

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: P331255-930

Luminaire Tested: **SA2XXDIP-C290D530U930-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331255-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C290D530U930-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

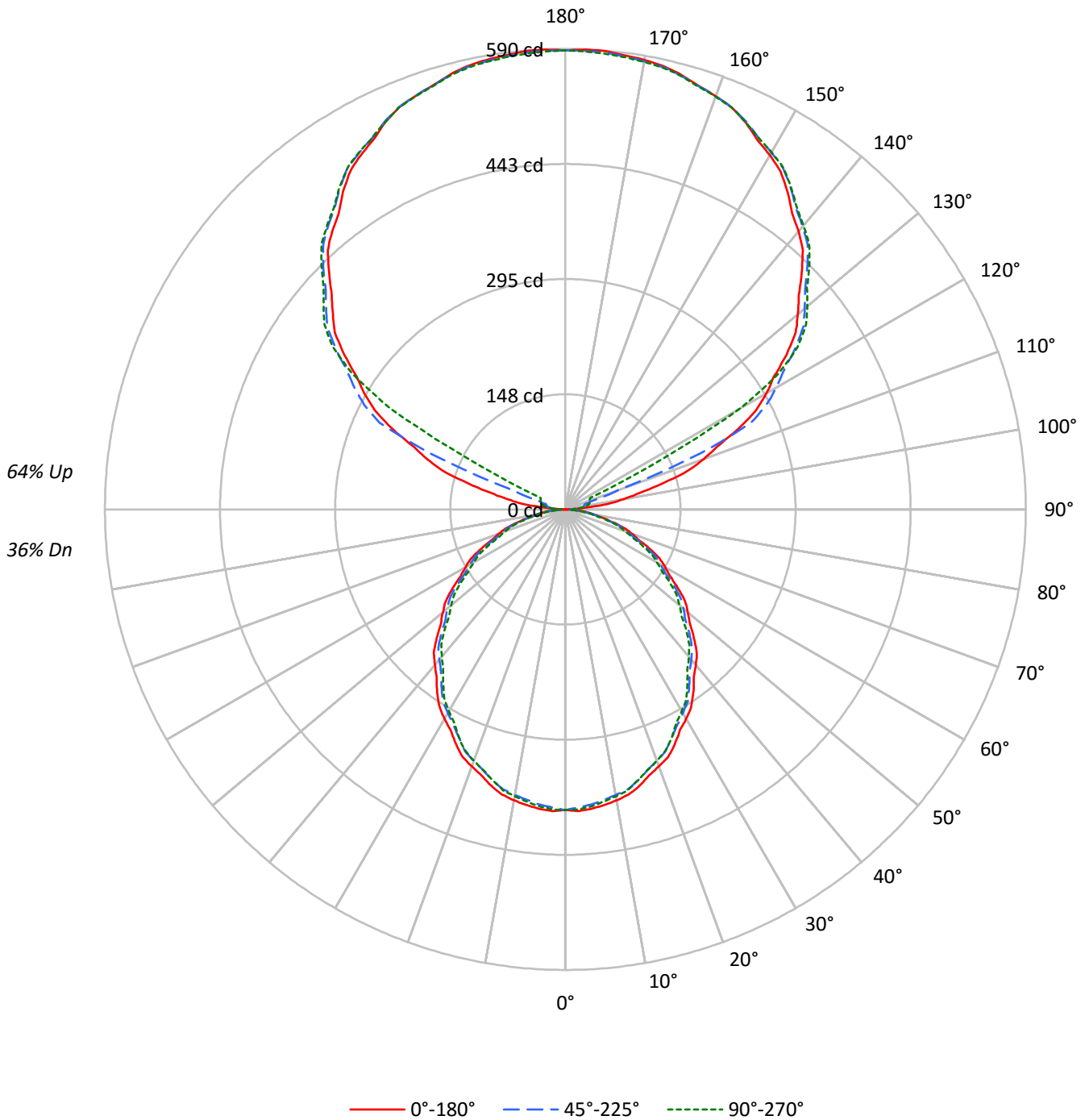
Lumens per Lamp: N/A
Luminaire Lumens: 2704.6 lumens
Efficiency: N/A
Efficacy: 105.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 25.6
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	0
RCR																		
0	104	104	104	104	94	94	94	94	76	76	76	59	59	59	44	44	44	36
1	95	90	87	83	86	82	79	76	66	64	62	52	50	49	38	38	37	31
2	86	79	73	68	78	72	67	62	58	54	51	45	43	41	34	32	31	26
3	79	69	62	57	71	63	57	52	51	47	43	40	37	35	30	28	26	22
4	72	61	54	48	65	56	49	44	45	41	37	36	32	30	27	25	23	19
5	66	55	47	41	59	50	43	38	41	35	32	32	28	26	24	22	20	16
6	61	49	41	35	55	45	38	33	36	31	27	29	25	22	22	19	17	14
7	56	44	36	31	51	40	33	29	33	28	24	26	23	20	20	17	15	13
8	52	40	32	27	47	36	30	25	30	25	21	24	20	18	18	16	14	11
9	48	36	29	24	44	33	27	22	27	22	19	22	18	16	17	14	12	10
10	45	33	26	21	41	30	24	20	25	20	17	20	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6218	6218	6218
5°	6242	6152	6190
10°	6205	6091	6120
15°	6128	6011	6006
20°	6019	5893	5887
25°	5911	5747	5747
30°	5774	5614	5565
35°	5643	5452	5373
40°	5480	5292	5191
45°	5318	5133	5005
50°	5144	4968	4793
55°	4963	4777	4597
60°	4760	4543	4379
65°	4542	4317	4118
70°	4263	4036	3843
75°	3880	3718	3624
80°	3440	3347	3171
85°	2816	2668	2408



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.2	1.3
10°-20°	101.9	3.8
20°-30°	149.8	5.5
30°-40°	174.0	6.4
40°-50°	173.8	6.4
50°-60°	151.6	5.6
60°-70°	112.1	4.1
70°-80°	63.5	2.3
80°-90°	18.5	0.7
90°-100°	19.6	0.7
100°-110°	71.9	2.7
110°-120°	192.3	7.1
120°-130°	317.4	11.7
130°-140°	337.5	12.5
140°-150°	313.7	11.6
150°-160°	252.2	9.3
160°-170°	162.5	6.0
170°-180°	55.9	2.1
0°-30°	287.9	10.6
0°-40°	461.9	17.1
0°-60°	787.3	29.1
0°-90°	981.4	36.3
90°-120°	283.8	10.5
90°-150°	1252.5	46.3
90°-180°	1723.0	63.7
0°-180°	2704.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	385	385	385	385	385	
5°	385	384	380	382	382	37
15°	367	364	360	361	359	103
25°	332	329	323	323	323	153
35°	286	282	277	274	273	179
45°	233	230	225	221	219	180
55°	176	174	170	165	163	158
65°	119	117	113	110	108	118
75°	62	61	60	58	58	66
85°	15	15	14	13	13	17
90°	0	5	8	11	12	2
95°	28	15	17	19	18	34
105°	129	135	26	30	32	138
115°	245	252	262	75	35	241
125°	346	352	360	362	364	308
135°	428	435	439	443	442	330
145°	496	497	503	506	504	310
155°	547	543	548	550	547	252
165°	576	574	575	578	575	163
175°	589	586	587	590	586	56
180°	588	588	588	588	588	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	385.1	385.1	385.1	385.1	385.1	385.1	385.1	385.1	385.1	385.1	385.1
2.5°	386.9	386.6	386.3	386.0	385.6	385.1	384.4	383.7	382.9	382.2	382.9
5°	385.1	384.8	384.5	384.2	383.8	383.3	382.4	381.5	380.5	379.6	380.3
7.5°	381.8	381.2	380.7	380.3	379.8	379.0	378.1	377.2	376.3	375.4	376.0
10°	378.5	378.0	377.4	376.8	376.2	375.4	374.5	373.5	372.5	371.5	372.1
12.5°	374.1	373.6	373.1	372.5	372.0	371.3	370.3	369.3	368.4	367.4	367.8
15°	366.6	366.2	365.7	365.2	364.7	363.9	362.8	361.7	360.7	359.6	360.0
17.5°	357.2	356.7	356.2	355.7	355.2	354.4	353.4	352.2	351.1	350.1	350.4
20°	350.3	349.8	349.4	348.9	348.4	347.6	346.4	345.3	344.1	343.0	343.2
22.5°	343.6	342.8	342.2	341.4	340.8	339.9	338.8	337.7	336.6	335.6	335.6
25°	331.8	331.2	330.5	329.9	329.2	328.2	326.8	325.4	324.0	322.6	322.8
27.5°	318.5	318.0	317.3	316.7	316.2	315.3	314.2	313.1	312.0	310.9	310.6
30°	309.7	309.0	308.3	307.7	307.0	306.1	304.8	303.6	302.3	301.1	300.8
32.5°	300.1	299.6	299.1	298.6	298.1	297.1	295.8	294.6	293.3	292.0	291.5
35°	286.3	285.4	284.6	283.8	283.0	281.9	280.6	279.3	278.0	276.6	276.1
37.5°	270.7	269.9	269.2	268.5	267.7	266.8	265.5	264.2	262.8	261.5	260.9
40°	260.0	259.3	258.7	258.0	257.4	256.4	255.0	253.7	252.4	251.1	250.4
42.5°	249.6	249.0	248.3	247.7	247.0	246.0	244.7	243.4	242.1	240.8	239.9
45°	232.9	232.4	231.8	231.2	230.6	229.8	228.5	227.3	226.1	224.8	223.9
47.5°	216.4	215.8	215.3	214.7	214.2	213.3	212.0	210.8	209.5	208.1	207.2
50°	204.8	204.4	204.0	203.6	203.2	202.4	201.2	200.1	198.9	197.8	196.7
52.5°	193.6	193.0	192.5	191.9	191.4	190.5	189.5	188.4	187.3	186.2	185.2
55°	176.3	175.8	175.3	174.8	174.3	173.6	172.6	171.6	170.6	169.7	168.6
57.5°	159.0	158.6	158.2	157.8	157.4	156.6	155.6	154.5	153.4	152.3	151.3
60°	147.4	147.1	146.8	146.4	146.1	145.4	144.2	143.1	141.9	140.7	139.8
62.5°	136.2	135.6	135.1	134.6	134.0	133.3	132.4	131.6	130.7	129.8	128.9
65°	118.9	118.4	117.9	117.4	116.9	116.3	115.4	114.6	113.8	113.0	112.2
67.5°	101.3	100.9	100.5	100.1	99.8	99.2	98.4	97.7	96.9	96.2	95.6
70°	90.3	90.0	89.7	89.4	89.0	88.5	87.8	87.1	86.3	85.5	85.0
72.5°	79.1	78.8	78.4	78.1	77.8	77.4	76.9	76.5	76.0	75.5	74.9
75°	62.2	62.0	61.9	61.7	61.6	61.3	60.9	60.4	60.0	59.6	59.1
77.5°	47.1	46.8	46.6	46.3	46.0	45.7	45.6	45.4	45.2	45.1	44.8
80°	37.0	36.9	36.9	36.8	36.7	36.6	36.4	36.3	36.1	36.0	35.7
82.5°	27.6	27.6	27.6	27.5	27.5	27.4	27.3	27.2	27.1	27.1	26.7
85°	15.2	15.1	15.0	14.9	14.8	14.8	14.7	14.6	14.5	14.4	14.2
87.5°	5.4	5.5	5.5	5.6	5.7	5.8	5.8	5.8	5.9	5.9	5.7
90°	0.4	1.5	2.5	3.5	4.6	5.5	6.3	7.0	7.7	8.5	9.0
92.5°	8.6	8.5	8.4	8.3	8.2	8.4	8.7	9.1	9.5	9.9	10.1
95°	27.6	24.5	21.4	18.3	15.2	13.9	14.6	15.2	15.9	16.6	17.0
97.5°	54.9	46.1	37.3	28.5	19.7	16.1	17.6	19.2	20.7	22.2	22.6
100°	75.3	62.4	49.4	36.4	23.5	17.9	19.4	21.0	22.7	24.2	25.0
102.5°	97.8	95.1	92.3	89.5	86.8	78.7	65.3	51.9	38.4	24.9	25.9
105°	129.3	132.2	135.0	137.9	140.7	129.2	103.4	77.6	51.8	25.9	27.0
107.5°	165.3	167.6	169.9	172.2	174.5	160.1	129.2	98.2	67.3	36.4	35.3
110°	188.5	190.5	192.5	194.4	196.4	183.8	156.5	129.1	101.7	74.4	65.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	210.3	212.1	213.8	215.6	217.3	214.8	208.1	201.3	194.5	187.8	153.3
115°	244.7	246.2	247.9	249.5	251.1	253.1	255.4	257.8	260.2	262.5	218.7
117.5°	275.4	277.2	279.0	280.8	282.6	284.3	285.9	287.6	289.2	290.7	280.2
120°	297.8	299.2	300.7	302.1	303.5	305.1	306.8	308.5	310.1	311.9	313.0
122.5°	316.9	318.4	319.9	321.4	322.9	324.6	326.4	328.2	330.1	332.0	332.6
125°	345.9	347.2	348.4	349.6	350.8	352.4	354.2	356.0	357.8	359.5	360.2
127.5°	372.2	373.6	375.0	376.3	377.6	379.0	380.3	381.7	383.0	384.4	385.3
130°	388.9	390.4	391.9	393.5	394.9	396.2	397.3	398.3	399.3	400.4	401.5
132.5°	405.9	407.2	408.5	409.8	411.1	412.2	413.3	414.3	415.3	416.4	417.3
135°	428.0	429.6	431.0	432.6	434.1	435.3	436.1	437.0	437.8	438.6	439.6
137.5°	450.5	451.4	452.5	453.6	454.6	455.7	456.6	457.6	458.5	459.5	460.5
140°	465.0	465.8	466.6	467.3	468.1	469.0	470.0	471.1	472.1	473.1	474.0
142.5°	477.3	478.0	478.7	479.3	480.0	480.9	482.2	483.3	484.5	485.8	486.5
145°	496.5	496.4	496.4	496.3	496.2	496.9	498.6	500.1	501.7	503.4	504.0
147.5°	513.3	512.9	512.6	512.3	511.8	512.5	514.0	515.7	517.2	518.9	519.3
150°	524.2	523.5	522.9	522.2	521.5	522.0	523.5	525.0	526.5	528.0	528.6
152.5°	533.4	532.6	531.9	531.2	530.4	530.8	532.2	533.7	535.1	536.5	537.1
155°	546.7	545.9	545.0	544.2	543.3	543.5	544.6	545.8	546.9	548.0	548.6
157.5°	557.2	556.5	555.8	555.1	554.3	554.4	555.1	556.0	556.8	557.6	558.2
160°	563.4	562.8	562.2	561.7	561.1	561.1	561.7	562.2	562.8	563.4	563.9
162.5°	568.8	568.2	567.6	567.0	566.6	566.5	567.0	567.4	567.9	568.4	569.1
165°	576.1	575.5	574.9	574.4	573.8	573.7	574.0	574.2	574.5	574.8	575.5
167.5°	581.6	581.0	580.4	579.8	579.3	579.1	579.4	579.7	579.9	580.2	580.8
170°	584.6	584.1	583.5	582.9	582.4	582.1	582.4	582.5	582.7	582.9	583.6
172.5°	586.7	586.1	585.5	585.0	584.4	584.2	584.4	584.6	584.7	585.0	585.6
175°	589.3	588.6	588.0	587.3	586.6	586.4	586.6	586.8	586.9	587.2	587.8
177.5°	589.7	589.2	588.6	588.2	587.6	587.3	587.4	587.5	587.6	587.7	588.2
180°	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	385.1	385.1	385.1	385.1	385.1	385.1	385.1	385.1
2.5°	383.5	384.2	384.8	385.1	385.0	384.8	384.7	384.6
5°	381.0	381.6	382.3	382.5	382.4	382.2	382.0	381.9
7.5°	376.7	377.3	378.0	378.2	378.1	377.8	377.6	377.5
10°	372.8	373.5	374.1	374.3	374.1	373.8	373.6	373.3
12.5°	368.3	368.7	369.2	369.3	369.2	368.9	368.8	368.6
15°	360.3	360.6	360.9	360.9	360.5	360.1	359.7	359.3
17.5°	350.8	351.2	351.6	351.6	351.1	350.8	350.4	350.0
20°	343.5	343.7	344.0	343.9	343.6	343.2	342.9	342.6
22.5°	335.7	335.7	335.7	335.7	335.5	335.3	335.1	334.9
25°	322.9	323.1	323.3	323.3	323.1	322.9	322.8	322.6
27.5°	310.4	310.1	309.9	309.6	309.2	308.8	308.4	308.0
30°	300.6	300.4	300.1	299.9	299.5	299.2	298.9	298.5
32.5°	291.1	290.6	290.2	289.8	289.4	289.1	288.8	288.5
35°	275.7	275.2	274.7	274.3	273.9	273.5	273.0	272.6
37.5°	260.2	259.7	259.0	258.5	258.1	257.7	257.4	257.0
40°	249.6	248.9	248.2	247.6	247.3	247.0	246.6	246.3
42.5°	239.1	238.3	237.5	236.8	236.4	235.9	235.5	235.1
45°	223.0	222.1	221.2	220.5	220.2	219.9	219.6	219.2
47.5°	206.3	205.3	204.3	203.6	203.2	202.7	202.2	201.7
50°	195.5	194.3	193.1	192.4	192.0	191.6	191.2	190.8
52.5°	184.3	183.4	182.4	181.6	181.1	180.6	180.0	179.4
55°	167.6	166.6	165.7	165.0	164.6	164.1	163.7	163.3
57.5°	150.3	149.4	148.4	147.7	147.5	147.2	146.8	146.5
60°	138.9	138.0	137.1	136.6	136.3	136.1	135.8	135.6
62.5°	128.1	127.3	126.5	125.9	125.6	125.2	124.9	124.6
65°	111.5	110.7	110.0	109.4	109.0	108.6	108.2	107.8
67.5°	95.1	94.5	93.9	93.4	93.1	92.8	92.5	92.1
70°	84.4	83.8	83.2	82.8	82.5	82.1	81.8	81.4
72.5°	74.4	73.8	73.2	72.7	72.5	72.2	72.0	71.7
75°	58.6	58.1	57.6	57.5	57.6	57.8	58.0	58.1
77.5°	44.6	44.4	44.1	43.9	43.6	43.5	43.2	43.0
80°	35.5	35.2	35.0	34.7	34.6	34.4	34.2	34.1
82.5°	26.4	26.1	25.8	25.6	25.6	25.5	25.5	25.5
85°	13.9	13.7	13.5	13.3	13.2	13.1	13.0	13.0
87.5°	5.6	5.5	5.5	5.4	5.4	5.3	5.3	5.3
90°	9.5	9.9	10.4	10.8	10.9	11.1	11.3	11.5
92.5°	10.4	10.6	10.8	11.0	11.2	11.3	11.4	11.5
95°	17.5	18.0	18.5	18.7	18.6	18.5	18.4	18.3
97.5°	23.0	23.3	23.7	24.0	24.1	24.2	24.3	24.5
100°	25.8	26.5	27.3	27.7	28.0	28.1	28.3	28.5
102.5°	26.9	27.9	28.9	29.5	29.8	30.0	30.2	30.6
105°	28.0	29.1	30.1	30.8	31.2	31.6	32.0	32.4
107.5°	34.2	33.2	32.1	31.8	32.1	32.5	32.9	33.3
110°	55.5	46.1	36.6	32.1	32.4	32.9	33.3	33.6



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CATALOG NUMBER: SA2XXDIP-C290D530U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	118.8	84.3	49.8	32.8	33.0	33.3	33.7	33.9
115°	175.0	131.2	87.4	62.1	55.3	48.5	41.7	34.9
117.5°	269.6	259.0	248.4	232.0	209.5	187.2	164.9	142.4
120°	314.1	315.3	316.4	310.6	297.8	285.1	272.3	259.5
122.5°	333.3	334.0	334.7	333.8	331.3	328.8	326.4	323.8
125°	360.9	361.5	362.2	362.6	363.0	363.2	363.5	363.8
127.5°	386.3	387.3	388.2	388.7	388.8	388.9	388.9	389.0
130°	402.4	403.5	404.6	405.0	404.9	404.8	404.7	404.6
132.5°	418.2	419.1	420.0	420.3	420.2	420.1	420.0	420.0
135°	440.6	441.5	442.5	442.9	442.6	442.5	442.3	442.1
137.5°	461.4	462.3	463.3	463.5	463.2	462.8	462.6	462.3
140°	474.8	475.6	476.5	476.7	476.2	475.8	475.3	474.8
142.5°	487.3	488.0	488.9	489.0	488.5	488.0	487.5	487.1
145°	504.7	505.3	506.0	506.1	505.6	505.2	504.7	504.2
147.5°	519.8	520.3	520.8	520.8	520.5	520.1	519.7	519.3
150°	529.1	529.7	530.3	530.4	529.9	529.4	528.9	528.5
152.5°	537.7	538.3	538.8	538.7	538.2	537.5	536.9	536.3
155°	549.2	549.8	550.3	550.2	549.4	548.7	548.0	547.1
157.5°	558.8	559.5	560.1	560.1	559.3	558.6	557.8	557.1
160°	564.4	565.0	565.6	565.6	564.9	564.3	563.5	562.9
162.5°	569.7	570.4	571.0	571.0	570.1	569.3	568.5	567.7
165°	576.2	576.8	577.5	577.5	576.8	576.2	575.5	574.8
167.5°	581.5	582.2	582.9	582.8	581.9	581.1	580.2	579.4
170°	584.2	584.9	585.5	585.5	584.6	583.8	582.9	582.0
172.5°	586.3	586.9	587.6	587.5	586.7	585.8	585.0	584.1
175°	588.5	589.1	589.8	589.7	588.7	587.7	586.9	585.9
177.5°	588.7	589.3	589.8	589.7	589.1	588.3	587.7	587.0
180°	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0

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