

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: P332547

Luminaire Tested: **S124DIP-S575D590U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332547  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S575D590U835-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4730.1 lumens  
Efficiency: N/A  
Efficacy: 144.2 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

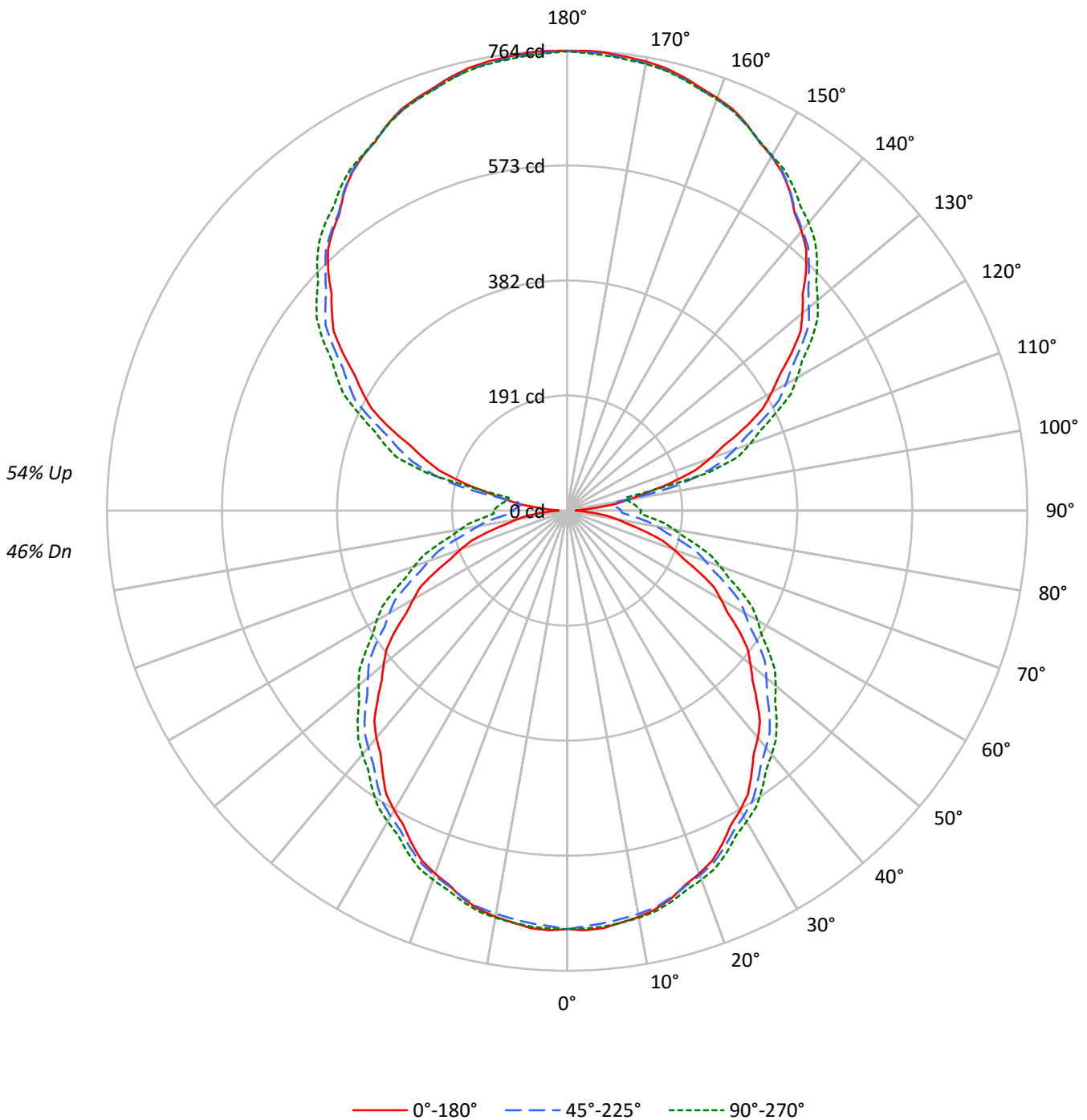
Input Watts (W): 32.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332547

CATALOG NUMBER: S124DIP-S575D590U835-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P332547

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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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	50	30	10	0														
RCR																																						
0	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46																				
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37																				
2	87	79	73	67	79	73	67	62	61	56	53	49	46	44	39	37	35	30																				
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	29	25																				
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	28	25	21																				
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18																				
6	61	48	40	34	56	45	37	32	38	32	28	31	27	23	25	21	19	16																				
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	23	19	17	14																				
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	12																				
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11																				
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10																				

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

	0°	45°	90°
0°	5610	5610	5610
5°	5628	5483	5498
10°	5593	5393	5388
15°	5543	5289	5260
20°	5467	5175	5135
25°	5382	5046	4997
30°	5290	4919	4856
35°	5185	4787	4732
40°	5102	4663	4603
45°	4978	4549	4492
50°	4873	4416	4375
55°	4765	4291	4237
60°	4596	4132	4112
65°	4410	3962	3958
70°	4186	3768	3778
75°	3872	3553	3616
80°	3526	3347	3457
85°	3082	3163	3364



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.8	1.4
10°-20°	188.5	4.0
20°-30°	285.1	6.0
30°-40°	344.9	7.3
40°-50°	364.7	7.7
50°-60°	343.2	7.3
60°-70°	284.7	6.0
70°-80°	200.0	4.2
80°-90°	115.3	2.4
90°-100°	93.2	2.0
100°-110°	216.0	4.6
110°-120°	351.5	7.4
120°-130°	422.7	8.9
130°-140°	440.3	9.3
140°-150°	405.7	8.6
150°-160°	325.9	6.9
160°-170°	210.2	4.4
170°-180°	72.4	1.5
0°-30°	539.4	11.4
0°-40°	884.4	18.7
0°-60°	1592.2	33.7
0°-90°	2192.2	46.3
90°-120°	660.7	14.0
90°-150°	1929.4	40.8
90°-180°	2538.0	53.7
0°-180°	4730.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	695	695	695	695	695	
5°	696	693	688	694	693	66
15°	667	668	665	672	672	188
25°	610	615	617	625	626	281
35°	534	543	551	561	564	334
45°	445	460	475	487	492	344
55°	349	365	388	403	408	311
65°	241	266	293	311	318	239
75°	134	163	195	216	224	142
85°	41	74	109	131	140	44
90°	14	52	90	115	123	10
95°	42	49	80	104	112	48
105°	179	198	229	252	240	188
115°	325	335	358	376	382	320
125°	454	456	474	489	495	405
135°	561	560	568	581	587	432
145°	645	646	646	651	656	403
155°	707	707	706	708	706	326
165°	746	743	743	747	742	211
175°	763	759	760	764	758	73
180°	763	763	763	763	763	



TEST NUMBER: P332547

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	697.4	697.0	696.6	696.1	695.7	695.0	693.9	692.8	691.6	690.5	691.5
5°	695.7	695.2	694.6	694.1	693.6	692.7	691.5	690.3	689.1	687.9	689.3
7.5°	689.8	689.4	689.1	688.8	688.5	687.9	686.9	685.9	684.8	683.8	685.4
10°	684.8	684.6	684.4	684.3	684.1	683.6	682.7	681.8	681.0	680.1	681.7
12.5°	677.9	677.9	677.9	677.8	677.8	677.5	676.9	676.3	675.7	675.1	676.5
15°	666.9	667.1	667.2	667.4	667.6	667.4	666.9	666.4	665.8	665.3	666.9
17.5°	651.8	652.3	652.8	653.3	653.9	654.1	654.0	653.9	653.8	653.7	655.2
20°	641.2	641.7	642.2	642.8	643.3	643.6	643.8	644.0	644.1	644.3	646.0
22.5°	629.4	630.0	630.7	631.3	632.0	632.5	632.8	633.1	633.4	633.7	635.5
25°	610.1	611.1	612.2	613.2	614.2	615.0	615.5	616.0	616.6	617.1	619.0
27.5°	588.6	590.1	591.6	593.2	594.7	595.8	596.6	597.4	598.2	599.0	600.8
30°	574.3	575.7	577.0	578.4	579.8	581.1	582.3	583.5	584.7	586.0	587.9
32.5°	558.7	560.4	562.0	563.7	565.4	566.9	568.2	569.6	570.9	572.3	574.4
35°	533.8	535.9	538.0	540.0	542.1	544.0	545.7	547.5	549.2	550.9	553.4
37.5°	508.8	511.1	513.5	515.9	518.3	520.6	522.7	524.9	527.0	529.1	531.6
40°	492.6	494.8	497.1	499.3	501.6	503.9	506.3	508.7	511.2	513.6	516.2
42.5°	473.9	476.4	478.9	481.5	484.0	486.7	489.5	492.3	495.2	498.0	500.9
45°	445.1	448.4	451.7	455.0	458.2	461.5	464.8	468.1	471.4	474.7	477.6
47.5°	417.6	420.9	424.3	427.7	431.1	434.7	438.5	442.3	446.1	449.9	453.0
50°	397.6	401.4	405.2	409.1	412.9	416.7	420.5	424.3	428.1	431.9	435.3
52.5°	377.7	381.5	385.3	389.1	392.9	397.0	401.4	405.7	410.1	414.4	417.9
55°	348.6	352.2	355.9	359.5	363.1	367.5	372.7	377.9	383.1	388.3	391.8
57.5°	316.1	320.6	325.1	329.6	334.1	338.9	344.0	349.2	354.4	359.5	363.6
60°	294.9	299.4	303.9	308.4	312.9	318.0	323.7	329.4	335.1	340.8	344.8
62.5°	274.4	279.3	284.2	289.1	294.0	299.3	305.0	310.7	316.5	322.2	326.1
65°	241.2	246.8	252.3	257.8	263.4	269.1	274.9	280.8	286.7	292.6	296.9
67.5°	209.3	215.2	221.1	227.0	232.8	238.9	245.2	251.5	257.8	264.1	268.5
70°	187.5	193.4	199.3	205.2	211.1	217.3	223.8	230.4	237.0	243.6	248.2
72.5°	166.4	172.4	178.4	184.4	190.4	196.9	203.9	210.9	217.9	224.9	229.4
75°	133.8	140.2	146.6	153.0	159.4	166.3	173.5	180.8	188.1	195.3	200.2
77.5°	103.5	110.3	117.1	123.8	130.6	137.8	145.4	153.0	160.6	168.2	173.1
80°	84.8	91.7	98.7	105.6	112.5	119.7	127.4	135.0	142.6	150.2	155.4
82.5°	66.1	73.3	80.5	87.7	94.9	102.3	109.9	117.5	125.1	132.8	138.1
85°	41.2	48.5	55.8	63.0	70.3	77.8	85.6	93.4	101.2	108.9	114.1
87.5°	23.4	30.7	38.0	45.4	52.7	60.3	68.0	75.8	83.6	91.4	96.5
90°	14.2	22.5	30.8	39.1	47.4	55.8	64.2	72.7	81.1	89.6	95.4
92.5°	19.0	25.3	31.6	37.9	44.2	51.6	60.0	68.5	76.9	85.4	91.0
95°	41.5	42.9	44.3	45.7	47.1	51.4	58.6	65.8	73.0	80.2	85.7
97.5°	75.8	83.4	91.0	98.6	106.2	106.4	99.3	92.2	85.1	77.9	82.5
100°	102.1	108.9	115.7	122.4	129.2	127.2	116.5	105.7	95.0	84.2	86.8
102.5°	132.2	137.8	143.5	149.1	154.7	159.7	164.0	168.3	172.6	177.0	158.2
105°	178.7	182.9	187.1	191.4	195.6	201.2	208.2	215.3	222.3	229.3	234.8
107.5°	223.2	226.4	229.6	232.8	236.0	241.1	248.0	254.9	261.8	268.7	273.6
110°	252.6	255.5	258.3	261.1	263.9	268.7	275.5	282.3	289.1	295.9	300.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	281.2	284.1	286.9	289.7	292.5	297.0	303.2	309.3	315.4	321.5	325.3
115°	325.2	327.2	329.1	331.1	333.0	336.7	342.1	347.5	352.9	358.3	362.4
117.5°	365.6	367.0	368.5	369.9	371.4	374.8	380.2	385.7	391.1	396.5	400.1
120°	392.4	393.4	394.4	395.4	396.5	399.4	404.3	409.2	414.1	419.0	422.7
122.5°	417.9	418.3	418.7	419.1	419.5	422.2	427.1	432.0	436.9	441.9	445.5
125°	453.7	454.1	454.4	454.8	455.1	457.3	461.4	465.4	469.5	473.6	477.2
127.5°	488.3	488.2	488.2	488.1	488.1	490.0	493.9	497.8	501.7	505.6	508.7
130°	510.0	510.0	509.9	509.9	509.8	511.4	514.5	517.7	520.8	524.0	527.2
132.5°	530.5	530.6	530.7	530.7	530.8	532.1	534.8	537.5	540.2	542.9	546.0
135°	560.6	560.4	560.3	560.2	560.1	560.9	562.6	564.3	566.0	567.7	570.8
137.5°	587.8	587.7	587.6	587.5	587.4	587.9	589.0	590.2	591.3	592.4	595.2
140°	605.6	605.7	605.8	605.9	606.0	606.2	606.6	607.1	607.5	607.9	610.5
142.5°	621.0	621.4	621.8	622.3	622.7	622.9	623.0	623.0	623.1	623.1	625.4
145°	645.4	645.6	645.8	646.0	646.2	646.3	646.3	646.3	646.3	646.3	647.5
147.5°	664.9	665.4	665.9	666.5	667.0	667.2	667.1	667.0	666.8	666.7	667.0
150°	679.0	679.3	679.7	680.0	680.4	680.5	680.3	680.2	680.1	679.9	679.9
152.5°	690.3	690.6	691.0	691.4	691.7	691.8	691.6	691.4	691.1	690.9	691.1
155°	706.8	706.9	707.0	707.1	707.3	707.1	706.8	706.4	706.0	705.6	706.1
157.5°	720.8	720.7	720.6	720.6	720.5	720.2	719.8	719.4	718.9	718.5	719.2
160°	729.0	728.6	728.2	727.9	727.5	727.2	727.1	727.0	726.8	726.7	727.5
162.5°	736.3	735.8	735.3	734.9	734.4	734.1	733.9	733.8	733.7	733.6	734.3
165°	745.5	744.9	744.3	743.6	743.0	742.7	742.7	742.7	742.7	742.7	743.7
167.5°	752.8	752.2	751.5	750.9	750.2	749.8	749.8	749.7	749.6	749.5	750.7
170°	757.0	756.2	755.4	754.7	753.9	753.6	753.7	753.8	754.0	754.1	755.1
172.5°	759.7	758.9	758.2	757.4	756.7	756.3	756.5	756.6	756.7	756.8	757.9
175°	762.7	761.9	761.1	760.4	759.6	759.3	759.4	759.6	759.7	759.8	760.9
177.5°	764.0	763.3	762.6	761.9	761.2	760.9	761.1	761.3	761.5	761.7	762.6
180°	762.7	762.7	762.7	762.7	762.7	762.7	762.7	762.7	762.7	762.7	762.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	692.5	693.4	694.4	694.8	694.7	694.5	694.4	694.3
5°	690.7	692.0	693.4	694.0	693.9	693.7	693.5	693.3
7.5°	687.0	688.5	690.1	690.8	690.6	690.4	690.2	690.1
10°	683.2	684.8	686.3	687.0	686.9	686.7	686.5	686.3
12.5°	678.0	679.4	680.8	681.5	681.5	681.4	681.4	681.4
15°	668.4	670.0	671.5	672.2	672.1	671.9	671.7	671.5
17.5°	656.8	658.4	660.0	660.7	660.6	660.5	660.3	660.2
20°	647.8	649.5	651.2	652.1	652.1	652.1	652.1	652.1
22.5°	637.2	638.9	640.6	641.7	641.9	642.2	642.5	642.8
25°	620.9	622.8	624.7	625.7	625.9	626.1	626.2	626.4
27.5°	602.6	604.3	606.1	607.1	607.3	607.5	607.7	607.9
30°	589.8	591.7	593.6	594.7	595.0	595.4	595.7	596.1
32.5°	576.6	578.8	581.0	582.2	582.6	582.9	583.3	583.6
35°	555.8	558.2	560.6	562.1	562.6	563.1	563.6	564.2
37.5°	534.1	536.5	539.0	540.5	541.0	541.6	542.1	542.7
40°	518.8	521.4	524.0	525.6	526.3	527.0	527.7	528.4
42.5°	503.8	506.6	509.5	511.2	511.8	512.3	512.9	513.4
45°	480.6	483.5	486.4	488.3	489.2	490.1	490.9	491.8
47.5°	456.0	459.1	462.1	464.1	465.2	466.2	467.3	468.3
50°	438.8	442.3	445.7	448.0	449.0	450.0	451.1	452.1
52.5°	421.4	424.8	428.3	430.5	431.6	432.6	433.6	434.7
55°	395.2	398.7	402.1	404.4	405.4	406.5	407.5	408.5
57.5°	367.7	371.9	376.0	378.5	379.5	380.4	381.4	382.4
60°	348.8	352.8	356.7	359.4	360.8	362.2	363.6	365.0
62.5°	330.1	334.1	338.1	340.7	342.1	343.5	344.9	346.3
65°	301.2	305.6	309.9	312.7	314.1	315.5	316.9	318.3
67.5°	272.9	277.3	281.7	284.5	285.9	287.2	288.6	289.9
70°	252.9	257.6	262.2	265.2	266.4	267.6	268.8	270.0
72.5°	233.9	238.5	243.0	245.9	247.3	248.6	250.0	251.3
75°	205.0	209.8	214.7	217.9	219.4	221.0	222.6	224.1
77.5°	178.1	183.0	187.9	191.2	192.8	194.5	196.1	197.8
80°	160.6	165.7	170.9	174.2	175.6	177.0	178.4	179.8
82.5°	143.4	148.7	154.1	157.5	159.0	160.5	162.0	163.6
85°	119.3	124.5	129.7	133.2	134.9	136.6	138.3	140.1
87.5°	101.7	106.9	112.0	115.4	117.0	118.6	120.1	121.7
90°	101.1	106.9	112.7	116.4	118.0	119.7	121.3	122.9
92.5°	96.7	102.3	107.9	111.5	112.9	114.3	115.8	117.2
95°	91.1	96.5	102.0	105.5	107.2	108.9	110.6	112.3
97.5°	87.1	91.8	96.4	99.5	101.1	102.7	104.3	105.9
100°	89.3	91.8	94.3	96.2	97.6	98.9	100.2	101.6
102.5°	139.5	120.8	102.1	93.4	94.8	96.2	97.5	98.9
105°	240.3	245.7	251.2	252.3	249.1	246.0	242.8	239.6
107.5°	278.4	283.2	288.0	291.3	293.0	294.7	296.4	298.2
110°	304.4	308.6	312.8	315.8	317.6	319.4	321.1	322.9





TEST NUMBER: P332547

CATALOG NUMBER: S124DIP-S575D590U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	329.1	332.9	336.7	339.5	341.4	343.3	345.1	347.0
115°	366.4	370.5	374.5	377.2	378.4	379.6	380.8	382.0
117.5°	403.6	407.2	410.7	413.1	414.5	415.8	417.1	418.5
120°	426.4	430.1	433.8	436.2	437.4	438.5	439.6	440.8
122.5°	449.1	452.7	456.3	458.6	459.6	460.6	461.6	462.6
125°	480.9	484.6	488.2	490.6	491.8	493.0	494.1	495.3
127.5°	511.7	514.7	517.8	519.8	520.9	522.0	523.1	524.1
130°	530.4	533.7	536.9	539.1	540.1	541.1	542.2	543.2
132.5°	549.1	552.2	555.3	557.3	558.3	559.2	560.2	561.1
135°	573.8	576.8	579.8	582.0	583.3	584.6	585.8	587.1
137.5°	598.1	600.9	603.7	605.5	606.2	607.0	607.8	608.6
140°	613.2	615.8	618.4	620.2	621.2	622.2	623.2	624.2
142.5°	627.6	629.9	632.1	633.6	634.4	635.1	635.9	636.6
145°	648.6	649.8	650.9	652.0	652.9	653.9	654.8	655.8
147.5°	667.2	667.4	667.7	668.1	668.8	669.5	670.2	670.9
150°	679.9	679.9	679.9	680.0	680.1	680.3	680.4	680.5
152.5°	691.3	691.5	691.7	691.8	691.7	691.6	691.5	691.5
155°	706.6	707.1	707.6	707.7	707.3	706.9	706.6	706.2
157.5°	719.8	720.5	721.1	721.1	720.5	719.8	719.2	718.5
160°	728.2	729.0	729.8	729.8	729.0	728.2	727.5	726.7
162.5°	735.1	735.8	736.6	736.6	735.7	734.8	734.0	733.1
165°	744.7	745.7	746.8	746.7	745.5	744.4	743.3	742.1
167.5°	751.8	752.9	754.0	753.9	752.7	751.4	750.1	748.9
170°	756.1	757.1	758.2	758.0	756.8	755.5	754.2	753.0
172.5°	758.9	759.9	760.9	760.7	759.4	758.0	756.6	755.2
175°	762.1	763.2	764.4	764.2	762.7	761.1	759.6	758.1
177.5°	763.4	764.2	765.0	764.8	763.6	762.4	761.1	759.9
180°	762.7	762.7	762.7	762.7	762.7	762.7	762.7	762.7

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