

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: P332547-927

Luminaire Tested: **S124DIP-S575D590U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332547-927  
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-S575D590U927-4F0-1E-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: 3747.1 lumens  
Efficiency: N/A  
Efficacy: 114.2 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

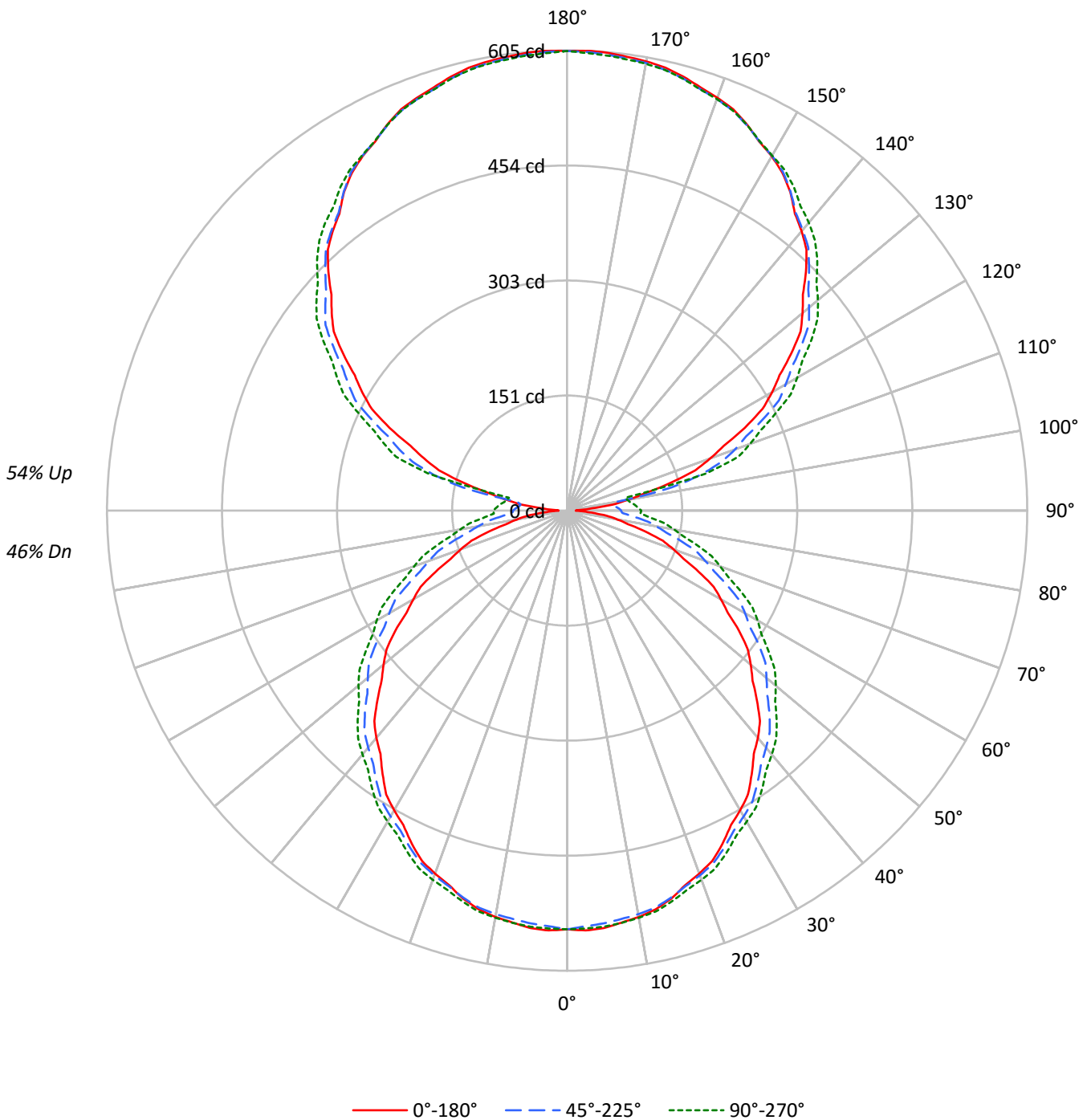
Input Watts (W): 32.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332547-927

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### Luminous Intensity Polar Plot





TEST NUMBER: P332547-927

CATALOG NUMBER: S124DIP-S575D590U927-4F0-1E-UDD-D

**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	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°	4444	4444	4444
5°	4458	4343	4355
10°	4431	4273	4269
15°	4391	4190	4167
20°	4331	4099	4068
25°	4264	3998	3958
30°	4191	3896	3847
35°	4108	3792	3748
40°	4041	3694	3646
45°	3943	3603	3558
50°	3860	3498	3465
55°	3775	3400	3356
60°	3640	3274	3257
65°	3494	3139	3136
70°	3315	2985	2993
75°	3068	2814	2864
80°	2794	2652	2738
85°	2439	2507	2665



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.1	1.4
10°-20°	149.4	4.0
20°-30°	225.8	6.0
30°-40°	273.2	7.3
40°-50°	288.9	7.7
50°-60°	271.9	7.3
60°-70°	225.6	6.0
70°-80°	158.4	4.2
80°-90°	91.3	2.4
90°-100°	73.8	2.0
100°-110°	171.1	4.6
110°-120°	278.5	7.4
120°-130°	334.9	8.9
130°-140°	348.8	9.3
140°-150°	321.4	8.6
150°-160°	258.2	6.9
160°-170°	166.5	4.4
170°-180°	57.4	1.5
0°-30°	427.3	11.4
0°-40°	700.6	18.7
0°-60°	1261.3	33.7
0°-90°	1736.6	46.3
90°-120°	523.4	14.0
90°-150°	1528.5	40.8
90°-180°	2010.0	53.6
0°-180°	3747.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	551	549	545	550	549	52
15°	528	529	527	532	532	149
25°	483	487	489	495	496	223
35°	423	430	436	445	447	265
45°	353	364	376	386	390	272
55°	276	289	308	319	324	246
65°	191	211	232	247	252	189
75°	106	129	155	171	178	113
85°	33	59	86	104	111	35
90°	11	41	71	91	97	8
95°	33	39	64	82	89	38
105°	142	157	182	199	190	149
115°	258	265	284	298	303	254
125°	359	361	375	388	392	321
135°	444	444	450	460	465	342
145°	511	512	512	516	520	319
155°	560	560	559	561	559	258
165°	591	588	588	592	588	167
175°	604	602	602	605	601	58
180°	604	604	604	604	604	



TEST NUMBER: P332547-927

CATALOG NUMBER: S124DIP-S575D590U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	552.5	552.2	551.8	551.4	551.1	550.6	549.7	548.8	547.9	547.0	547.8
5°	551.1	550.7	550.2	549.9	549.5	548.7	547.8	546.8	545.9	544.9	546.1
7.5°	546.4	546.1	545.9	545.7	545.4	544.9	544.2	543.4	542.5	541.7	543.0
10°	542.5	542.3	542.2	542.1	541.9	541.5	540.8	540.1	539.5	538.8	540.0
12.5°	537.0	537.0	537.0	536.9	536.9	536.7	536.2	535.8	535.3	534.8	535.9
15°	528.3	528.5	528.5	528.7	528.9	528.7	528.3	527.9	527.4	527.0	528.3
17.5°	516.3	516.7	517.1	517.5	518.0	518.2	518.1	518.0	517.9	517.8	519.0
20°	507.9	508.3	508.7	509.2	509.6	509.8	510.0	510.2	510.2	510.4	511.7
22.5°	498.6	499.1	499.6	500.1	500.7	501.1	501.3	501.5	501.8	502.0	503.4
25°	483.3	484.1	485.0	485.8	486.6	487.2	487.6	488.0	488.5	488.9	490.4
27.5°	466.3	467.5	468.7	469.9	471.1	472.0	472.6	473.2	473.9	474.5	475.9
30°	455.0	456.1	457.1	458.2	459.3	460.3	461.3	462.2	463.2	464.2	465.7
32.5°	442.6	443.9	445.2	446.6	447.9	449.1	450.1	451.2	452.3	453.4	455.0
35°	422.9	424.5	426.2	427.8	429.4	430.9	432.3	433.7	435.1	436.4	438.4
37.5°	403.1	404.9	406.8	408.7	410.6	412.4	414.1	415.8	417.5	419.1	421.1
40°	390.2	392.0	393.8	395.5	397.4	399.2	401.1	403.0	405.0	406.9	408.9
42.5°	375.4	377.4	379.4	381.4	383.4	385.6	387.8	390.0	392.3	394.5	396.8
45°	352.6	355.2	357.8	360.4	363.0	365.6	368.2	370.8	373.4	376.0	378.3
47.5°	330.8	333.4	336.1	338.8	341.5	344.4	347.4	350.4	353.4	356.4	358.9
50°	315.0	318.0	321.0	324.1	327.1	330.1	333.1	336.1	339.1	342.1	344.8
52.5°	299.2	302.2	305.2	308.2	311.2	314.5	318.0	321.4	324.9	328.3	331.1
55°	276.2	279.0	281.9	284.8	287.6	291.1	295.2	299.4	303.5	307.6	310.4
57.5°	250.4	254.0	257.5	261.1	264.7	268.5	272.5	276.6	280.7	284.8	288.0
60°	233.6	237.2	240.7	244.3	247.9	251.9	256.4	260.9	265.5	270.0	273.1
62.5°	217.4	221.3	225.1	229.0	232.9	237.1	241.6	246.1	250.7	255.2	258.3
65°	191.1	195.5	199.9	204.2	208.7	213.2	217.8	222.4	227.1	231.8	235.2
67.5°	165.8	170.5	175.2	179.8	184.4	189.3	194.2	199.2	204.2	209.2	212.7
70°	148.5	153.2	157.9	162.6	167.2	172.1	177.3	182.5	187.7	193.0	196.6
72.5°	131.8	136.6	141.3	146.1	150.8	156.0	161.5	167.1	172.6	178.2	181.7
75°	106.0	111.1	116.1	121.2	126.3	131.7	137.4	143.2	149.0	154.7	158.6
77.5°	82.0	87.4	92.8	98.1	103.5	109.2	115.2	121.2	127.2	133.2	137.1
80°	67.2	72.6	78.2	83.7	89.1	94.8	100.9	106.9	113.0	119.0	123.1
82.5°	52.4	58.1	63.8	69.5	75.2	81.0	87.1	93.1	99.1	105.2	109.4
85°	32.6	38.4	44.2	49.9	55.7	61.6	67.8	74.0	80.2	86.3	90.4
87.5°	18.5	24.3	30.1	36.0	41.7	47.8	53.9	60.0	66.2	72.4	76.4
90°	11.2	17.8	24.4	31.0	37.5	44.2	50.9	57.6	64.2	71.0	75.6
92.5°	15.1	20.0	25.0	30.0	35.0	40.9	47.5	54.3	60.9	67.7	72.1
95°	32.9	34.0	35.1	36.2	37.3	40.7	46.4	52.1	57.8	63.5	67.9
97.5°	60.0	66.1	72.1	78.1	84.1	84.3	78.7	73.0	67.4	61.7	65.4
100°	80.9	86.3	91.7	97.0	102.3	100.8	92.3	83.7	75.3	66.7	68.8
102.5°	104.7	109.2	113.7	118.1	122.6	126.5	129.9	133.3	136.7	140.2	125.3
105°	141.6	144.9	148.2	151.6	155.0	159.4	164.9	170.6	176.1	181.6	186.0
107.5°	176.8	179.4	181.9	184.4	187.0	191.0	196.5	201.9	207.4	212.9	216.7
110°	200.1	202.4	204.6	206.8	209.1	212.9	218.2	223.6	229.0	234.4	237.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	222.8	225.1	227.3	229.5	231.7	235.3	240.2	245.0	249.9	254.7	257.7
115°	257.6	259.2	260.7	262.3	263.8	266.7	271.0	275.3	279.6	283.8	287.1
117.5°	289.6	290.7	291.9	293.0	294.2	296.9	301.2	305.5	309.8	314.1	317.0
120°	310.9	311.6	312.4	313.2	314.1	316.4	320.3	324.2	328.0	331.9	334.9
122.5°	331.1	331.4	331.7	332.0	332.3	334.5	338.3	342.2	346.1	350.1	352.9
125°	359.4	359.7	360.0	360.3	360.5	362.3	365.5	368.7	371.9	375.2	378.0
127.5°	386.8	386.7	386.7	386.7	386.7	388.2	391.3	394.3	397.4	400.5	403.0
130°	404.0	404.0	403.9	403.9	403.9	405.1	407.6	410.1	412.6	415.1	417.6
132.5°	420.3	420.3	420.4	420.4	420.5	421.5	423.7	425.8	427.9	430.1	432.5
135°	444.1	443.9	443.9	443.8	443.7	444.3	445.7	447.0	448.4	449.7	452.2
137.5°	465.6	465.6	465.5	465.4	465.3	465.7	466.6	467.5	468.4	469.3	471.5
140°	479.7	479.8	479.9	480.0	480.1	480.2	480.5	480.9	481.3	481.6	483.6
142.5°	491.9	492.3	492.6	493.0	493.3	493.5	493.5	493.5	493.6	493.6	495.4
145°	511.3	511.4	511.6	511.7	511.9	512.0	512.0	512.0	512.0	512.0	512.9
147.5°	526.7	527.1	527.5	528.0	528.4	528.5	528.5	528.4	528.2	528.1	528.4
150°	537.9	538.1	538.4	538.7	539.0	539.1	538.9	538.8	538.8	538.6	538.6
152.5°	546.8	547.1	547.4	547.7	548.0	548.0	547.9	547.7	547.5	547.3	547.5
155°	559.9	560.0	560.1	560.2	560.3	560.2	559.9	559.6	559.3	559.0	559.4
157.5°	571.0	570.9	570.8	570.8	570.8	570.5	570.2	569.9	569.5	569.2	569.7
160°	577.5	577.2	576.9	576.6	576.3	576.1	576.0	575.9	575.8	575.7	576.3
162.5°	583.3	582.9	582.5	582.2	581.8	581.5	581.4	581.3	581.2	581.1	581.7
165°	590.6	590.1	589.6	589.1	588.6	588.4	588.4	588.4	588.4	588.4	589.1
167.5°	596.4	595.9	595.3	594.8	594.3	594.0	594.0	593.9	593.8	593.7	594.7
170°	599.7	599.0	598.4	597.9	597.2	597.0	597.1	597.1	597.3	597.4	598.2
172.5°	601.8	601.2	600.6	600.0	599.4	599.1	599.3	599.4	599.4	599.5	600.4
175°	604.2	603.6	602.9	602.4	601.7	601.5	601.6	601.7	601.8	601.9	602.8
177.5°	605.2	604.7	604.1	603.6	603.0	602.8	602.9	603.1	603.2	603.4	604.1
180°	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	548.6	549.3	550.1	550.4	550.3	550.2	550.1	550.0
5°	547.2	548.2	549.3	549.8	549.7	549.5	549.4	549.2
7.5°	544.2	545.4	546.7	547.2	547.1	546.9	546.8	546.7
10°	541.2	542.5	543.7	544.2	544.2	544.0	543.8	543.7
12.5°	537.1	538.2	539.3	539.9	539.9	539.8	539.8	539.8
15°	529.5	530.8	532.0	532.5	532.4	532.3	532.1	532.0
17.5°	520.3	521.6	522.8	523.4	523.3	523.2	523.1	523.0
20°	513.2	514.5	515.9	516.6	516.6	516.6	516.6	516.6
22.5°	504.8	506.1	507.5	508.3	508.5	508.7	509.0	509.2
25°	491.9	493.4	494.9	495.7	495.8	496.0	496.1	496.2
27.5°	477.4	478.7	480.1	480.9	481.1	481.3	481.4	481.6
30°	467.2	468.7	470.2	471.1	471.3	471.7	471.9	472.2
32.5°	456.8	458.5	460.3	461.2	461.5	461.8	462.1	462.3
35°	440.3	442.2	444.1	445.3	445.7	446.1	446.5	446.9
37.5°	423.1	425.0	427.0	428.2	428.6	429.0	429.4	429.9
40°	411.0	413.0	415.1	416.4	416.9	417.5	418.0	418.6
42.5°	399.1	401.3	403.6	405.0	405.4	405.8	406.3	406.7
45°	380.7	383.0	385.3	386.8	387.5	388.2	388.9	389.6
47.5°	361.2	363.7	366.1	367.7	368.5	369.3	370.2	371.0
50°	347.6	350.4	353.1	354.9	355.7	356.5	357.4	358.1
52.5°	333.8	336.5	339.3	341.0	341.9	342.7	343.5	344.4
55°	313.1	315.8	318.5	320.4	321.2	322.0	322.8	323.6
57.5°	291.3	294.6	297.9	299.8	300.6	301.3	302.1	302.9
60°	276.3	279.5	282.6	284.7	285.8	286.9	288.0	289.1
62.5°	261.5	264.7	267.8	269.9	271.0	272.1	273.2	274.3
65°	238.6	242.1	245.5	247.7	248.8	249.9	251.0	252.2
67.5°	216.2	219.7	223.2	225.4	226.5	227.5	228.6	229.7
70°	200.3	204.1	207.7	210.1	211.0	212.0	212.9	213.9
72.5°	185.3	188.9	192.5	194.8	195.9	196.9	198.0	199.1
75°	162.4	166.2	170.1	172.6	173.8	175.1	176.3	177.5
77.5°	141.1	145.0	148.9	151.5	152.7	154.1	155.3	156.7
80°	127.2	131.3	135.4	138.0	139.1	140.2	141.3	142.4
82.5°	113.6	117.8	122.1	124.8	126.0	127.1	128.3	129.6
85°	94.5	98.6	102.7	105.5	106.9	108.2	109.6	111.0
87.5°	80.6	84.7	88.7	91.4	92.7	94.0	95.1	96.4
90°	80.1	84.7	89.3	92.2	93.5	94.8	96.1	97.4
92.5°	76.6	81.0	85.5	88.3	89.4	90.5	91.7	92.8
95°	72.2	76.4	80.8	83.6	84.9	86.3	87.6	89.0
97.5°	69.0	72.7	76.4	78.8	80.1	81.4	82.6	83.9
100°	70.7	72.7	74.7	76.2	77.3	78.3	79.4	80.5
102.5°	110.5	95.7	80.9	74.0	75.1	76.2	77.2	78.3
105°	190.4	194.6	199.0	199.9	197.3	194.9	192.3	189.8
107.5°	220.5	224.3	228.1	230.8	232.1	233.5	234.8	236.2
110°	241.1	244.5	247.8	250.2	251.6	253.0	254.4	255.8





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CATALOG NUMBER: S124DIP-S575D590U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	260.7	263.7	266.7	268.9	270.5	272.0	273.4	274.9
115°	290.3	293.5	296.7	298.8	299.8	300.7	301.7	302.6
117.5°	319.7	322.6	325.3	327.3	328.4	329.4	330.4	331.5
120°	337.8	340.7	343.6	345.5	346.5	347.4	348.2	349.2
122.5°	355.8	358.6	361.5	363.3	364.1	364.9	365.7	366.5
125°	381.0	383.9	386.7	388.6	389.6	390.5	391.4	392.4
127.5°	405.4	407.7	410.2	411.8	412.6	413.5	414.4	415.2
130°	420.2	422.8	425.3	427.1	427.9	428.6	429.5	430.3
132.5°	435.0	437.4	439.9	441.5	442.3	443.0	443.8	444.5
135°	454.6	456.9	459.3	461.1	462.1	463.1	464.1	465.1
137.5°	473.8	476.0	478.2	479.7	480.2	480.9	481.5	482.1
140°	485.8	487.8	489.9	491.3	492.1	492.9	493.7	494.5
142.5°	497.2	499.0	500.7	501.9	502.6	503.1	503.7	504.3
145°	513.8	514.8	515.6	516.5	517.2	518.0	518.7	519.5
147.5°	528.5	528.7	528.9	529.3	529.8	530.4	530.9	531.5
150°	538.6	538.6	538.6	538.7	538.8	538.9	539.0	539.1
152.5°	547.6	547.8	548.0	548.0	548.0	547.9	547.8	547.8
155°	559.8	560.2	560.5	560.6	560.3	560.0	559.8	559.4
157.5°	570.2	570.8	571.2	571.2	570.8	570.2	569.7	569.2
160°	576.9	577.5	578.1	578.1	577.5	576.9	576.3	575.7
162.5°	582.3	582.9	583.5	583.5	582.8	582.1	581.5	580.7
165°	589.9	590.7	591.6	591.5	590.6	589.7	588.8	587.9
167.5°	595.6	596.4	597.3	597.2	596.3	595.2	594.2	593.3
170°	599.0	599.8	600.6	600.5	599.5	598.5	597.5	596.5
172.5°	601.2	602.0	602.8	602.6	601.6	600.5	599.4	598.3
175°	603.7	604.6	605.5	605.4	604.2	602.9	601.7	600.6
177.5°	604.8	605.4	606.0	605.9	604.9	604.0	602.9	602.0
180°	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2

(END OF REPORT)