

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: P331333-830

Luminaire Tested: **SA2XXDIP-C675D330U830-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331333-830
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-C675D330U830-4F0-1E-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

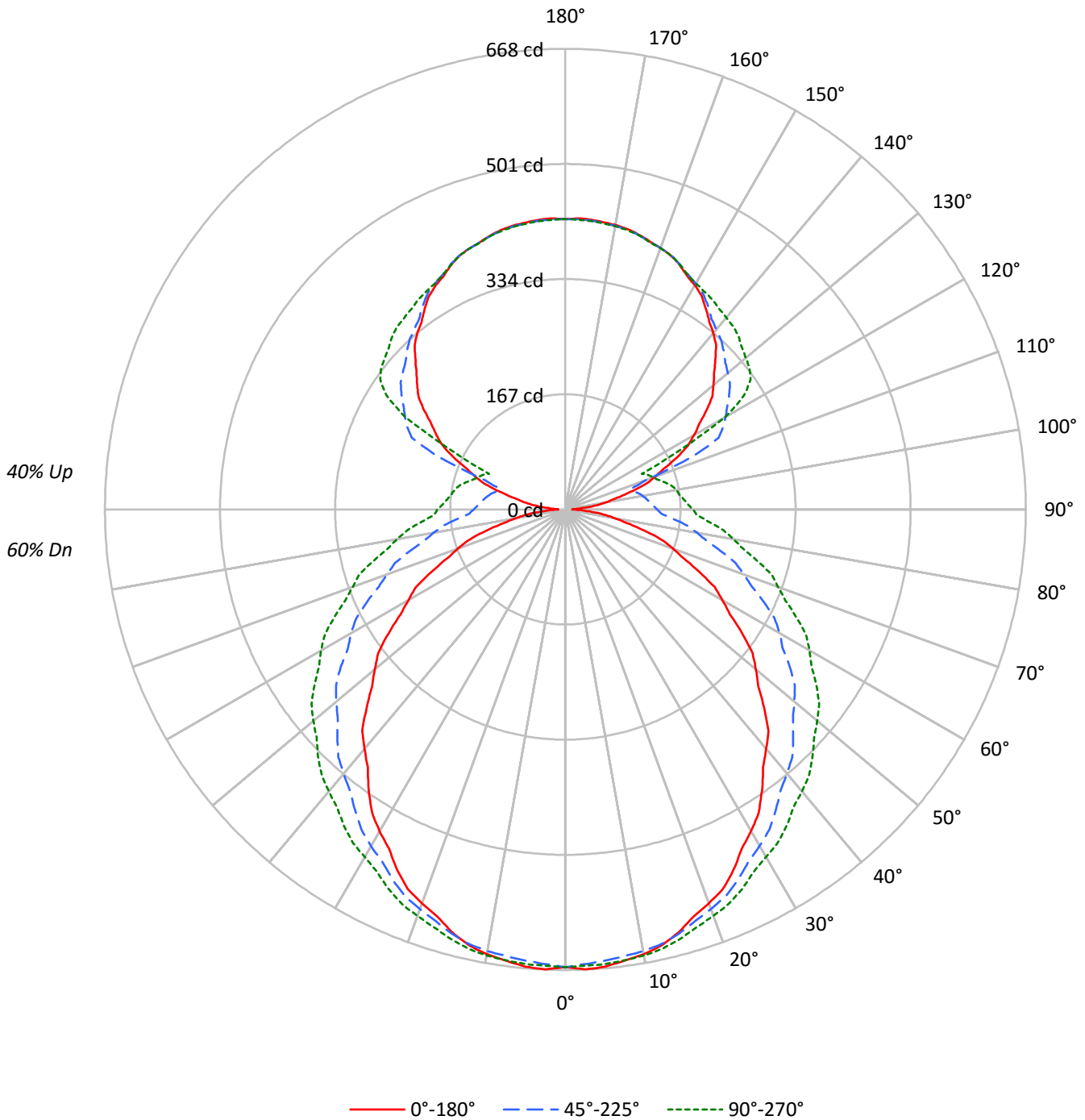
Lumens per Lamp: N/A
Luminaire Lumens: 3768.2 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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									
RC	80									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°	10719	10719	10719
5°	10771	10318	10278
10°	10704	10013	9900
15°	10557	9691	9503
20°	10370	9345	9120
25°	10186	9011	8772
30°	9928	8668	8421
35°	9665	8338	8176
40°	9388	8055	7929
45°	9124	7803	7719
50°	8843	7574	7511
55°	8548	7331	7300
60°	8188	7076	7078
65°	7811	6777	6812
70°	7390	6457	6525
75°	6853	6143	6262
80°	6004	5822	5995
85°	5192	5544	5785



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.9	1.7
10°-20°	180.4	4.8
20°-30°	273.4	7.3
30°-40°	333.0	8.8
40°-50°	358.2	9.5
50°-60°	347.9	9.2
60°-70°	303.7	8.1
70°-80°	233.8	6.2
80°-90°	158.0	4.2
90°-100°	122.2	3.2
100°-110°	130.5	3.5
110°-120°	189.9	5.0
120°-130°	256.4	6.8
130°-140°	254.0	6.7
140°-150°	226.8	6.0
150°-160°	180.7	4.8
160°-170°	116.4	3.1
170°-180°	40.1	1.1
0°-30°	516.7	13.7
0°-40°	849.6	22.5
0°-60°	1555.7	41.3
0°-90°	2251.3	59.7
90°-120°	442.5	11.7
90°-150°	1179.7	31.3
90°-180°	1517.0	40.3
0°-180°	3768.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	664	664	664	664	664	
5°	666	663	657	663	662	63
15°	635	637	637	645	645	179
25°	577	584	593	604	607	265
35°	498	514	532	552	560	311
45°	408	434	468	496	507	315
55°	313	348	397	431	444	279
65°	214	261	318	356	370	212
75°	118	173	234	274	288	125
85°	35	94	156	195	210	37
90°	10	69	133	172	185	7
95°	28	64	122	159	172	30
105°	98	131	101	137	150	104
115°	179	197	246	139	122	176
125°	250	255	290	317	328	223
135°	308	313	325	347	355	238
145°	356	356	360	368	372	223
155°	392	389	392	394	392	180
165°	413	411	412	414	412	117
175°	422	420	421	422	420	40
180°	421	421	421	421	421	



TEST NUMBER: P331333-830

CATALOG NUMBER: SA2XXDIP-C675D330U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	667.8	667.2	666.8	666.2	665.7	664.9	663.6	662.4	661.3	660.1	660.9
5°	665.8	665.2	664.6	663.9	663.3	662.3	661.0	659.8	658.5	657.1	658.5
7.5°	659.9	659.4	659.0	658.6	658.2	657.4	656.5	655.4	654.5	653.6	655.1
10°	655.3	654.8	654.4	653.9	653.6	653.0	652.3	651.8	651.1	650.4	652.1
12.5°	647.5	647.6	647.7	647.8	647.9	647.7	647.2	646.8	646.3	645.8	647.5
15°	635.1	635.5	635.9	636.3	636.8	637.0	637.0	637.0	637.0	637.0	638.9
17.5°	618.9	619.8	620.7	621.6	622.5	623.3	624.0	624.6	625.3	626.0	628.0
20°	608.1	609.2	610.2	611.3	612.4	613.3	614.2	615.1	616.0	616.8	619.2
22.5°	596.5	597.8	599.1	600.3	601.5	602.8	604.0	605.1	606.3	607.6	609.9
25°	577.3	578.8	580.3	581.8	583.3	585.0	586.9	588.9	590.8	592.7	595.3
27.5°	554.2	556.7	559.1	561.6	564.0	566.4	568.6	570.9	573.2	575.4	578.6
30°	538.9	541.6	544.4	547.1	550.0	552.7	555.5	558.3	561.1	563.8	567.2
32.5°	521.9	525.0	528.1	531.2	534.4	537.6	540.9	544.1	547.4	550.7	554.7
35°	497.5	501.1	504.7	508.3	512.0	515.9	519.9	524.0	528.0	532.1	536.8
37.5°	470.9	475.1	479.3	483.4	487.7	492.4	497.7	502.9	508.1	513.4	518.7
40°	453.2	457.9	462.6	467.3	472.0	477.2	483.1	488.8	494.6	500.3	505.9
42.5°	436.3	440.9	445.6	450.3	455.1	460.7	467.4	474.0	480.6	487.3	493.3
45°	407.9	413.8	419.5	425.3	431.0	437.7	445.2	452.7	460.1	467.6	474.3
47.5°	380.0	386.3	392.7	398.9	405.2	412.7	421.5	430.3	439.0	447.8	454.8
50°	360.8	367.5	374.1	380.7	387.3	395.5	405.1	414.7	424.3	433.9	441.2
52.5°	342.3	349.3	356.3	363.3	370.2	378.8	388.9	399.1	409.2	419.3	426.8
55°	312.7	320.4	328.1	335.8	343.5	352.9	364.0	375.1	386.3	397.4	405.1
57.5°	283.4	292.2	300.9	309.5	318.2	328.2	339.5	350.8	362.2	373.5	381.8
60°	262.7	271.8	281.1	290.3	299.4	310.2	322.3	334.5	346.7	358.9	367.0
62.5°	244.2	253.7	263.3	272.8	282.4	293.2	305.4	317.5	329.8	342.0	350.6
65°	213.6	224.0	234.6	245.1	255.5	267.0	279.7	292.3	304.9	317.5	326.3
67.5°	185.5	196.4	207.5	218.4	229.3	241.2	254.1	267.0	279.9	292.8	301.7
70°	165.5	176.6	187.8	198.9	210.0	222.2	235.4	248.6	261.9	275.2	284.4
72.5°	147.0	158.4	169.9	181.4	192.8	205.3	218.8	232.1	245.6	259.0	268.1
75°	118.4	130.4	142.3	154.3	166.3	179.1	192.7	206.4	220.1	233.8	243.0
77.5°	90.7	103.2	115.7	128.2	140.7	154.0	167.9	181.8	195.7	209.5	218.8
80°	72.2	85.2	98.2	111.3	124.3	137.8	151.7	165.6	179.5	193.4	202.4
82.5°	56.7	69.7	82.5	95.4	108.3	121.7	135.8	149.9	163.9	178.0	187.0
85°	34.7	47.9	61.2	74.4	87.7	101.1	114.8	128.5	142.2	155.9	164.9
87.5°	18.9	31.9	44.7	57.6	70.5	83.8	97.6	111.4	125.2	139.0	147.8
90°	9.9	23.1	36.2	49.4	62.5	76.2	90.4	104.6	118.9	133.1	142.0
92.5°	15.0	26.5	38.0	49.5	60.9	73.4	86.8	100.3	113.7	127.1	135.7
95°	27.5	35.3	43.2	51.0	58.7	69.4	82.7	96.0	109.2	122.5	131.0
97.5°	46.1	48.7	51.4	54.0	56.6	64.7	78.0	91.4	104.9	118.3	126.5
100°	60.7	59.3	58.0	56.6	55.2	61.1	74.2	87.4	100.5	113.6	122.1
102.5°	76.0	81.2	86.5	91.8	97.1	100.7	102.6	104.7	106.7	108.7	117.2
105°	97.5	105.7	114.0	122.2	130.4	130.8	123.5	116.1	108.7	101.3	109.5
107.5°	123.0	129.6	136.2	142.9	149.5	146.9	135.4	123.9	112.4	100.9	107.4
110°	138.8	144.6	150.2	156.0	161.6	159.9	150.9	141.8	132.7	123.6	123.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	154.5	159.3	164.2	169.0	173.9	178.9	184.0	189.1	194.3	199.3	181.5
115°	179.1	182.6	186.1	189.5	193.1	200.5	211.8	223.1	234.4	245.7	220.8
117.5°	200.1	202.9	205.8	208.6	211.4	217.9	227.9	238.0	248.1	258.1	256.8
120°	216.2	218.1	220.0	221.8	223.7	229.5	239.3	249.0	258.8	268.6	275.4
122.5°	229.9	231.3	232.7	234.1	235.5	240.9	250.2	259.7	269.0	278.3	284.6
125°	249.7	250.5	251.5	252.3	253.2	257.7	265.8	274.0	282.1	290.2	296.5
127.5°	268.5	269.3	270.0	270.8	271.5	275.2	281.6	288.1	294.6	301.1	307.1
130°	280.5	281.3	282.2	283.0	284.0	287.0	292.2	297.5	302.7	307.9	313.8
132.5°	292.7	293.3	294.1	294.7	295.5	297.9	302.2	306.3	310.6	314.8	320.4
135°	307.6	308.6	309.7	310.8	311.9	313.8	316.5	319.3	322.1	324.8	330.0
137.5°	323.6	324.3	325.0	325.7	326.4	327.6	329.2	330.8	332.5	334.1	338.7
140°	334.0	334.4	334.7	335.1	335.4	336.1	337.3	338.5	339.6	340.8	344.9
142.5°	342.8	343.1	343.4	343.7	343.9	344.5	345.4	346.4	347.3	348.3	351.6
145°	355.6	355.6	355.5	355.4	355.3	355.9	357.0	358.3	359.4	360.5	362.3
147.5°	367.7	367.4	367.1	366.8	366.6	367.0	368.2	369.4	370.5	371.6	372.1
150°	375.4	374.9	374.5	374.0	373.5	373.9	374.9	376.1	377.1	378.2	378.6
152.5°	382.0	381.5	381.0	380.4	379.9	380.1	381.2	382.2	383.2	384.3	384.7
155°	391.6	391.0	390.4	389.7	389.2	389.3	390.1	390.9	391.7	392.5	392.9
157.5°	399.1	398.6	398.0	397.6	397.0	397.1	397.7	398.2	398.8	399.4	399.8
160°	403.5	403.1	402.7	402.3	401.9	401.9	402.3	402.7	403.1	403.5	403.9
162.5°	407.4	407.0	406.6	406.1	405.8	405.8	406.0	406.4	406.8	407.2	407.6
165°	412.6	412.3	411.8	411.4	411.0	410.9	411.1	411.3	411.5	411.7	412.2
167.5°	416.5	416.1	415.8	415.3	414.9	414.8	415.0	415.2	415.4	415.6	416.0
170°	418.8	418.3	417.9	417.5	417.1	417.0	417.1	417.3	417.4	417.5	418.0
172.5°	420.2	419.8	419.3	419.0	418.6	418.4	418.6	418.7	418.9	419.0	419.4
175°	422.1	421.6	421.1	420.7	420.2	420.0	420.2	420.3	420.5	420.6	421.0
177.5°	422.4	422.0	421.6	421.2	420.8	420.8	420.8	420.8	420.8	420.9	421.3
180°	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	661.8	662.6	663.5	663.7	663.4	663.1	662.7	662.4
5°	659.8	661.0	662.3	662.9	662.6	662.4	662.2	661.9
7.5°	656.6	658.2	659.7	660.3	660.2	659.9	659.7	659.5
10°	653.8	655.5	657.3	658.0	657.8	657.6	657.4	657.1
12.5°	649.2	650.9	652.7	653.4	653.2	653.0	652.8	652.5
15°	640.8	642.7	644.7	645.5	645.4	645.1	644.9	644.7
17.5°	630.0	632.1	634.0	635.1	635.1	635.1	635.1	635.1
20°	621.5	623.9	626.1	627.4	627.4	627.4	627.4	627.4
22.5°	612.3	614.6	616.9	618.3	618.6	619.0	619.3	619.6
25°	597.9	600.4	602.9	604.5	605.2	605.9	606.5	607.2
27.5°	581.9	585.1	588.4	590.2	590.7	591.2	591.6	592.1
30°	570.7	574.1	577.5	579.6	580.2	580.9	581.5	582.1
32.5°	558.6	562.6	566.5	569.0	570.2	571.4	572.5	573.6
35°	541.5	546.2	550.9	554.0	555.5	557.0	558.5	560.0
37.5°	523.9	529.0	534.3	537.7	539.3	540.8	542.4	544.0
40°	511.4	517.0	522.5	526.3	528.2	530.2	532.1	534.0
42.5°	499.4	505.5	511.5	515.6	517.5	519.4	521.3	523.2
45°	480.9	487.5	494.2	498.5	500.7	502.8	504.9	507.1
47.5°	461.7	468.6	475.5	480.1	482.5	484.8	487.2	489.6
50°	448.5	455.7	463.1	467.9	470.2	472.6	474.9	477.2
52.5°	434.2	441.7	449.1	454.1	456.6	459.1	461.7	464.2
55°	412.7	420.5	428.2	433.4	436.2	438.9	441.8	444.5
57.5°	390.1	398.4	406.7	412.3	415.1	417.9	420.8	423.6
60°	375.1	383.2	391.4	397.0	399.9	402.9	406.0	409.0
62.5°	359.2	367.9	376.5	382.3	385.0	387.9	390.7	393.5
65°	335.1	343.8	352.6	358.4	361.2	363.9	366.7	369.5
67.5°	310.6	319.4	328.3	334.2	337.1	340.0	342.9	345.8
70°	293.6	302.7	312.0	317.8	320.4	323.0	325.6	328.1
72.5°	277.1	286.1	295.1	301.1	304.3	307.4	310.4	313.5
75°	252.2	261.4	270.6	276.5	279.4	282.1	284.9	287.7
77.5°	227.9	237.0	246.2	252.2	255.2	258.3	261.2	264.2
80°	211.3	220.4	229.3	235.4	238.3	241.3	244.3	247.3
82.5°	196.0	204.9	214.0	219.8	222.6	225.5	228.3	231.1
85°	173.8	182.9	191.8	197.7	200.8	203.8	206.8	209.7
87.5°	156.6	165.4	174.2	179.9	182.8	185.5	188.2	191.0
90°	150.9	159.8	168.7	174.5	177.2	179.8	182.6	185.3
92.5°	144.3	152.8	161.4	167.0	169.7	172.3	174.9	177.6
95°	139.5	147.9	156.4	161.8	164.4	166.8	169.4	171.8
97.5°	134.7	142.8	151.0	156.4	159.0	161.6	164.2	166.8
100°	130.5	138.9	147.4	152.9	155.3	157.9	160.3	162.8
102.5°	125.5	134.0	142.5	148.0	150.5	153.1	155.6	158.2
105°	117.8	126.0	134.2	139.7	142.3	145.0	147.5	150.1
107.5°	113.8	120.2	126.6	131.1	133.7	136.4	139.0	141.6
110°	123.8	123.8	123.9	125.2	127.8	130.4	133.1	135.7



TEST NUMBER: P331333-830

CATALOG NUMBER: SA2XXDIP-C675D330U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	163.6	145.8	127.9	120.3	122.8	125.5	128.0	130.5
115°	195.9	171.0	146.0	132.2	129.8	127.2	124.7	122.2
117.5°	255.6	254.3	253.1	245.5	231.7	217.8	204.0	190.2
120°	282.2	289.0	295.8	295.8	289.0	282.2	275.4	268.6
122.5°	291.0	297.3	303.6	306.9	307.1	307.4	307.6	307.8
125°	302.7	309.0	315.2	319.4	321.5	323.7	325.7	327.9
127.5°	313.1	319.1	325.1	329.0	330.9	332.9	334.8	336.7
130°	319.7	325.6	331.5	335.2	336.9	338.5	340.2	341.8
132.5°	325.9	331.6	337.1	340.8	342.4	344.0	345.7	347.3
135°	335.1	340.3	345.4	348.8	350.4	351.9	353.5	355.2
137.5°	343.4	347.9	352.5	355.4	356.7	357.9	359.1	360.3
140°	348.8	352.9	356.9	359.4	360.3	361.3	362.2	363.2
142.5°	354.9	358.2	361.5	363.4	364.3	365.0	365.8	366.6
145°	364.0	365.8	367.6	368.8	369.5	370.2	371.0	371.7
147.5°	372.7	373.2	373.7	374.1	374.3	374.6	374.8	375.0
150°	379.0	379.4	379.8	379.8	379.6	379.2	378.8	378.5
152.5°	385.1	385.5	385.9	385.9	385.4	385.0	384.6	384.1
155°	393.3	393.7	394.2	394.1	393.5	393.0	392.5	391.9
157.5°	400.3	400.8	401.1	401.1	400.6	400.1	399.5	399.1
160°	404.4	404.7	405.1	405.1	404.6	404.2	403.7	403.2
162.5°	408.0	408.5	409.0	409.0	408.3	407.7	407.2	406.6
165°	412.6	413.1	413.6	413.6	413.1	412.6	412.2	411.7
167.5°	416.5	417.0	417.5	417.4	416.8	416.1	415.6	414.9
170°	418.5	419.0	419.4	419.3	418.8	418.1	417.5	416.9
172.5°	419.9	420.4	420.8	420.8	420.2	419.6	419.0	418.4
175°	421.5	422.0	422.4	422.4	421.7	421.0	420.3	419.6
177.5°	421.7	422.1	422.4	422.4	421.9	421.4	420.9	420.5
180°	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1

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