

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: P331333-935

Luminaire Tested: **SA2XXDIP-C675D330U935-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331333-935
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-C675D330U935-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

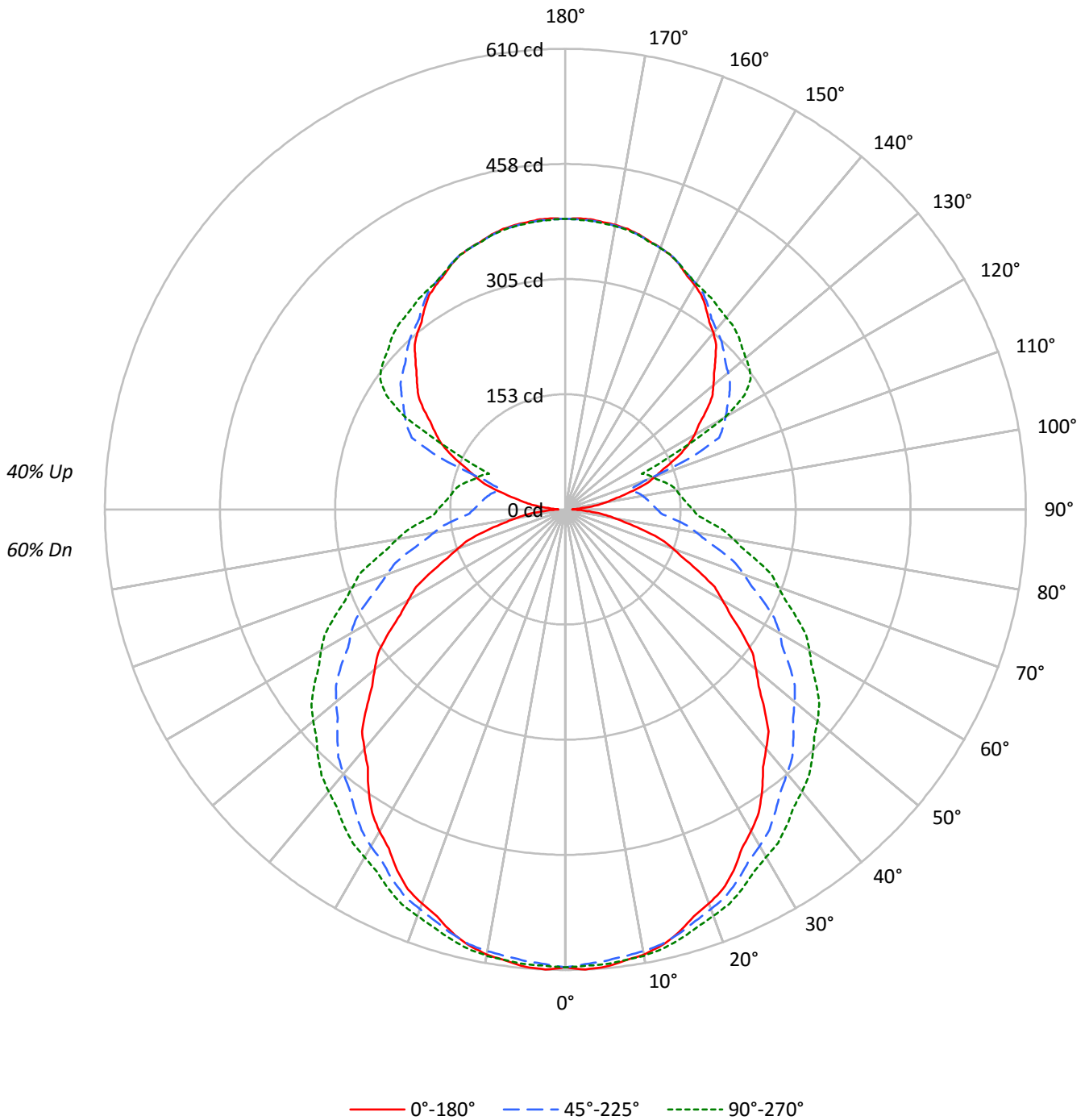
Lumens per Lamp: N/A
Luminaire Lumens: 3442.2 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 35
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	109	109	109	109	102	102	102	102	89	89	89	76	76	76	65	65	65	60
1	98	93	88	84	91	87	83	79	75	72	69	65	62	60	55	53	51	47
2	89	80	73	67	82	75	69	63	65	60	56	56	52	49	47	44	42	38
3	80	70	62	55	75	65	58	52	57	51	46	49	44	40	41	38	35	31
4	73	62	53	46	68	58	50	44	50	44	39	43	38	34	36	33	30	26
5	67	55	46	39	62	51	43	37	45	38	33	38	33	29	33	29	25	22
6	62	49	40	34	57	46	38	32	40	34	29	35	29	26	30	25	22	19
7	57	44	36	30	53	41	34	28	36	30	25	31	26	22	27	23	20	17
8	53	40	32	26	49	38	30	25	33	27	22	29	24	20	25	21	17	15
9	49	36	29	23	46	34	27	22	30	24	20	26	21	18	23	19	16	14
10	46	33	26	21	43	32	25	20	28	22	18	24	20	16	21	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9792	9792	9792
5°	9839	9426	9390
10°	9778	9148	9044
15°	9643	8853	8681
20°	9473	8536	8331
25°	9305	8231	8014
30°	9067	7919	7694
35°	8828	7615	7468
40°	8576	7358	7243
45°	8334	7127	7051
50°	8078	6920	6861
55°	7810	6696	6668
60°	7480	6465	6465
65°	7135	6192	6222
70°	6751	5899	5960
75°	6257	5612	5720
80°	5488	5319	5476
85°	4743	5064	5286



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.5	1.7
10°-20°	164.8	4.8
20°-30°	249.7	7.3
30°-40°	304.2	8.8
40°-50°	327.2	9.5
50°-60°	317.8	9.2
60°-70°	277.5	8.1
70°-80°	213.6	6.2
80°-90°	144.3	4.2
90°-100°	111.6	3.2
100°-110°	119.2	3.5
110°-120°	173.4	5.0
120°-130°	234.3	6.8
130°-140°	232.0	6.7
140°-150°	207.2	6.0
150°-160°	165.0	4.8
160°-170°	106.3	3.1
170°-180°	36.6	1.1
0°-30°	472.0	13.7
0°-40°	776.1	22.5
0°-60°	1421.1	41.3
0°-90°	2056.5	59.7
90°-120°	404.2	11.7
90°-150°	1077.7	31.3
90°-180°	1386.0	40.3
0°-180°	3442.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	608	605	600	605	605	58
15°	580	582	582	589	589	163
25°	527	534	541	552	555	242
35°	454	469	486	505	512	284
45°	373	397	427	453	463	288
55°	286	318	363	394	406	255
65°	195	239	290	325	338	194
75°	108	158	214	250	263	114
85°	32	86	142	178	192	34
90°	9	63	122	157	169	7
95°	25	58	112	145	157	28
105°	89	119	93	125	137	95
115°	164	180	224	127	112	161
125°	228	233	265	290	300	204
135°	281	286	297	317	324	217
145°	325	325	329	336	340	203
155°	358	356	358	360	358	165
165°	377	375	376	378	376	106
175°	386	384	384	386	383	37
180°	385	385	385	385	385	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5
2.5°	610.0	609.5	609.1	608.6	608.1	607.3	606.2	605.1	604.1	603.0	603.7
5°	608.2	607.6	607.1	606.5	605.9	605.0	603.8	602.7	601.5	600.3	601.5
7.5°	602.8	602.4	602.0	601.6	601.2	600.5	599.7	598.7	597.9	597.0	598.4
10°	598.6	598.1	597.8	597.4	597.0	596.5	595.9	595.4	594.8	594.2	595.7
12.5°	591.5	591.6	591.7	591.8	591.9	591.7	591.2	590.8	590.4	590.0	591.5
15°	580.1	580.5	580.9	581.3	581.7	581.9	581.9	581.9	581.9	581.9	583.6
17.5°	565.3	566.2	567.0	567.8	568.6	569.4	570.0	570.6	571.2	571.9	573.7
20°	555.5	556.5	557.4	558.4	559.4	560.3	561.0	561.9	562.7	563.4	565.6
22.5°	544.9	546.0	547.3	548.4	549.5	550.6	551.7	552.8	553.9	555.0	557.2
25°	527.4	528.7	530.1	531.5	532.9	534.4	536.1	538.0	539.7	541.4	543.8
27.5°	506.3	508.5	510.7	513.0	515.2	517.4	519.4	521.5	523.6	525.6	528.6
30°	492.2	494.7	497.3	499.8	502.4	504.9	507.5	510.0	512.6	515.1	518.1
32.5°	476.7	479.6	482.4	485.3	488.2	491.1	494.1	497.1	500.1	503.1	506.7
35°	454.4	457.7	461.1	464.3	467.7	471.2	474.9	478.6	482.3	486.0	490.3
37.5°	430.2	434.0	437.8	441.6	445.5	449.8	454.6	459.4	464.2	469.0	473.8
40°	414.0	418.3	422.6	426.9	431.2	435.9	441.3	446.5	451.8	457.0	462.1
42.5°	398.6	402.8	407.1	411.4	415.7	420.9	427.0	433.0	439.0	445.1	450.6
45°	372.6	378.0	383.2	388.5	393.7	399.8	406.7	413.5	420.3	427.1	433.3
47.5°	347.2	352.9	358.7	364.4	370.1	377.0	385.0	393.0	401.1	409.1	415.4
50°	329.6	335.7	341.7	347.8	353.8	361.3	370.1	378.8	387.6	396.4	403.0
52.5°	312.7	319.1	325.5	331.8	338.2	346.0	355.2	364.5	373.8	383.1	389.9
55°	285.7	292.7	299.7	306.8	313.7	322.4	332.5	342.7	352.8	363.0	370.1
57.5°	258.9	266.9	274.8	282.8	290.7	299.8	310.1	320.5	330.9	341.2	348.8
60°	240.0	248.3	256.8	265.2	273.5	283.4	294.5	305.6	316.7	327.9	335.3
62.5°	223.1	231.8	240.5	249.2	258.0	267.9	279.0	290.1	301.3	312.4	320.3
65°	195.1	204.7	214.3	223.9	233.4	243.9	255.5	267.0	278.5	290.1	298.1
67.5°	169.4	179.4	189.5	199.5	209.5	220.3	232.1	243.9	255.7	267.5	275.6
70°	151.2	161.4	171.5	181.7	191.8	202.9	215.1	227.1	239.3	251.4	259.8
72.5°	134.3	144.7	155.2	165.7	176.2	187.5	199.8	212.1	224.4	236.6	244.9
75°	108.1	119.1	130.0	140.9	151.9	163.6	176.1	188.6	201.0	213.6	222.0
77.5°	82.8	94.3	105.7	117.1	128.5	140.7	153.3	166.1	178.7	191.4	199.8
80°	66.0	77.8	89.7	101.7	113.6	125.9	138.6	151.3	163.9	176.7	184.9
82.5°	51.8	63.6	75.3	87.1	98.9	111.2	124.1	136.9	149.7	162.6	170.8
85°	31.7	43.7	55.9	67.9	80.1	92.4	104.9	117.4	129.9	142.4	150.6
87.5°	17.3	29.1	40.8	52.6	64.4	76.5	89.2	101.8	114.3	127.0	135.0
90°	9.0	21.1	33.1	45.1	57.1	69.6	82.6	95.6	108.6	121.6	129.8
92.5°	13.7	24.2	34.7	45.2	55.6	67.1	79.3	91.6	103.8	116.1	124.0
95°	25.1	32.3	39.4	46.6	53.6	63.4	75.5	87.6	99.8	111.9	119.7
97.5°	42.1	44.5	46.9	49.3	51.7	59.1	71.3	83.5	95.8	108.1	115.5
100°	55.4	54.2	53.0	51.7	50.5	55.8	67.8	79.8	91.8	103.8	111.5
102.5°	69.4	74.2	79.0	83.9	88.7	92.0	93.8	95.7	97.5	99.3	107.0
105°	89.0	96.5	104.1	111.6	119.1	119.5	112.8	106.1	99.3	92.6	100.0
107.5°	112.4	118.4	124.4	130.5	136.6	134.2	123.7	113.2	102.7	92.1	98.1
110°	126.8	132.1	137.2	142.5	147.7	146.1	137.8	129.5	121.2	112.9	113.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	141.1	145.5	150.0	154.4	158.9	163.4	168.1	172.7	177.5	182.1	165.8
115°	163.6	166.8	170.0	173.1	176.4	183.1	193.5	203.8	214.1	224.5	201.7
117.5°	182.8	185.4	188.0	190.5	193.1	199.1	208.2	217.4	226.6	235.7	234.6
120°	197.5	199.2	201.0	202.6	204.3	209.7	218.6	227.5	236.4	245.4	251.6
122.5°	210.0	211.3	212.6	213.9	215.2	220.1	228.6	237.2	245.7	254.3	260.0
125°	228.1	228.9	229.7	230.5	231.3	235.4	242.8	250.3	257.7	265.1	270.9
127.5°	245.3	246.0	246.7	247.4	248.1	251.4	257.3	263.2	269.1	275.1	280.5
130°	256.2	257.0	257.8	258.6	259.4	262.2	266.9	271.7	276.6	281.3	286.6
132.5°	267.3	267.9	268.6	269.2	269.9	272.2	276.0	279.8	283.7	287.6	292.7
135°	280.9	281.9	282.9	283.9	284.9	286.6	289.1	291.7	294.2	296.7	301.4
137.5°	295.6	296.3	296.9	297.6	298.2	299.3	300.7	302.2	303.8	305.2	309.4
140°	305.1	305.5	305.7	306.1	306.3	307.0	308.2	309.2	310.2	311.3	315.0
142.5°	313.1	313.4	313.7	313.9	314.2	314.7	315.6	316.4	317.3	318.1	321.2
145°	324.9	324.9	324.8	324.7	324.6	325.1	326.1	327.3	328.3	329.3	331.0
147.5°	335.9	335.6	335.4	335.1	334.9	335.3	336.3	337.4	338.5	339.5	339.9
150°	342.9	342.5	342.1	341.6	341.2	341.6	342.5	343.5	344.5	345.5	345.9
152.5°	349.0	348.5	348.0	347.5	347.1	347.2	348.2	349.1	350.1	351.0	351.4
155°	357.7	357.1	356.6	356.0	355.5	355.6	356.4	357.1	357.8	358.5	359.0
157.5°	364.5	364.1	363.6	363.2	362.7	362.7	363.3	363.8	364.3	364.8	365.2
160°	368.6	368.2	367.8	367.5	367.1	367.1	367.5	367.8	368.2	368.6	368.9
162.5°	372.1	371.8	371.4	371.0	370.7	370.7	370.9	371.3	371.6	372.0	372.4
165°	376.9	376.6	376.2	375.8	375.5	375.4	375.6	375.7	375.9	376.1	376.5
167.5°	380.5	380.1	379.8	379.4	379.0	378.9	379.1	379.3	379.4	379.6	380.0
170°	382.5	382.1	381.8	381.4	381.0	380.9	381.0	381.2	381.3	381.4	381.9
172.5°	383.8	383.5	383.1	382.7	382.4	382.2	382.4	382.5	382.6	382.7	383.1
175°	385.6	385.1	384.7	384.3	383.8	383.7	383.8	383.9	384.1	384.2	384.6
177.5°	385.8	385.5	385.1	384.8	384.4	384.4	384.4	384.4	384.4	384.5	384.9
180°	384.7	384.7	384.7	384.7	384.7	384.7	384.7	384.7	384.7	384.7	384.7



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CATALOG NUMBER: SA2XXDIP-C675D330U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5
2.5°	604.5	605.3	606.1	606.3	606.0	605.7	605.4	605.1
5°	602.7	603.8	605.0	605.5	605.3	605.1	604.9	604.7
7.5°	599.8	601.2	602.6	603.2	603.0	602.8	602.6	602.4
10°	597.3	598.8	600.5	601.1	600.9	600.7	600.5	600.3
12.5°	593.1	594.6	596.2	596.8	596.7	596.5	596.3	596.1
15°	585.4	587.1	588.9	589.7	589.5	589.3	589.1	588.9
17.5°	575.5	577.4	579.2	580.1	580.1	580.1	580.1	580.1
20°	567.7	569.9	572.0	573.1	573.1	573.1	573.1	573.1
22.5°	559.3	561.5	563.5	564.8	565.1	565.4	565.8	566.0
25°	546.1	548.5	550.8	552.2	552.8	553.5	554.1	554.7
27.5°	531.6	534.5	537.5	539.2	539.6	540.0	540.4	540.9
30°	521.3	524.4	527.5	529.4	530.0	530.6	531.2	531.8
32.5°	510.3	513.9	517.5	519.8	520.9	521.9	523.0	524.0
35°	494.6	498.9	503.3	506.1	507.5	508.9	510.1	511.5
37.5°	478.5	483.3	488.1	491.2	492.7	494.0	495.5	497.0
40°	467.2	472.3	477.3	480.8	482.5	484.3	486.0	487.8
42.5°	456.2	461.8	467.3	471.0	472.7	474.5	476.2	477.9
45°	439.3	445.3	451.4	455.4	457.4	459.3	461.2	463.2
47.5°	421.7	428.1	434.4	438.6	440.7	442.9	445.1	447.2
50°	409.7	416.3	423.0	427.4	429.6	431.7	433.8	435.9
52.5°	396.7	403.5	410.3	414.8	417.1	419.4	421.7	424.0
55°	377.0	384.1	391.2	395.9	398.5	401.0	403.6	406.0
57.5°	356.4	363.9	371.5	376.6	379.2	381.8	384.4	386.9
60°	342.7	350.1	357.6	362.7	365.3	368.1	370.8	373.6
62.5°	328.1	336.0	344.0	349.2	351.7	354.3	356.9	359.5
65°	306.1	314.1	322.1	327.4	329.9	332.4	335.0	337.5
67.5°	283.7	291.8	299.9	305.3	307.9	310.6	313.2	315.9
70°	268.2	276.6	285.0	290.3	292.7	295.1	297.4	299.7
72.5°	253.1	261.3	269.6	275.1	277.9	280.8	283.5	286.4
75°	230.4	238.8	247.2	252.6	255.2	257.7	260.3	262.8
77.5°	208.2	216.5	224.9	230.4	233.2	235.9	238.6	241.3
80°	193.0	201.3	209.5	215.0	217.7	220.4	223.2	225.9
82.5°	179.0	187.2	195.4	200.8	203.4	206.0	208.5	211.1
85°	158.8	167.0	175.2	180.6	183.4	186.1	188.9	191.6
87.5°	143.0	151.1	159.1	164.4	166.9	169.4	171.9	174.4
90°	137.8	145.9	154.1	159.4	161.9	164.3	166.8	169.3
92.5°	131.8	139.6	147.4	152.6	155.0	157.4	159.8	162.2
95°	127.4	135.1	142.8	147.8	150.2	152.4	154.7	157.0
97.5°	123.0	130.4	137.9	142.8	145.3	147.7	150.0	152.4
100°	119.2	126.9	134.7	139.7	141.9	144.2	146.5	148.7
102.5°	114.7	122.4	130.2	135.2	137.5	139.8	142.2	144.5
105°	107.6	115.1	122.6	127.6	130.0	132.4	134.7	137.2
107.5°	103.9	109.8	115.6	119.8	122.2	124.6	127.0	129.3
110°	113.0	113.0	113.1	114.3	116.8	119.2	121.6	124.0



TEST NUMBER: P331333-935

CATALOG NUMBER: SA2XXDIP-C675D330U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	149.5	133.2	116.8	109.9	112.2	114.6	116.9	119.2
115°	178.9	156.2	133.4	120.8	118.6	116.2	113.9	111.6
117.5°	233.5	232.3	231.2	224.3	211.6	199.0	186.3	173.7
120°	257.8	264.0	270.2	270.2	264.0	257.8	251.6	245.4
122.5°	265.8	271.6	277.3	280.3	280.5	280.8	280.9	281.2
125°	276.6	282.2	287.9	291.8	293.7	295.7	297.6	299.5
127.5°	286.0	291.4	297.0	300.6	302.3	304.1	305.8	307.5
130°	292.1	297.4	302.8	306.2	307.7	309.2	310.7	312.2
132.5°	297.7	302.9	308.0	311.3	312.8	314.3	315.8	317.3
135°	306.1	310.8	315.6	318.7	320.1	321.5	323.0	324.4
137.5°	313.7	317.8	322.0	324.7	325.8	326.9	328.0	329.2
140°	318.7	322.4	326.1	328.3	329.2	330.0	330.9	331.7
142.5°	324.2	327.2	330.2	332.0	332.8	333.5	334.2	334.8
145°	332.5	334.2	335.8	336.9	337.5	338.2	338.9	339.6
147.5°	340.4	340.9	341.4	341.7	341.9	342.2	342.3	342.6
150°	346.2	346.6	347.0	347.0	346.7	346.4	346.0	345.8
152.5°	351.8	352.1	352.5	352.5	352.1	351.7	351.3	350.9
155°	359.3	359.6	360.1	360.0	359.5	359.0	358.5	358.0
157.5°	365.7	366.1	366.4	366.4	365.9	365.5	365.0	364.5
160°	369.4	369.7	370.1	370.1	369.6	369.2	368.8	368.3
162.5°	372.7	373.2	373.6	373.6	373.0	372.5	372.0	371.4
165°	376.9	377.4	377.8	377.8	377.4	376.9	376.5	376.1
167.5°	380.5	380.9	381.3	381.3	380.7	380.1	379.6	379.0
170°	382.3	382.7	383.1	383.1	382.5	381.9	381.4	380.8
172.5°	383.6	384.0	384.4	384.4	383.8	383.3	382.7	382.2
175°	385.0	385.5	385.9	385.8	385.2	384.6	383.9	383.3
177.5°	385.2	385.6	385.9	385.8	385.4	385.0	384.5	384.1
180°	384.7	384.7	384.7	384.7	384.7	384.7	384.7	384.7

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