

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: P332538-840

Luminaire Tested: **S124DIP-S575D365U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332538-840  
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-S575D365U840-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3869.6 lumens  
Efficiency: N/A  
Efficacy: 140.7 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

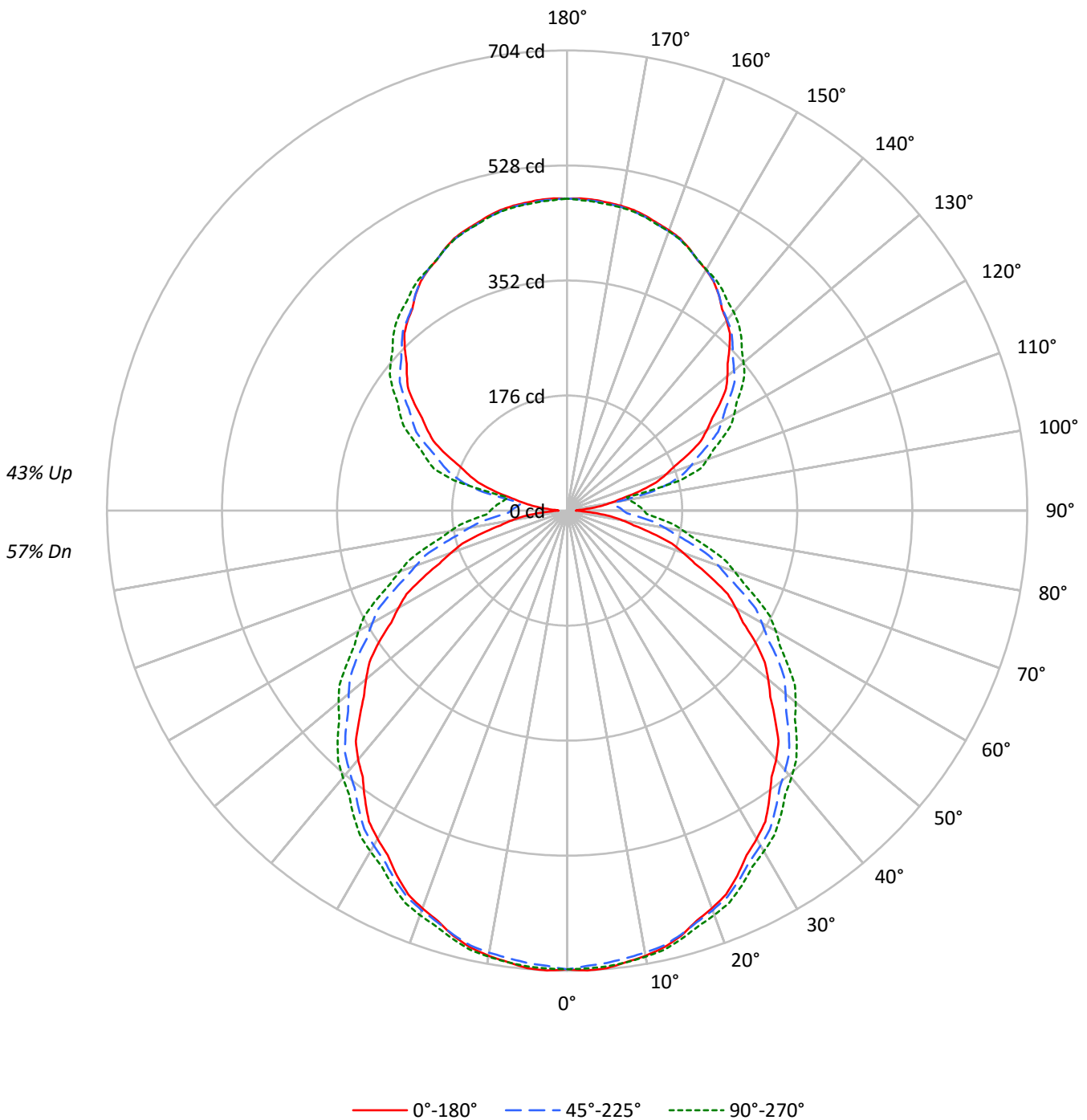
Input Watts (W): 27.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332538-840

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### Luminous Intensity Polar Plot





TEST NUMBER: P332538-840

CATALOG NUMBER: S124DIP-S575D365U840-4F0-1E-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	109	109	109	109	101	101	101	101	87	87	87	75	75	75	63	63	63	57
1	98	93	89	85	91	87	83	80	75	72	69	64	62	60	54	52	51	46
2	89	81	74	68	82	75	69	64	65	60	56	55	52	49	46	44	42	37
3	81	71	63	56	75	66	59	53	57	51	47	49	44	41	41	38	35	31
4	74	62	54	47	68	58	51	45	50	44	40	43	38	35	36	33	30	26
5	68	55	47	40	63	52	44	38	45	39	34	38	34	30	32	29	26	23
6	62	50	41	35	58	46	39	33	40	34	30	35	30	26	29	26	23	20
7	58	45	36	31	53	42	34	29	37	30	26	31	27	23	27	23	20	17
8	53	41	32	27	49	38	31	26	33	27	23	29	24	20	25	21	18	15
9	50	37	29	24	46	35	28	23	30	25	21	26	22	18	23	19	16	14
10	46	34	26	21	43	32	25	20	28	22	18	24	20	16	21	17	14	13

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

	0°	45°	90°
0°	5666	5666	5666
5°	5683	5537	5552
10°	5649	5446	5442
15°	5598	5341	5312
20°	5521	5226	5185
25°	5435	5096	5047
30°	5342	4967	4904
35°	5237	4834	4779
40°	5153	4710	4648
45°	5027	4594	4537
50°	4920	4460	4418
55°	4811	4333	4278
60°	4641	4173	4153
65°	4454	4001	3997
70°	4226	3805	3816
75°	3910	3587	3652
80°	3559	3381	3492
85°	3112	3195	3398



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.5	1.7
10°-20°	190.4	4.9
20°-30°	287.9	7.4
30°-40°	348.3	9.0
40°-50°	368.3	9.5
50°-60°	346.6	9.0
60°-70°	287.5	7.4
70°-80°	202.0	5.2
80°-90°	115.6	3.0
90°-100°	84.1	2.2
100°-110°	154.2	4.0
110°-120°	232.7	6.0
120°-130°	271.7	7.0
130°-140°	278.6	7.2
140°-150°	254.5	6.6
150°-160°	203.9	5.3
160°-170°	131.5	3.4
170°-180°	45.3	1.2
0°-30°	544.7	14.1
0°-40°	893.1	23.1
0°-60°	1607.9	41.6
0°-90°	2213.0	57.2
90°-120°	471.1	12.2
90°-150°	1275.9	33.0
90°-180°	1657.0	42.8
0°-180°	3869.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	702	702	702	702	702	
5°	703	700	695	700	700	67
15°	674	674	672	678	678	190
25°	616	621	623	631	633	284
35°	539	548	556	567	570	337
45°	450	464	479	492	497	347
55°	352	369	392	407	412	314
65°	244	269	296	314	321	241
75°	135	164	197	218	226	144
85°	42	75	110	133	142	44
90°	14	49	86	110	118	9
95°	30	45	76	99	107	33
105°	114	133	163	184	180	120
115°	205	214	238	256	262	202
125°	285	287	305	320	326	255
135°	351	351	358	371	377	271
145°	404	404	404	409	413	252
155°	442	442	442	443	442	204
165°	466	465	465	467	464	132
175°	477	475	475	478	474	45
180°	477	477	477	477	477	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	704.3	703.9	703.5	703.0	702.6	701.9	700.7	699.6	698.4	697.3	698.3
5°	702.6	702.1	701.5	700.9	700.4	699.5	698.3	697.1	695.9	694.7	696.1
7.5°	696.6	696.2	695.9	695.6	695.3	694.7	693.7	692.7	691.6	690.5	692.2
10°	691.6	691.4	691.2	691.1	690.8	690.3	689.4	688.5	687.7	686.8	688.4
12.5°	684.6	684.6	684.6	684.5	684.5	684.2	683.6	683.0	682.4	681.8	683.2
15°	673.5	673.7	673.8	674.0	674.2	674.0	673.5	673.0	672.4	671.9	673.5
17.5°	658.2	658.7	659.2	659.7	660.4	660.6	660.5	660.4	660.2	660.1	661.7
20°	647.5	648.0	648.5	649.1	649.6	649.9	650.2	650.4	650.5	650.7	652.4
22.5°	635.6	636.2	636.9	637.5	638.2	638.7	639.0	639.3	639.6	640.0	641.8
25°	616.1	617.1	618.2	619.2	620.3	621.1	621.6	622.1	622.7	623.2	625.1
27.5°	594.4	595.9	597.4	599.1	600.6	601.7	602.5	603.3	604.1	604.9	606.7
30°	580.0	581.4	582.7	584.1	585.5	586.8	588.0	589.3	590.5	591.8	593.7
32.5°	564.2	565.9	567.5	569.3	571.0	572.5	573.8	575.2	576.5	577.9	580.1
35°	539.1	541.2	543.3	545.3	547.4	549.4	551.1	552.9	554.6	556.3	558.9
37.5°	513.8	516.1	518.6	521.0	523.4	525.7	527.9	530.1	532.2	534.3	536.8
40°	497.5	499.7	502.0	504.2	506.5	508.9	511.3	513.7	516.2	518.7	521.3
42.5°	478.6	481.1	483.6	486.3	488.8	491.5	494.3	497.2	500.1	502.9	505.8
45°	449.5	452.8	456.2	459.5	462.7	466.1	469.4	472.7	476.1	479.4	482.3
47.5°	421.7	425.1	428.5	431.9	435.4	439.0	442.8	446.7	450.5	454.3	457.5
50°	401.5	405.4	409.2	413.1	417.0	420.8	424.6	428.5	432.3	436.2	439.6
52.5°	381.4	385.3	389.1	392.9	396.8	400.9	405.4	409.7	414.1	418.5	422.0
55°	352.0	355.7	359.4	363.0	366.7	371.1	376.4	381.6	386.9	392.1	395.7
57.5°	319.2	323.8	328.3	332.9	337.4	342.2	347.4	352.6	357.9	363.0	367.2
60°	297.8	302.4	306.9	311.4	316.0	321.1	326.9	332.6	338.4	344.2	348.2
62.5°	277.1	282.1	287.0	292.0	296.9	302.3	308.0	313.8	319.6	325.4	329.3
65°	243.6	249.2	254.8	260.3	266.0	271.8	277.6	283.6	289.5	295.5	299.8
67.5°	211.4	217.3	223.3	229.2	235.1	241.3	247.6	254.0	260.3	266.7	271.1
70°	189.3	195.3	201.3	207.2	213.2	219.4	226.0	232.7	239.3	246.0	250.6
72.5°	168.0	174.1	180.2	186.2	192.3	198.8	205.9	213.0	220.0	227.1	231.7
75°	135.1	141.6	148.0	154.5	161.0	167.9	175.2	182.6	190.0	197.2	202.2
77.5°	104.5	111.4	118.3	125.0	131.9	139.2	146.8	154.5	162.2	169.9	174.8
80°	85.6	92.6	99.7	106.6	113.6	120.9	128.7	136.3	144.0	151.7	156.9
82.5°	66.8	74.0	81.3	88.6	95.8	103.3	111.0	118.7	126.3	134.1	139.5
85°	41.6	49.0	56.4	63.6	71.0	78.6	86.4	94.3	102.2	110.0	115.2
87.5°	23.4	30.8	38.1	45.3	52.7	60.2	68.0	75.7	83.5	91.3	96.4
90°	13.6	21.5	29.4	37.3	45.0	53.1	61.2	69.4	77.5	85.6	91.2
92.5°	16.5	22.8	29.1	35.4	41.8	49.0	57.2	65.3	73.4	81.6	86.9
95°	29.9	32.9	36.0	39.1	42.1	47.3	54.5	61.7	69.0	76.2	81.4
97.5°	51.0	57.6	64.2	70.9	77.6	80.0	78.2	76.4	74.6	72.9	77.6
100°	67.2	73.1	79.1	85.0	91.1	92.0	87.9	83.7	79.6	75.4	78.8
102.5°	86.0	91.1	96.0	101.1	106.1	111.3	116.5	121.8	127.0	132.3	122.3
105°	114.5	118.5	122.4	126.4	130.4	135.8	142.7	149.5	156.3	163.2	168.3
107.5°	142.3	145.3	148.5	151.6	154.6	159.6	166.2	172.8	179.5	186.1	190.8
110°	160.5	163.2	165.8	168.5	171.2	175.8	182.4	189.0	195.6	202.2	206.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	178.1	180.7	183.3	185.9	188.4	192.8	198.8	204.9	211.0	217.0	220.9
115°	205.3	207.1	208.9	210.8	212.6	216.2	221.7	227.2	232.7	238.2	242.3
117.5°	230.5	231.8	233.0	234.3	235.5	238.8	244.2	249.6	255.0	260.3	264.0
120°	247.0	247.8	248.6	249.5	250.3	253.3	258.2	263.3	268.2	273.2	276.8
122.5°	263.0	263.3	263.6	263.9	264.2	266.7	271.7	276.5	281.4	286.3	289.9
125°	285.1	285.3	285.4	285.5	285.7	287.8	292.1	296.3	300.4	304.7	308.2
127.5°	306.6	306.5	306.5	306.4	306.3	308.1	311.7	315.5	319.2	323.0	326.0
130°	320.0	319.9	319.8	319.7	319.6	321.0	324.2	327.2	330.2	333.3	336.4
132.5°	332.9	332.9	332.8	332.8	332.8	334.0	336.5	339.0	341.5	344.2	347.2
135°	351.3	351.2	351.1	351.1	351.0	351.7	353.3	354.9	356.4	357.9	360.8
137.5°	368.4	368.3	368.1	368.0	367.8	368.2	369.2	370.1	371.0	372.0	374.8
140°	379.5	379.5	379.5	379.5	379.5	379.6	379.9	380.3	380.6	380.9	383.4
142.5°	388.9	389.1	389.4	389.6	389.9	390.0	390.0	390.0	390.0	390.0	392.1
145°	404.0	404.1	404.2	404.2	404.3	404.3	404.3	404.3	404.3	404.3	405.5
147.5°	416.3	416.6	416.9	417.1	417.4	417.5	417.4	417.3	417.2	417.2	417.4
150°	425.2	425.3	425.5	425.6	425.8	425.8	425.7	425.6	425.5	425.5	425.5
152.5°	431.9	432.1	432.3	432.6	432.8	432.8	432.7	432.5	432.4	432.3	432.4
155°	442.2	442.3	442.3	442.4	442.5	442.4	442.2	441.9	441.7	441.5	441.8
157.5°	451.0	450.9	450.9	450.8	450.8	450.6	450.4	450.1	449.8	449.6	450.0
160°	456.2	455.9	455.7	455.4	455.1	455.0	454.9	454.8	454.7	454.6	455.1
162.5°	460.7	460.4	460.1	459.8	459.5	459.3	459.2	459.1	459.1	459.0	459.5
165°	466.5	466.1	465.6	465.2	464.8	464.6	464.6	464.6	464.6	464.6	465.3
167.5°	471.0	470.6	470.2	469.8	469.4	469.2	469.1	469.1	469.0	469.0	469.7
170°	473.6	473.1	472.6	472.2	471.7	471.5	471.6	471.7	471.7	471.8	472.4
172.5°	475.3	474.8	474.3	473.9	473.4	473.2	473.3	473.4	473.4	473.5	474.1
175°	477.2	476.7	476.3	475.7	475.2	475.0	475.1	475.2	475.3	475.3	476.2
177.5°	478.1	477.6	477.2	476.7	476.3	476.1	476.3	476.4	476.5	476.6	477.2
180°	477.2	477.2	477.2	477.2	477.2	477.2	477.2	477.2	477.2	477.2	477.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	699.3	700.2	701.3	701.7	701.6	701.4	701.3	701.1
5°	697.5	698.8	700.2	700.8	700.7	700.5	700.3	700.1
7.5°	693.8	695.3	696.9	697.6	697.4	697.2	697.0	696.9
10°	689.9	691.6	693.1	693.8	693.7	693.5	693.3	693.1
12.5°	684.7	686.1	687.5	688.2	688.2	688.1	688.1	688.1
15°	675.0	676.6	678.1	678.8	678.7	678.5	678.3	678.1
17.5°	663.3	664.9	666.5	667.2	667.1	667.0	666.8	666.7
20°	654.2	655.9	657.6	658.5	658.5	658.5	658.5	658.5
22.5°	643.5	645.2	646.9	648.0	648.2	648.5	648.8	649.1
25°	627.0	628.9	630.9	631.9	632.1	632.3	632.4	632.6
27.5°	608.5	610.3	612.1	613.1	613.3	613.5	613.7	613.9
30°	595.6	597.5	599.5	600.6	600.9	601.3	601.6	602.0
32.5°	582.3	584.5	586.7	587.9	588.3	588.7	589.1	589.4
35°	561.3	563.7	566.1	567.6	568.2	568.7	569.2	569.8
37.5°	539.4	541.8	544.3	545.8	546.3	546.9	547.4	548.1
40°	523.9	526.5	529.2	530.8	531.5	532.2	532.9	533.6
42.5°	508.8	511.6	514.5	516.2	516.8	517.4	518.0	518.5
45°	485.3	488.3	491.2	493.1	494.0	494.9	495.7	496.7
47.5°	460.5	463.6	466.7	468.7	469.8	470.8	471.9	472.9
50°	443.1	446.7	450.1	452.4	453.4	454.4	455.6	456.6
52.5°	425.6	429.0	432.5	434.7	435.9	436.9	437.9	439.0
55°	399.1	402.6	406.1	408.4	409.4	410.5	411.5	412.5
57.5°	371.3	375.6	379.7	382.2	383.2	384.2	385.2	386.2
60°	352.2	356.3	360.2	362.9	364.4	365.8	367.2	368.6
62.5°	333.4	337.4	341.4	344.1	345.5	346.9	348.3	349.7
65°	304.2	308.6	313.0	315.8	317.2	318.6	320.0	321.4
67.5°	275.6	280.0	284.5	287.3	288.7	290.0	291.4	292.8
70°	255.4	260.1	264.8	267.8	269.0	270.2	271.5	272.7
72.5°	236.2	240.9	245.4	248.3	249.7	251.1	252.5	253.8
75°	207.0	211.9	216.8	220.0	221.6	223.2	224.8	226.3
77.5°	179.9	184.8	189.8	193.1	194.7	196.4	198.0	199.8
80°	162.2	167.3	172.6	175.9	177.3	178.7	180.2	181.6
82.5°	144.8	150.2	155.6	159.1	160.6	162.1	163.6	165.2
85°	120.5	125.7	131.0	134.5	136.2	137.9	139.7	141.5
87.5°	101.6	106.7	112.0	115.3	116.8	118.5	120.0	121.6
90°	96.7	102.3	107.9	111.4	112.9	114.5	116.0	117.5
92.5°	92.4	97.8	103.2	106.6	108.1	109.5	110.9	112.3
95°	86.6	91.8	96.9	100.4	102.1	103.7	105.3	107.0
97.5°	82.2	86.7	91.4	94.5	96.1	97.7	99.3	100.9
100°	82.2	85.5	88.9	91.2	92.5	93.8	95.1	96.4
102.5°	112.3	102.3	92.4	88.1	89.5	90.8	92.2	93.6
105°	173.4	178.4	183.5	185.3	183.9	182.4	181.0	179.6
107.5°	195.4	200.1	204.7	207.8	209.3	211.0	212.5	214.1
110°	210.6	214.7	218.8	221.8	223.4	225.1	226.7	228.3





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CATALOG NUMBER: S124DIP-S575D365U840-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	224.7	228.5	232.4	235.2	236.9	238.5	240.2	242.0
115°	246.2	250.2	254.2	256.8	258.0	259.3	260.5	261.8
117.5°	267.5	271.1	274.8	277.2	278.6	279.9	281.3	282.7
120°	280.5	284.2	287.8	290.2	291.4	292.8	294.0	295.2
122.5°	293.5	297.1	300.6	303.1	304.1	305.2	306.3	307.4
125°	311.7	315.4	318.9	321.2	322.3	323.5	324.6	325.8
127.5°	329.1	332.2	335.3	337.4	338.5	339.7	340.8	341.9
130°	339.6	342.8	346.1	348.2	349.3	350.3	351.3	352.4
132.5°	350.3	353.4	356.5	358.5	359.5	360.4	361.4	362.4
135°	363.9	366.8	369.7	371.8	373.0	374.3	375.4	376.6
137.5°	377.5	380.2	382.8	384.7	385.5	386.3	387.2	388.0
140°	386.0	388.5	391.0	392.7	393.6	394.7	395.6	396.6
142.5°	394.4	396.5	398.6	400.1	400.8	401.6	402.3	403.1
145°	406.6	407.8	408.9	409.9	410.7	411.6	412.4	413.3
147.5°	417.6	417.8	418.0	418.4	419.0	419.7	420.3	420.9
150°	425.5	425.5	425.5	425.5	425.6	425.7	425.7	425.8
152.5°	432.5	432.6	432.8	432.8	432.7	432.7	432.7	432.6
155°	442.1	442.4	442.7	442.8	442.5	442.3	442.1	441.8
157.5°	450.4	450.8	451.2	451.2	450.8	450.4	450.0	449.6
160°	455.7	456.2	456.6	456.6	456.2	455.7	455.1	454.6
162.5°	459.9	460.4	460.9	460.8	460.3	459.8	459.2	458.7
165°	466.0	466.6	467.3	467.2	466.5	465.7	465.0	464.3
167.5°	470.4	471.1	471.7	471.7	470.9	470.1	469.3	468.6
170°	473.1	473.7	474.3	474.2	473.5	472.7	471.9	471.1
172.5°	474.8	475.4	476.1	475.9	475.1	474.2	473.4	472.5
175°	476.9	477.6	478.3	478.2	477.2	476.3	475.2	474.3
177.5°	477.7	478.2	478.7	478.5	477.8	477.0	476.3	475.4
180°	477.2	477.2	477.2	477.2	477.2	477.2	477.2	477.2

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