

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: P331333-940

Luminaire Tested: **SA2XXDIP-C675D330U940-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331333-940
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-C675D330U940-4F0-1E-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: 3564.9 lumens
Efficiency: N/A
Efficacy: 101.9 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

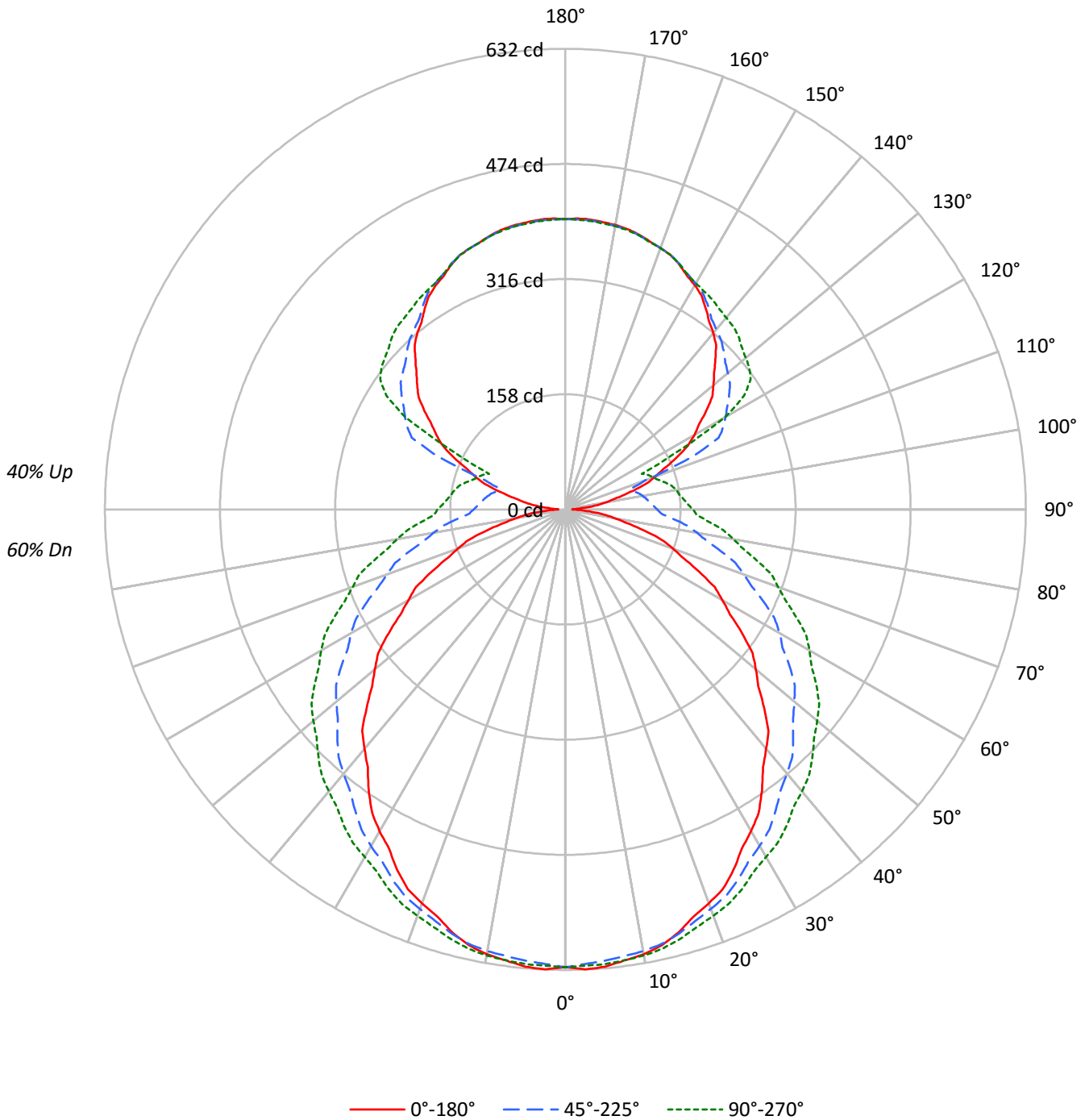
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	10141	10141	10141
5°	10191	9762	9724
10°	10126	9474	9367
15°	9987	9168	8990
20°	9810	8841	8627
25°	9637	8525	8298
30°	9392	8201	7967
35°	9142	7888	7735
40°	8880	7621	7501
45°	8632	7383	7302
50°	8365	7166	7106
55°	8089	6934	6906
60°	7745	6695	6695
65°	7391	6412	6445
70°	6992	6110	6173
75°	6483	5811	5925
80°	5680	5509	5672
85°	4908	5245	5473



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	1.7
10°-20°	170.7	4.8
20°-30°	258.6	7.3
30°-40°	315.0	8.8
40°-50°	338.9	9.5
50°-60°	329.1	9.2
60°-70°	287.4	8.1
70°-80°	221.2	6.2
80°-90°	149.5	4.2
90°-100°	115.6	3.2
100°-110°	123.4	3.5
110°-120°	179.6	5.0
120°-130°	242.6	6.8
130°-140°	240.3	6.7
140°-150°	214.6	6.0
150°-160°	170.9	4.8
160°-170°	110.1	3.1
170°-180°	37.9	1.1
0°-30°	488.8	13.7
0°-40°	803.8	22.5
0°-60°	1471.8	41.3
0°-90°	2129.9	59.7
90°-120°	418.6	11.7
90°-150°	1116.1	31.3
90°-180°	1435.0	40.3
0°-180°	3564.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	628	628	628	628	628	
5°	630	627	622	627	626	60
15°	601	602	603	610	610	169
25°	546	553	561	571	574	251
35°	471	486	503	523	530	294
45°	386	411	442	470	480	298
55°	296	329	376	408	420	264
65°	202	247	300	336	350	201
75°	112	163	221	259	272	118
85°	33	89	148	184	198	35
90°	9	66	126	162	175	7
95°	26	61	116	150	163	29
105°	92	124	96	130	142	99
115°	169	186	232	132	116	166
125°	236	242	275	300	310	211
135°	291	296	307	328	336	225
145°	336	336	341	348	352	211
155°	370	368	371	373	371	171
165°	390	389	390	391	390	110
175°	399	397	398	400	397	38
180°	398	398	398	398	398	



TEST NUMBER: P331333-940

CATALOG NUMBER: SA2XXDIP-C675D330U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	631.8	631.2	630.8	630.3	629.8	629.0	627.9	626.7	625.6	624.5	625.3
5°	629.9	629.3	628.7	628.1	627.5	626.6	625.4	624.2	622.9	621.7	622.9
7.5°	624.3	623.8	623.5	623.0	622.7	622.0	621.1	620.1	619.2	618.3	619.7
10°	619.9	619.5	619.1	618.7	618.3	617.8	617.2	616.6	616.0	615.4	617.0
12.5°	612.6	612.7	612.8	612.9	613.0	612.8	612.3	611.9	611.4	611.0	612.6
15°	600.8	601.2	601.6	602.0	602.4	602.6	602.6	602.6	602.6	602.6	604.4
17.5°	585.5	586.4	587.2	588.1	588.9	589.7	590.3	590.9	591.6	592.3	594.1
20°	575.3	576.3	577.3	578.4	579.3	580.2	581.0	581.9	582.7	583.5	585.8
22.5°	564.4	565.5	566.8	567.9	569.1	570.2	571.4	572.5	573.6	574.8	577.0
25°	546.2	547.6	549.0	550.5	551.9	553.5	555.3	557.1	558.9	560.7	563.2
27.5°	524.3	526.6	529.0	531.3	533.6	535.8	538.0	540.1	542.2	544.4	547.4
30°	509.8	512.4	515.1	517.6	520.3	522.9	525.6	528.2	530.8	533.4	536.6
32.5°	493.7	496.7	499.6	502.6	505.6	508.6	511.8	514.8	517.9	521.0	524.8
35°	470.6	474.0	477.5	480.9	484.4	488.0	491.9	495.7	499.5	503.4	507.8
37.5°	445.5	449.5	453.4	457.4	461.4	465.8	470.8	475.8	480.7	485.7	490.7
40°	428.7	433.2	437.7	442.1	446.6	451.5	457.0	462.4	467.9	473.3	478.6
42.5°	412.8	417.1	421.6	426.1	430.5	435.9	442.2	448.4	454.7	461.0	466.7
45°	385.9	391.5	396.9	402.3	407.8	414.1	421.2	428.3	435.3	442.4	448.7
47.5°	359.5	365.5	371.5	377.4	383.3	390.5	398.8	407.1	415.4	423.7	430.3
50°	341.3	347.7	353.9	360.2	366.4	374.2	383.3	392.4	401.4	410.5	417.4
52.5°	323.9	330.5	337.1	343.7	350.3	358.4	367.9	377.6	387.1	396.7	403.8
55°	295.9	303.1	310.4	317.7	324.9	333.9	344.4	354.9	365.4	375.9	383.3
57.5°	268.1	276.4	284.6	292.8	301.0	310.5	321.2	331.9	342.7	353.4	361.2
60°	248.5	257.2	265.9	274.6	283.3	293.5	305.0	316.5	328.0	339.6	347.2
62.5°	231.0	240.0	249.1	258.1	267.2	277.4	288.9	300.4	312.0	323.5	331.7
65°	202.1	212.0	221.9	231.8	241.7	252.6	264.6	276.5	288.5	300.4	308.7
67.5°	175.5	185.8	196.3	206.6	217.0	228.2	240.4	252.6	264.8	277.1	285.4
70°	156.6	167.1	177.6	188.2	198.7	210.2	222.7	235.2	247.8	260.4	269.0
72.5°	139.1	149.9	160.8	171.7	182.4	194.2	207.0	219.6	232.4	245.0	253.6
75°	112.0	123.3	134.6	146.0	157.3	169.4	182.4	195.3	208.2	221.2	229.9
77.5°	85.8	97.6	109.5	121.3	133.1	145.7	158.8	172.0	185.1	198.2	207.0
80°	68.3	80.6	92.9	105.3	117.6	130.4	143.6	156.7	169.8	183.0	191.5
82.5°	53.7	65.9	78.0	90.2	102.5	115.1	128.5	141.8	155.1	168.4	176.9
85°	32.8	45.3	57.9	70.4	82.9	95.7	108.6	121.5	134.6	147.5	156.0
87.5°	17.9	30.1	42.3	54.5	66.7	79.3	92.4	105.4	118.4	131.5	139.8
90°	9.4	21.8	34.2	46.7	59.1	72.1	85.5	99.0	112.4	125.9	134.4
92.5°	14.2	25.1	35.9	46.8	57.6	69.5	82.1	94.9	107.5	120.3	128.4
95°	26.0	33.4	40.8	48.2	55.6	65.6	78.2	90.8	103.3	115.9	123.9
97.5°	43.6	46.1	48.6	51.1	53.6	61.2	73.8	86.5	99.2	111.9	119.7
100°	57.4	56.1	54.8	53.5	52.3	57.8	70.2	82.7	95.1	107.5	115.5
102.5°	71.9	76.9	81.9	86.9	91.8	95.2	97.1	99.1	100.9	102.8	110.8
105°	92.2	100.0	107.8	115.6	123.3	123.8	116.8	109.9	102.8	95.9	103.6
107.5°	116.4	122.6	128.9	135.2	141.4	139.0	128.1	117.3	106.4	95.4	101.6
110°	131.3	136.8	142.1	147.6	152.9	151.3	142.8	134.1	125.6	116.9	117.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	146.2	150.7	155.3	159.9	164.5	169.2	174.1	178.9	183.8	188.6	171.7
115°	169.4	172.7	176.0	179.3	182.7	189.7	200.4	211.1	221.8	232.5	208.9
117.5°	189.3	192.0	194.7	197.3	200.0	206.2	215.6	225.2	234.7	244.2	243.0
120°	204.6	206.3	208.1	209.8	211.6	217.1	226.4	235.6	244.9	254.1	260.6
122.5°	217.5	218.8	220.2	221.5	222.8	227.9	236.7	245.7	254.5	263.3	269.3
125°	236.2	237.0	237.9	238.7	239.5	243.8	251.5	259.2	266.9	274.6	280.5
127.5°	254.0	254.8	255.5	256.2	256.9	260.4	266.4	272.6	278.7	284.9	290.5
130°	265.4	266.2	267.0	267.8	268.7	271.5	276.4	281.4	286.4	291.3	296.9
132.5°	276.9	277.5	278.2	278.8	279.6	281.9	285.9	289.8	293.8	297.8	303.1
135°	291.0	291.9	293.0	294.0	295.1	296.9	299.4	302.1	304.7	307.3	312.2
137.5°	306.1	306.8	307.5	308.2	308.8	310.0	311.5	313.0	314.6	316.1	320.5
140°	316.0	316.4	316.6	317.0	317.3	318.0	319.1	320.2	321.3	322.4	326.3
142.5°	324.3	324.6	324.9	325.1	325.4	325.9	326.8	327.7	328.6	329.5	332.6
145°	336.4	336.4	336.4	336.3	336.2	336.7	337.8	338.9	340.0	341.1	342.8
147.5°	347.9	347.6	347.3	347.1	346.9	347.2	348.3	349.5	350.5	351.6	352.0
150°	355.2	354.7	354.3	353.8	353.4	353.7	354.7	355.8	356.8	357.8	358.2
152.5°	361.4	361.0	360.4	359.9	359.4	359.6	360.6	361.6	362.6	363.6	363.9
155°	370.5	369.9	369.3	368.7	368.2	368.3	369.1	369.8	370.6	371.3	371.8
157.5°	377.6	377.1	376.6	376.1	375.6	375.7	376.2	376.7	377.3	377.8	378.3
160°	381.7	381.4	380.9	380.6	380.2	380.2	380.6	380.9	381.4	381.7	382.1
162.5°	385.4	385.0	384.7	384.2	383.9	383.9	384.1	384.5	384.9	385.2	385.7
165°	390.4	390.0	389.6	389.2	388.9	388.8	389.0	389.1	389.3	389.5	389.9
167.5°	394.0	393.7	393.3	392.9	392.5	392.4	392.6	392.8	393.0	393.2	393.6
170°	396.2	395.7	395.4	395.0	394.6	394.5	394.6	394.8	394.8	395.0	395.5
172.5°	397.5	397.2	396.7	396.4	396.0	395.8	396.0	396.1	396.3	396.4	396.8
175°	399.3	398.9	398.4	398.0	397.5	397.3	397.5	397.6	397.8	397.9	398.3
177.5°	399.6	399.2	398.9	398.5	398.1	398.1	398.1	398.1	398.1	398.2	398.6
180°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4



TEST NUMBER: P331333-940

CATALOG NUMBER: SA2XXDIP-C675D330U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	626.1	626.9	627.7	627.9	627.6	627.3	627.0	626.7
5°	624.2	625.4	626.6	627.1	626.9	626.7	626.5	626.2
7.5°	621.2	622.7	624.1	624.7	624.6	624.3	624.1	623.9
10°	618.6	620.2	621.9	622.5	622.3	622.1	622.0	621.7
12.5°	614.2	615.8	617.5	618.1	618.0	617.8	617.6	617.3
15°	606.3	608.1	609.9	610.7	610.6	610.3	610.1	609.9
17.5°	596.0	598.0	599.9	600.8	600.8	600.8	600.8	600.8
20°	588.0	590.2	592.4	593.5	593.5	593.5	593.5	593.5
22.5°	579.3	581.5	583.6	585.0	585.2	585.6	585.9	586.2
25°	565.6	568.0	570.4	571.9	572.6	573.2	573.8	574.4
27.5°	550.5	553.6	556.7	558.4	558.8	559.3	559.7	560.2
30°	539.9	543.1	546.4	548.3	548.9	549.6	550.1	550.7
32.5°	528.5	532.3	535.9	538.3	539.5	540.6	541.6	542.7
35°	512.3	516.7	521.2	524.1	525.6	527.0	528.3	529.8
37.5°	495.6	500.5	505.5	508.7	510.2	511.7	513.2	514.7
40°	483.8	489.1	494.4	497.9	499.7	501.6	503.4	505.2
42.5°	472.4	478.2	483.9	487.8	489.5	491.4	493.2	495.0
45°	455.0	461.2	467.5	471.6	473.7	475.7	477.7	479.7
47.5°	436.8	443.4	449.9	454.2	456.5	458.7	460.9	463.2
50°	424.3	431.1	438.1	442.6	444.9	447.1	449.2	451.5
52.5°	410.8	417.9	424.9	429.6	431.9	434.4	436.8	439.2
55°	390.5	397.8	405.1	410.0	412.7	415.3	417.9	420.5
57.5°	369.1	376.9	384.8	390.0	392.7	395.4	398.1	400.7
60°	354.9	362.6	370.3	375.6	378.4	381.2	384.1	386.9
62.5°	339.8	348.0	356.2	361.7	364.3	366.9	369.6	372.3
65°	317.0	325.3	333.6	339.0	341.7	344.3	347.0	349.6
67.5°	293.8	302.2	310.6	316.2	318.9	321.6	324.4	327.2
70°	277.8	286.4	295.2	300.7	303.1	305.6	308.0	310.4
72.5°	262.2	270.6	279.2	284.9	287.8	290.8	293.6	296.6
75°	238.6	247.3	256.0	261.6	264.3	266.9	269.6	272.2
77.5°	215.6	224.3	232.9	238.6	241.5	244.3	247.1	249.9
80°	199.9	208.5	217.0	222.7	225.4	228.3	231.1	234.0
82.5°	185.4	193.9	202.4	207.9	210.6	213.3	216.0	218.6
85°	164.4	173.0	181.5	187.1	189.9	192.8	195.6	198.4
87.5°	148.1	156.5	164.8	170.2	172.9	175.5	178.1	180.7
90°	142.8	151.1	159.6	165.1	167.6	170.1	172.7	175.3
92.5°	136.5	144.5	152.7	158.0	160.5	163.0	165.5	168.0
95°	132.0	139.9	147.9	153.1	155.5	157.8	160.2	162.6
97.5°	127.4	135.1	142.9	147.9	150.4	152.9	155.3	157.8
100°	123.5	131.4	139.5	144.6	147.0	149.4	151.7	154.0
102.5°	118.8	126.8	134.8	140.0	142.4	144.8	147.2	149.6
105°	111.5	119.2	127.0	132.2	134.6	137.1	139.6	142.0
107.5°	107.6	113.7	119.8	124.0	126.5	129.0	131.5	133.9
110°	117.1	117.1	117.2	118.4	120.9	123.4	125.9	128.4



TEST NUMBER: P331333-940

CATALOG NUMBER: SA2XXDIP-C675D330U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	154.8	137.9	121.0	113.8	116.2	118.7	121.1	123.5
115°	185.3	161.8	138.1	125.1	122.8	120.4	118.0	115.6
117.5°	241.8	240.6	239.4	232.3	219.2	206.1	193.0	179.9
120°	267.0	273.4	279.8	279.8	273.4	267.0	260.6	254.1
122.5°	275.3	281.2	287.2	290.3	290.5	290.8	291.0	291.2
125°	286.4	292.3	298.2	302.2	304.2	306.2	308.2	310.2
127.5°	296.2	301.8	307.6	311.3	313.1	315.0	316.7	318.5
130°	302.5	308.0	313.6	317.1	318.7	320.2	321.8	323.3
132.5°	308.4	313.7	319.0	322.4	324.0	325.5	327.1	328.6
135°	317.0	321.9	326.8	330.0	331.5	333.0	334.5	336.0
137.5°	324.9	329.1	333.5	336.3	337.4	338.6	339.7	340.9
140°	330.0	333.9	337.7	340.0	340.9	341.8	342.7	343.6
142.5°	335.7	338.9	342.0	343.8	344.6	345.4	346.1	346.8
145°	344.4	346.1	347.8	348.9	349.6	350.3	351.0	351.7
147.5°	352.6	353.0	353.6	353.9	354.1	354.4	354.5	354.8
150°	358.6	358.9	359.4	359.4	359.1	358.7	358.4	358.1
152.5°	364.4	364.7	365.1	365.1	364.6	364.3	363.8	363.4
155°	372.1	372.5	372.9	372.8	372.3	371.8	371.3	370.8
157.5°	378.7	379.2	379.5	379.5	379.0	378.5	378.0	377.6
160°	382.5	382.9	383.3	383.3	382.8	382.4	381.9	381.5
162.5°	386.0	386.5	386.9	386.9	386.3	385.8	385.2	384.7
165°	390.4	390.8	391.3	391.3	390.8	390.4	389.9	389.5
167.5°	394.0	394.5	394.9	394.8	394.3	393.7	393.2	392.5
170°	395.9	396.4	396.8	396.7	396.2	395.6	395.0	394.4
172.5°	397.3	397.7	398.1	398.1	397.5	397.0	396.4	395.8
175°	398.8	399.2	399.7	399.6	399.0	398.3	397.6	397.0
177.5°	399.0	399.3	399.7	399.6	399.1	398.7	398.2	397.8
180°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4

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