

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: P332753-830

Luminaire Tested: **S124DIW-S575D770U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332753-830
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: S124DIW-S575D770U830-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5128.9 lumens
Efficiency: N/A
Efficacy: 136.4 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

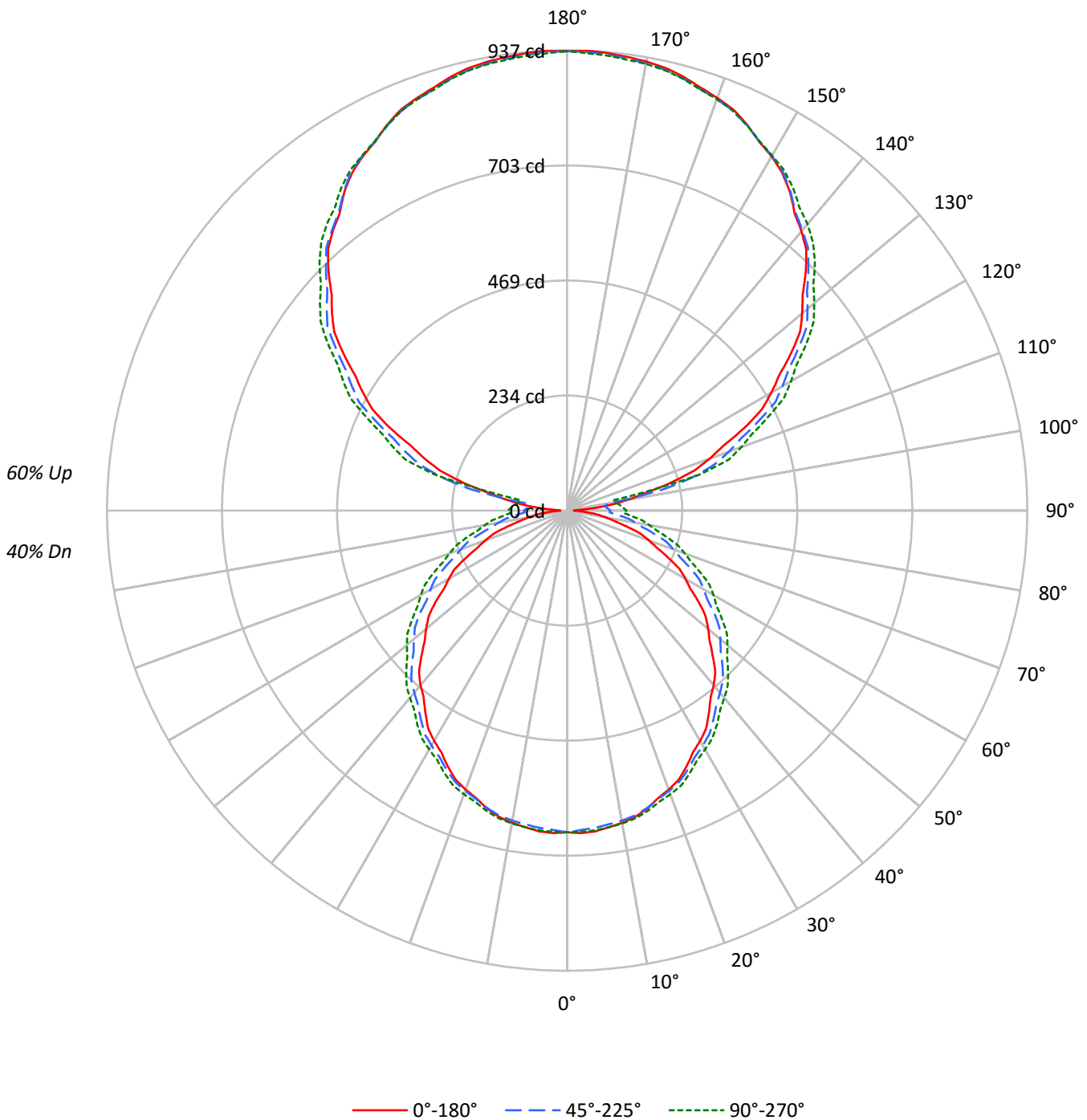
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	95	95	95	95	78	78	78	62	62	62	47	47	47	40				
1	95	90	86	82	86	82	79	75	67	65	62	53	51	50	40	39	38	32				
2	86	78	72	66	78	71	66	61	58	54	51	46	43	41	35	33	32	26				
3	78	68	61	55	71	62	56	51	51	46	42	41	37	34	31	28	26	22				
4	71	60	52	46	65	55	48	43	45	40	36	36	32	29	27	25	23	19				
5	65	54	45	39	59	49	42	36	40	35	31	32	28	25	24	22	19	16				
6	60	48	40	34	54	44	37	31	36	31	26	29	25	22	22	19	17	14				
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	20	17	15	12				
8	51	39	31	26	47	36	29	24	30	24	20	24	20	17	18	16	13	11				
9	48	35	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10				
10	45	32	25	20	40	30	23	19	25	20	16	20	16	14	16	13	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5288	5288	5288
5°	5304	5168	5182
10°	5272	5083	5079
15°	5225	4985	4958
20°	5153	4877	4840
25°	5073	4756	4710
30°	4986	4636	4576
35°	4887	4512	4460
40°	4809	4395	4338
45°	4692	4287	4233
50°	4593	4163	4123
55°	4491	4045	3993
60°	4332	3894	3876
65°	4156	3735	3731
70°	3945	3551	3561
75°	3649	3349	3408
80°	3322	3156	3259
85°	2903	2980	3172



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.0	1.2
10°-20°	177.7	3.5
20°-30°	268.7	5.2
30°-40°	325.1	6.3
40°-50°	343.7	6.7
50°-60°	323.5	6.3
60°-70°	268.4	5.2
70°-80°	188.5	3.7
80°-90°	109.3	2.1
90°-100°	95.3	1.9
100°-110°	250.8	4.9
110°-120°	421.7	8.2
120°-130°	513.1	10.0
130°-140°	537.7	10.5
140°-150°	497.2	9.7
150°-160°	399.7	7.8
160°-170°	257.8	5.0
170°-180°	88.8	1.7
0°-30°	508.4	9.9
0°-40°	833.5	16.3
0°-60°	1500.7	29.3
0°-90°	2066.9	40.3
90°-120°	767.8	15.0
90°-150°	2315.7	45.2
90°-180°	3062.0	59.7
0°-180°	5128.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	656	653	648	654	654	62
15°	629	629	627	633	633	177
25°	575	579	582	589	590	265
35°	503	512	519	529	532	315
45°	420	433	447	459	464	324
55°	329	344	366	380	385	293
65°	227	251	276	293	300	225
75°	126	153	184	204	211	134
85°	39	70	103	124	132	41
90°	14	51	88	112	121	10
95°	48	50	79	102	110	57
105°	217	237	267	289	272	228
115°	398	407	429	446	452	391
125°	556	559	575	590	596	496
135°	687	687	694	707	713	529
145°	791	793	793	798	802	494
155°	867	867	865	868	866	400
165°	914	911	911	916	910	258
175°	935	932	932	937	930	89
180°	935	935	935	935	935	



TEST NUMBER: P332753-830

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	657.3	657.0	656.6	656.1	655.7	655.1	654.0	653.0	651.9	650.8	651.8
5°	655.7	655.3	654.7	654.2	653.7	652.9	651.8	650.6	649.5	648.4	649.7
7.5°	650.2	649.8	649.5	649.2	648.9	648.4	647.4	646.5	645.5	644.5	646.0
10°	645.5	645.3	645.1	645.0	644.8	644.3	643.5	642.6	641.9	641.0	642.5
12.5°	638.9	638.9	638.9	638.9	638.9	638.6	638.0	637.4	636.9	636.3	637.6
15°	628.6	628.8	628.9	629.1	629.2	629.1	628.6	628.1	627.5	627.1	628.6
17.5°	614.3	614.8	615.3	615.8	616.3	616.5	616.4	616.3	616.2	616.1	617.6
20°	604.4	604.8	605.3	605.9	606.3	606.6	606.8	607.0	607.1	607.3	608.9
22.5°	593.2	593.8	594.5	595.0	595.7	596.2	596.4	596.7	597.0	597.3	599.0
25°	575.0	576.0	577.0	578.0	578.9	579.7	580.1	580.6	581.2	581.6	583.4
27.5°	554.8	556.2	557.6	559.1	560.5	561.6	562.3	563.1	563.8	564.6	566.3
30°	541.3	542.6	543.8	545.2	546.5	547.7	548.8	550.0	551.1	552.3	554.1
32.5°	526.6	528.2	529.7	531.3	532.9	534.3	535.6	536.9	538.1	539.4	541.4
35°	503.1	505.1	507.1	509.0	511.0	512.7	514.3	516.0	517.6	519.2	521.6
37.5°	479.6	481.7	484.0	486.3	488.5	490.7	492.7	494.7	496.7	498.7	501.1
40°	464.3	466.4	468.5	470.6	472.8	474.9	477.2	479.5	481.8	484.1	486.5
42.5°	446.7	449.0	451.4	453.8	456.2	458.7	461.4	464.0	466.7	469.4	472.1
45°	419.5	422.6	425.7	428.9	431.9	435.0	438.1	441.2	444.3	447.4	450.2
47.5°	393.6	396.7	399.9	403.1	406.3	409.7	413.3	416.9	420.5	424.0	427.0
50°	374.8	378.3	381.9	385.6	389.2	392.8	396.3	399.9	403.5	407.1	410.3
52.5°	356.0	359.6	363.2	366.7	370.3	374.2	378.3	382.4	386.5	390.6	393.9
55°	328.6	332.0	335.5	338.8	342.2	346.4	351.3	356.2	361.1	366.0	369.3
57.5°	297.9	302.2	306.4	310.7	314.9	319.4	324.2	329.1	334.0	338.8	342.7
60°	278.0	282.2	286.4	290.7	294.9	299.7	305.1	310.5	315.8	321.2	325.0
62.5°	258.6	263.3	267.9	272.5	277.1	282.1	287.5	292.8	298.3	303.7	307.4
65°	227.3	232.6	237.8	243.0	248.3	253.6	259.1	264.7	270.2	275.8	279.8
67.5°	197.3	202.8	208.4	214.0	219.4	225.2	231.1	237.0	243.0	248.9	253.1
70°	176.7	182.3	187.8	193.4	199.0	204.8	210.9	217.2	223.4	229.6	233.9
72.5°	156.8	162.5	168.1	173.8	179.5	185.6	192.2	198.8	205.4	212.0	216.2
75°	126.1	132.1	138.2	144.2	150.2	156.7	163.5	170.4	177.3	184.1	188.7
77.5°	97.6	104.0	110.4	116.7	123.1	129.9	137.0	144.2	151.4	158.5	163.2
80°	79.9	86.4	93.0	99.5	106.0	112.8	120.1	127.2	134.4	141.6	146.5
82.5°	62.3	69.1	75.9	82.7	89.4	96.4	103.6	110.7	117.9	125.2	130.2
85°	38.8	45.7	52.6	59.4	66.3	73.3	80.7	88.0	95.4	102.6	107.5
87.5°	22.1	29.1	36.1	43.1	50.1	57.3	64.7	72.1	79.5	86.8	91.7
90°	13.9	22.1	30.3	38.5	46.8	55.0	63.2	71.5	79.7	88.0	93.7
92.5°	20.0	25.9	31.9	37.9	43.8	50.9	59.2	67.4	75.7	83.9	89.4
95°	48.0	48.1	48.2	48.3	48.4	51.8	58.7	65.5	72.4	79.2	84.5
97.5°	90.4	98.3	106.2	114.1	122.1	120.6	109.9	99.2	88.5	77.8	82.1
100°	122.8	129.9	136.9	143.9	151.0	146.9	131.9	116.7	101.6	86.5	88.3
102.5°	159.8	165.5	171.3	177.0	182.9	187.4	190.9	194.3	197.7	201.1	176.9
105°	217.2	221.4	225.6	229.8	233.9	239.5	246.3	253.1	259.9	266.7	272.2
107.5°	271.7	274.9	278.1	281.2	284.3	289.3	296.1	302.7	309.5	316.3	321.0
110°	308.1	310.9	313.6	316.3	319.1	323.8	330.5	337.1	343.7	350.3	354.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	343.4	346.2	349.0	351.9	354.8	359.2	365.0	370.9	376.8	382.7	386.3
115°	397.6	399.5	401.4	403.4	405.3	408.8	413.9	419.0	424.0	429.0	433.0
117.5°	447.1	448.7	450.2	451.7	453.2	456.5	461.7	466.8	472.1	477.3	480.6
120°	480.1	481.3	482.3	483.4	484.6	487.4	492.0	496.5	501.1	505.7	509.3
122.5°	511.4	511.9	512.4	512.8	513.3	515.9	520.6	525.3	530.0	534.7	538.1
125°	555.6	556.1	556.6	557.0	557.5	559.6	563.4	567.1	570.9	574.7	578.2
127.5°	598.0	598.0	598.0	598.0	598.0	599.9	603.8	607.7	611.4	615.3	618.1
130°	624.9	624.9	624.9	624.8	624.8	626.4	629.4	632.5	635.6	638.7	641.8
132.5°	650.1	650.2	650.3	650.4	650.5	652.0	654.6	657.3	660.0	662.6	665.6
135°	687.1	686.9	686.8	686.6	686.5	687.3	689.1	690.8	692.6	694.4	697.3
137.5°	720.6	720.5	720.4	720.3	720.2	720.8	722.0	723.2	724.4	725.7	728.4
140°	742.3	742.5	742.7	742.8	743.0	743.3	743.8	744.2	744.7	745.2	747.7
142.5°	761.4	762.0	762.4	763.0	763.5	763.8	763.9	764.0	764.0	764.1	766.4
145°	791.4	791.6	791.9	792.2	792.5	792.7	792.7	792.7	792.7	792.7	793.8
147.5°	815.2	816.0	816.6	817.4	818.1	818.3	818.2	818.0	817.8	817.7	818.0
150°	832.6	833.0	833.5	834.0	834.4	834.6	834.4	834.2	834.2	834.0	834.0
152.5°	846.6	847.1	847.5	848.0	848.4	848.5	848.2	848.0	847.7	847.4	847.6
155°	866.9	867.0	867.1	867.3	867.5	867.3	866.9	866.4	865.9	865.4	866.1
157.5°	884.1	884.0	883.9	883.8	883.7	883.4	882.9	882.3	881.7	881.3	882.0
160°	894.1	893.6	893.2	892.8	892.3	891.9	891.8	891.6	891.5	891.4	892.3
162.5°	903.1	902.5	901.9	901.4	900.7	900.3	900.2	900.0	899.8	899.8	900.7
165°	914.5	913.6	912.9	912.1	911.3	911.0	911.0	911.0	911.0	911.0	912.2
167.5°	923.4	922.6	921.8	921.0	920.1	919.7	919.6	919.5	919.5	919.4	920.7
170°	928.4	927.5	926.5	925.6	924.7	924.3	924.4	924.6	924.7	924.9	926.1
172.5°	931.8	930.9	929.9	929.0	928.0	927.7	927.8	927.9	928.1	928.3	929.5
175°	935.4	934.4	933.6	932.6	931.7	931.3	931.4	931.6	931.8	931.9	933.3
177.5°	937.1	936.2	935.4	934.4	933.6	933.3	933.6	933.8	934.1	934.2	935.3
180°	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	652.7	653.6	654.5	654.9	654.8	654.6	654.5	654.4
5°	651.0	652.2	653.6	654.1	654.0	653.8	653.7	653.5
7.5°	647.5	648.9	650.4	651.1	650.9	650.7	650.5	650.4
10°	643.9	645.5	646.9	647.5	647.4	647.2	647.1	646.9
12.5°	639.0	640.4	641.7	642.3	642.3	642.2	642.2	642.2
15°	630.0	631.5	632.9	633.6	633.5	633.3	633.1	632.9
17.5°	619.1	620.6	622.1	622.7	622.6	622.5	622.4	622.3
20°	610.6	612.2	613.8	614.6	614.6	614.6	614.6	614.6
22.5°	600.6	602.2	603.8	604.8	605.0	605.3	605.6	605.9
25°	585.2	587.0	588.8	589.7	589.9	590.1	590.2	590.4
27.5°	568.0	569.6	571.3	572.2	572.4	572.6	572.8	573.0
30°	555.9	557.7	559.5	560.5	560.8	561.2	561.5	561.8
32.5°	543.5	545.5	547.6	548.7	549.1	549.4	549.8	550.1
35°	523.9	526.1	528.4	529.8	530.3	530.7	531.2	531.8
37.5°	503.4	505.7	508.0	509.4	509.9	510.5	511.0	511.5
40°	489.0	491.4	493.9	495.4	496.1	496.7	497.4	498.0
42.5°	474.9	477.5	480.2	481.8	482.4	482.9	483.4	483.9
45°	453.0	455.7	458.5	460.2	461.1	461.9	462.7	463.5
47.5°	429.8	432.7	435.5	437.4	438.5	439.4	440.5	441.4
50°	413.6	416.9	420.1	422.3	423.2	424.1	425.2	426.1
52.5°	397.2	400.4	403.7	405.8	406.8	407.7	408.7	409.7
55°	372.5	375.8	379.0	381.2	382.1	383.1	384.1	385.0
57.5°	346.6	350.5	354.4	356.8	357.7	358.5	359.5	360.4
60°	328.8	332.5	336.2	338.7	340.1	341.4	342.7	344.0
62.5°	311.1	314.9	318.7	321.1	322.4	323.8	325.1	326.4
65°	283.9	288.0	292.1	294.7	296.1	297.4	298.7	300.0
67.5°	257.2	261.4	265.5	268.2	269.5	270.7	272.0	273.2
70°	238.4	242.8	247.1	250.0	251.1	252.2	253.4	254.5
72.5°	220.5	224.8	229.0	231.8	233.1	234.3	235.6	236.9
75°	193.2	197.7	202.4	205.4	206.8	208.3	209.8	211.2
77.5°	167.9	172.5	177.1	180.2	181.7	183.3	184.8	186.4
80°	151.4	156.2	161.1	164.2	165.5	166.8	168.1	169.5
82.5°	135.2	140.2	145.2	148.5	149.9	151.3	152.7	154.2
85°	112.4	117.3	122.2	125.5	127.1	128.8	130.4	132.1
87.5°	96.7	101.6	106.5	109.7	111.2	112.7	114.1	115.6
90°	99.3	105.0	110.7	114.2	115.9	117.5	119.1	120.7
92.5°	95.0	100.5	106.0	109.5	110.8	112.3	113.6	115.0
95°	89.8	95.2	100.6	104.1	105.7	107.3	108.9	110.5
97.5°	86.4	90.9	95.2	98.1	99.7	101.2	102.8	104.3
100°	90.0	91.8	93.6	95.1	96.4	97.6	99.0	100.3
102.5°	152.6	128.4	104.2	92.7	94.0	95.3	96.6	97.9
105°	277.7	283.1	288.6	289.2	284.9	280.6	276.3	272.0
107.5°	325.7	330.4	335.1	338.3	340.1	341.9	343.7	345.3
110°	358.4	362.5	366.6	369.5	371.3	373.1	374.8	376.5



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CATALOG NUMBER: S124DIW-S575D770U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	389.7	393.3	396.9	399.6	401.5	403.4	405.3	407.2
115°	436.9	440.7	444.7	447.1	448.3	449.5	450.6	451.8
117.5°	483.9	487.3	490.6	492.9	494.1	495.4	496.6	497.9
120°	512.8	516.4	520.0	522.3	523.2	524.2	525.3	526.2
122.5°	541.6	545.0	548.5	550.6	551.5	552.3	553.2	554.0
125°	581.7	585.3	588.9	591.3	592.4	593.5	594.7	595.8
127.5°	620.9	623.9	626.7	628.6	629.5	630.6	631.5	632.5
130°	644.9	647.9	651.0	653.1	654.0	655.1	656.0	657.0
132.5°	668.5	671.5	674.5	676.4	677.2	678.1	678.9	679.8
135°	700.2	703.1	706.1	708.1	709.5	710.7	712.0	713.3
137.5°	731.1	733.9	736.6	738.3	739.0	739.7	740.5	741.1
140°	750.4	752.9	755.5	757.3	758.3	759.2	760.3	761.2
142.5°	768.5	770.7	773.0	774.4	775.1	775.8	776.6	777.3
145°	794.9	796.1	797.2	798.2	799.3	800.2	801.2	802.1
147.5°	818.2	818.5	818.8	819.3	819.9	820.6	821.2	821.9
150°	834.0	834.0	834.0	834.1	834.2	834.3	834.5	834.6
152.5°	847.9	848.1	848.4	848.5	848.4	848.3	848.2	848.1
155°	866.7	867.3	867.9	868.0	867.5	867.0	866.6	866.2
157.5°	882.9	883.7	884.5	884.5	883.7	882.9	882.0	881.3
160°	893.2	894.1	895.0	895.0	894.1	893.2	892.3	891.4
162.5°	901.6	902.5	903.4	903.4	902.4	901.3	900.2	899.2
165°	913.4	914.6	915.9	915.9	914.5	913.0	911.6	910.2
167.5°	922.1	923.4	924.8	924.7	923.1	921.6	920.0	918.5
170°	927.4	928.7	929.9	929.7	928.2	926.6	925.1	923.5
172.5°	930.8	932.0	933.2	933.0	931.3	929.7	928.0	926.3
175°	934.7	936.1	937.5	937.3	935.4	933.6	931.7	929.8
177.5°	936.3	937.3	938.3	938.0	936.5	935.0	933.6	932.1
180°	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4

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