.5	561.5	561.5	561.5	561.5
22.5°	548.6	550.1	551.6	552.5	552.7	552.9	553.2	553.5
25°	534.6	536.2	537.9	538.7	538.9	539.1	539.2	539.3
27.5°	518.8	520.3	521.9	522.7	522.9	523.1	523.2	523.4
30°	507.8	509.5	511.1	512.0	512.3	512.6	512.9	513.2
32.5°	496.5	498.3	500.2	501.3	501.6	501.9	502.2	502.5
35°	478.5	480.6	482.7	484.0	484.4	484.8	485.3	485.8
37.5°	459.9	461.9	464.1	465.4	465.8	466.3	466.7	467.3
40°	446.7	448.9	451.2	452.5	453.1	453.7	454.3	455.0
42.5°	433.8	436.2	438.7	440.1	440.7	441.1	441.6	442.0
45°	413.8	416.3	418.8	420.4	421.2	422.0	422.7	423.4
47.5°	392.6	395.3	397.9	399.6	400.5	401.4	402.3	403.2
50°	377.8	380.8	383.7	385.7	386.6	387.4	388.4	389.3
52.5°	362.8	365.8	368.8	370.7	371.6	372.5	373.3	374.3
55°	340.3	343.3	346.2	348.2	349.0	350.0	350.9	351.7
57.5°	316.6	320.2	323.7	325.9	326.7	327.5	328.4	329.2
60°	300.3	303.8	307.1	309.4	310.6	311.9	313.1	314.3
62.5°	284.2	287.7	291.1	293.3	294.5	295.8	297.0	298.2
65°	259.3	263.1	266.8	269.2	270.4	271.6	272.9	274.1
67.5°	235.0	238.8	242.5	245.0	246.2	247.3	248.5	249.6
70°	217.7	221.8	225.8	228.3	229.4	230.4	231.4	232.5
72.5°	201.4	205.3	209.2	211.7	212.9	214.0	215.2	216.4
75°	176.5	180.6	184.9	187.6	188.9	190.3	191.7	193.0
77.5°	153.3	157.6	161.8	164.6	166.0	167.5	168.8	170.3
80°	138.3	142.7	147.1	150.0	151.2	152.4	153.6	154.8
82.5°	123.5	128.0	132.7	135.6	136.9	138.2	139.5	140.9
85°	102.7	107.2	111.7	114.7	116.1	117.6	119.1	120.6
87.5°	87.6	92.0	96.4	99.4	100.7	102.1	103.4	104.8
90°	87.0	92.0	97.0	100.2	101.6	103.1	104.4	105.8
92.5°	91.8	96.3	100.9	103.9	105.2	106.5	107.9	109.2
95°	104.3	108.7	113.0	115.8	117.2	118.6	119.9	121.2
97.5°	121.7	126.1	130.4	133.1	134.4	135.7	137.0	138.3
100°	134.5	138.8	143.0	145.7	146.7	147.7	148.8	149.8
102.5°	148.3	152.5	156.7	159.5	160.7	162.0	163.2	164.5
105°	169.2	173.2	177.3	180.0	181.6	183.1	184.6	186.1
107.5°	192.5	196.5	200.4	203.0	204.1	205.1	206.1	207.2
110°	208.1	211.4	214.6	216.9	218.4	219.9	221.4	223.0





TEST NUMBER: P332548-935

CATALOG NUMBER: S124DIP-S575D590U935-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	224.8	228.1	231.4	233.6	234.9	236.1	237.4	238.6
115°	251.0	254.1	257.3	259.3	260.3	261.2	262.1	263.0
117.5°	275.6	278.4	281.0	282.9	283.9	284.8	285.9	286.8
120°	292.4	294.8	297.2	299.2	300.6	302.0	303.4	304.8
122.5°	309.7	312.3	314.9	316.5	317.2	317.9	318.6	319.3
125°	335.4	337.9	340.5	342.2	342.9	343.5	344.2	344.9
127.5°	359.0	361.4	363.9	365.6	366.4	367.2	368.1	368.9
130°	376.0	378.4	380.9	382.4	382.8	383.2	383.7	384.2
132.5°	392.0	394.3	396.7	398.2	399.0	399.7	400.5	401.1
135°	415.5	417.7	419.8	421.2	421.7	422.3	422.9	423.4
137.5°	438.8	440.7	442.6	443.9	444.7	445.5	446.3	447.1
140°	454.3	456.2	458.0	459.2	459.9	460.5	461.2	461.8
142.5°	469.4	471.1	472.8	474.0	474.6	475.2	475.8	476.4
145°	492.7	493.4	494.2	494.7	495.0	495.2	495.5	495.8
147.5°	513.8	513.8	513.8	514.1	514.4	514.8	515.2	515.6
150°	527.9	527.9	527.9	527.9	527.7	527.6	527.5	527.4
152.5°	541.4	541.7	541.9	541.9	541.7	541.3	541.1	540.8
155°	560.2	560.6	561.1	561.1	560.6	560.2	559.7	559.3
157.5°	576.8	577.1	577.5	577.4	577.0	576.7	576.3	575.9
160°	587.0	587.3	587.6	587.5	587.0	586.4	585.9	585.4
162.5°	596.2	596.8	597.4	597.4	596.8	596.2	595.7	595.2
165°	608.3	608.9	609.6	609.7	609.2	608.8	608.4	608.0
167.5°	618.5	619.1	619.8	619.7	619.1	618.5	617.8	617.1
170°	624.0	624.7	625.3	625.3	624.5	623.7	622.9	622.2
172.5°	628.1	628.9	629.6	629.6	628.8	628.0	627.2	626.5
175°	632.6	633.4	634.0	634.0	633.4	632.6	631.8	631.0
177.5°	635.0	635.6	636.2	636.2	635.5	634.8	634.0	633.4
180°	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0

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