

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: P331388-930

Luminaire Tested: **SA2XXDIP-C865D530U930-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331388-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C865D530U930-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4390.6 lumens  
Efficiency: N/A  
Efficacy: 90.0 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

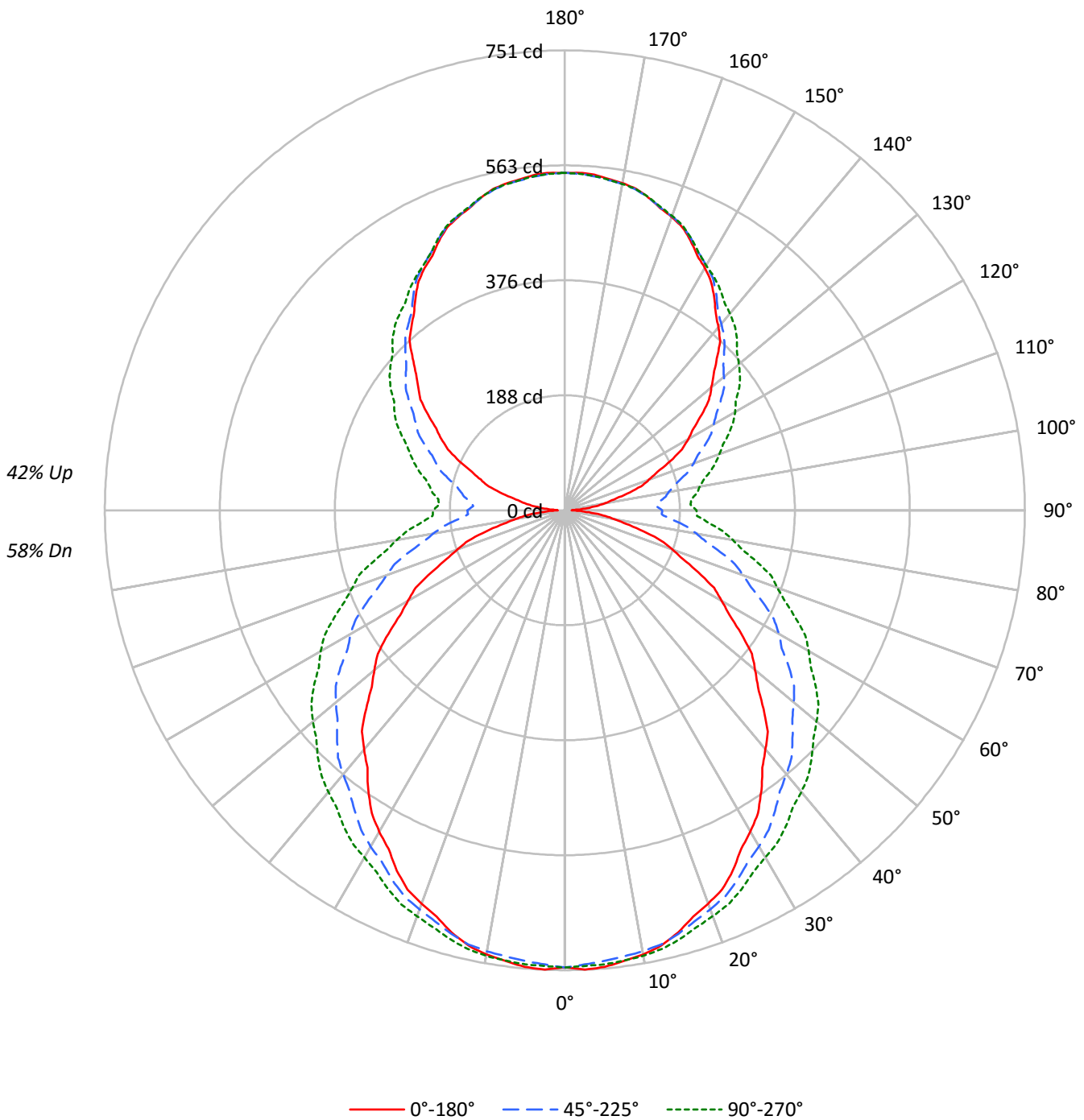
Input Watts (W): 48.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331388-930

CATALOG NUMBER: SA2XXDIP-C865D530U930-4F0-1E-UDD-D1

### Luminous Intensity Polar Plot





TEST NUMBER: P331388-930

CATALOG NUMBER: SA2XXDIP-C865D530U930-4F0-1E-UDD-D1

**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	88	88	88	75	75	75	63	63	63	58																			
1	98	93	88	84	91	86	82	79	74	71	68	63	61	59	53	51	50	45																			
2	88	80	73	67	82	74	68	63	64	59	55	55	51	48	46	43	41	36																			
3	80	70	62	55	74	65	58	52	56	50	46	48	43	40	40	37	34	30																			
4	73	61	53	46	68	57	50	44	49	43	38	42	37	34	35	32	29	25																			
5	67	54	46	39	62	51	43	37	44	38	33	38	33	29	32	28	25	22																			
6	62	49	40	34	57	46	38	32	40	33	29	34	29	25	29	25	22	19																			
7	57	44	35	30	53	41	33	28	36	30	25	31	26	22	26	22	19	16																			
8	53	40	32	26	49	37	30	25	33	26	22	28	23	20	24	20	17	15																			
9	49	36	28	23	46	34	27	22	30	24	20	26	21	17	22	18	15	13																			
10	46	33	26	21	43	31	24	20	27	22	18	24	19	16	20	17	14	12																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	12053	12053	12053
5°	12111	11602	11558
10°	12036	11258	11133
15°	11869	10896	10685
20°	11659	10507	10254
25°	11452	10132	9863
30°	11160	9747	9469
35°	10866	9375	9193
40°	10556	9059	8916
45°	10260	8774	8678
50°	9944	8519	8446
55°	9611	8242	8208
60°	9207	7957	7957
65°	8784	7620	7658
70°	8310	7260	7336
75°	7704	6907	7041
80°	6744	6545	6739
85°	5835	6234	6508



TEST NUMBER: P331388-930

CATALOG NUMBER: SA2XXDIP-C865D530U930-4F0-1E-UDD-D1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.7	1.6
10°-20°	202.8	4.6
20°-30°	307.4	7.0
30°-40°	374.4	8.5
40°-50°	402.8	9.2
50°-60°	391.1	8.9
60°-70°	341.5	7.8
70°-80°	262.9	6.0
80°-90°	178.7	4.1
90°-100°	156.5	3.6
100°-110°	197.2	4.5
110°-120°	244.0	5.6
120°-130°	276.5	6.3
130°-140°	287.3	6.5
140°-150°	270.6	6.2
150°-160°	225.0	5.1
160°-170°	149.2	3.4
170°-180°	52.2	1.2
0°-30°	580.9	13.2
0°-40°	955.3	21.8
0°-60°	1749.2	39.8
0°-90°	2532.3	57.7
90°-120°	597.6	13.6
90°-150°	1432.0	32.6
90°-180°	1858.0	42.3
0°-180°	4390.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	746	746	746	746	746	
5°	749	745	739	745	744	71
15°	714	716	716	725	725	201
25°	649	657	666	679	683	298
35°	559	578	598	621	630	349
45°	459	488	526	558	570	354
55°	352	392	447	484	500	314
65°	240	294	357	400	415	239
75°	133	194	263	308	324	141
85°	39	106	175	219	236	42
90°	11	80	159	200	215	9
95°	33	89	154	194	207	35
105°	105	140	195	233	246	112
115°	190	207	253	284	295	188
125°	273	279	310	337	347	244
135°	351	357	368	389	398	272
145°	425	428	431	438	442	266
155°	486	487	489	491	490	224
165°	529	528	528	531	529	149
175°	550	549	548	551	548	52
180°	551	551	551	551	551	



TEST NUMBER: P331388-930

CATALOG NUMBER: SA2XXDIP-C865D530U930-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5
2.5°	750.8	750.2	749.7	749.1	748.5	747.5	746.2	744.9	743.5	742.2	743.1
5°	748.6	748.0	747.2	746.5	745.8	744.7	743.2	741.8	740.4	738.9	740.4
7.5°	741.9	741.4	740.9	740.5	740.0	739.2	738.1	737.0	735.9	734.8	736.5
10°	736.8	736.3	735.8	735.3	734.8	734.3	733.5	732.8	732.1	731.3	733.3
12.5°	728.1	728.2	728.3	728.4	728.5	728.2	727.7	727.2	726.7	726.1	728.1
15°	714.0	714.5	715.0	715.5	715.9	716.2	716.2	716.2	716.2	716.2	718.4
17.5°	695.9	696.8	697.9	698.9	699.9	700.7	701.6	702.3	703.1	703.8	706.1
20°	683.7	684.9	686.2	687.4	688.5	689.7	690.6	691.5	692.5	693.5	696.1
22.5°	670.7	672.1	673.5	674.9	676.3	677.7	679.1	680.4	681.8	683.1	685.7
25°	649.1	650.8	652.5	654.2	655.8	657.8	659.9	662.1	664.2	666.4	669.3
27.5°	623.1	625.9	628.6	631.4	634.1	636.7	639.3	641.9	644.4	646.9	650.6
30°	605.8	608.9	612.1	615.2	618.3	621.5	624.6	627.7	630.9	634.0	637.8
32.5°	586.8	590.3	593.8	597.4	600.9	604.5	608.1	611.9	615.6	619.2	623.7
35°	559.3	563.4	567.5	571.6	575.7	580.0	584.6	589.1	593.7	598.3	603.6
37.5°	529.5	534.2	538.9	543.6	548.3	553.6	559.5	565.5	571.4	577.3	583.2
40°	509.6	514.9	520.2	525.5	530.7	536.6	543.1	549.6	556.1	562.6	568.8
42.5°	490.5	495.8	501.1	506.4	511.7	518.0	525.5	533.0	540.4	547.9	554.6
45°	458.7	465.2	471.7	478.2	484.7	492.1	500.5	509.0	517.4	525.8	533.2
47.5°	427.3	434.4	441.5	448.6	455.6	464.1	473.9	483.8	493.7	503.5	511.3
50°	405.7	413.1	420.6	428.0	435.5	444.7	455.4	466.3	477.1	488.0	496.1
52.5°	384.9	392.7	400.6	408.5	416.3	425.9	437.3	448.7	460.1	471.5	479.8
55°	351.6	360.3	368.9	377.6	386.2	396.8	409.3	421.8	434.3	446.8	455.4
57.5°	318.7	328.5	338.3	348.0	357.8	369.0	381.7	394.5	407.2	420.0	429.3
60°	295.4	305.7	316.0	326.4	336.7	348.7	362.4	376.1	389.8	403.6	412.7
62.5°	274.6	285.3	296.0	306.7	317.5	329.7	343.4	357.1	370.8	384.5	394.2
65°	240.2	251.9	263.7	275.5	287.3	300.3	314.5	328.6	342.8	357.0	366.9
67.5°	208.6	220.9	233.2	245.5	257.8	271.3	285.8	300.3	314.8	329.3	339.2
70°	186.1	198.6	211.1	223.6	236.1	249.8	264.7	279.6	294.5	309.4	319.8
72.5°	165.3	178.2	191.1	204.0	216.9	230.8	246.0	261.1	276.1	291.2	301.4
75°	133.1	146.5	160.0	173.5	186.9	201.4	216.7	232.1	247.5	262.9	273.2
77.5°	101.9	116.0	130.1	144.1	158.2	173.1	188.7	204.4	220.0	235.6	245.9
80°	81.1	95.8	110.5	125.1	139.8	154.9	170.6	186.2	201.8	217.4	227.6
82.5°	63.8	78.3	92.8	107.2	121.7	136.9	152.7	168.5	184.3	200.2	210.3
85°	39.0	53.9	68.7	83.6	98.6	113.7	129.1	144.5	159.9	175.3	185.4
87.5°	21.3	35.9	50.5	65.1	79.6	94.8	110.6	126.5	142.4	158.2	168.0
90°	11.3	26.5	41.7	56.8	72.0	88.5	106.1	123.8	141.5	159.1	168.5
92.5°	18.3	32.1	46.0	59.9	73.8	88.4	103.8	119.1	134.4	149.8	159.2
95°	32.9	45.2	57.5	69.8	82.2	95.6	110.3	124.9	139.5	154.2	163.3
97.5°	51.8	62.7	73.6	84.6	95.6	108.2	122.4	136.6	150.9	165.1	174.1
100°	66.6	76.3	86.1	95.8	105.5	117.2	131.0	144.8	158.6	172.4	181.2
102.5°	81.4	90.2	99.0	107.7	116.5	127.7	141.1	154.6	168.0	181.6	190.3
105°	105.3	112.7	119.9	127.2	134.5	144.5	157.2	169.9	182.6	195.3	203.9
107.5°	130.6	136.6	142.7	148.7	154.7	163.8	175.7	187.7	199.7	211.7	219.8
110°	146.1	151.6	156.9	162.4	167.9	176.4	188.3	200.0	211.8	223.6	231.2



TEST NUMBER: P331388-930

CATALOG NUMBER: SA2XXDIP-C865D530U930-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	164.0	168.6	173.3	178.0	182.6	190.5	201.6	212.7	223.9	235.0	242.5
115°	190.3	193.6	196.8	200.1	203.3	210.3	220.9	231.5	242.1	252.7	259.8
117.5°	215.4	218.0	220.5	223.1	225.7	231.6	241.1	250.5	259.9	269.4	276.2
120°	232.9	234.7	236.5	238.3	240.1	245.3	254.1	262.9	271.7	280.5	287.2
122.5°	248.9	250.3	251.7	253.1	254.5	259.3	267.8	276.2	284.7	293.2	299.5
125°	272.7	273.7	274.6	275.6	276.5	280.6	288.0	295.4	302.8	310.1	316.3
127.5°	297.0	298.0	298.9	299.9	300.8	304.2	310.0	315.8	321.6	327.5	333.0
130°	312.3	313.4	314.5	315.6	316.7	319.7	324.5	329.3	334.2	339.0	344.5
132.5°	329.4	330.2	331.1	331.9	332.8	335.2	339.2	343.1	347.0	350.9	356.0
135°	351.1	352.3	353.4	354.6	355.7	357.6	360.2	362.8	365.4	368.0	373.0
137.5°	375.3	376.1	377.0	377.9	378.8	379.8	381.2	382.5	383.8	385.1	389.6
140°	389.8	390.4	391.1	391.8	392.5	393.4	394.4	395.3	396.3	397.4	401.2
142.5°	404.6	405.3	406.0	406.7	407.4	408.0	408.4	408.9	409.3	409.8	412.9
145°	424.9	425.7	426.4	427.1	427.9	428.5	429.1	429.7	430.4	431.0	432.5
147.5°	444.0	444.8	445.7	446.6	447.4	448.1	448.5	448.9	449.3	449.8	450.2
150°	457.1	457.6	458.3	458.9	459.5	460.0	460.4	460.8	461.2	461.7	461.9
152.5°	468.6	469.2	469.8	470.4	471.0	471.6	472.1	472.5	473.0	473.6	473.9
155°	485.8	486.2	486.5	486.7	487.1	487.4	487.7	488.0	488.3	488.6	489.2
157.5°	500.6	500.8	501.0	501.2	501.5	501.7	501.8	502.1	502.2	502.4	503.1
160°	509.6	509.7	510.0	510.1	510.4	510.5	510.6	510.7	510.9	510.9	511.6
162.5°	517.7	517.8	517.8	517.9	517.9	518.0	518.0	518.2	518.3	518.4	519.1
165°	528.6	528.5	528.4	528.3	528.2	528.2	528.2	528.2	528.2	528.2	528.9
167.5°	537.7	537.4	537.1	536.8	536.5	536.3	536.3	536.3	536.2	536.2	537.0
170°	542.6	542.3	541.9	541.6	541.4	541.1	541.0	540.9	540.8	540.7	541.4
172.5°	545.9	545.6	545.3	544.9	544.7	544.5	544.4	544.3	544.1	544.0	544.8
175°	550.0	549.7	549.3	549.1	548.8	548.5	548.3	548.1	547.9	547.6	548.4
177.5°	551.7	551.4	551.1	550.9	550.7	550.5	550.3	550.2	550.0	549.8	550.3
180°	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9



TEST NUMBER: P331388-930

CATALOG NUMBER: SA2XXDIP-C865D530U930-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5
2.5°	744.0	745.0	746.0	746.3	745.9	745.5	745.1	744.8
5°	741.8	743.2	744.7	745.3	745.0	744.8	744.5	744.3
7.5°	738.3	740.0	741.8	742.5	742.2	742.0	741.8	741.5
10°	735.2	737.1	739.1	739.9	739.6	739.4	739.2	738.9
12.5°	730.0	731.9	733.9	734.7	734.4	734.2	733.9	733.7
15°	720.5	722.7	724.9	725.8	725.5	725.3	725.0	724.9
17.5°	708.4	710.6	712.9	714.0	714.0	714.0	714.0	714.0
20°	698.8	701.4	704.0	705.4	705.4	705.4	705.4	705.4
22.5°	688.4	691.0	693.7	695.2	695.5	695.9	696.3	696.8
25°	672.2	675.1	678.0	679.8	680.4	681.2	681.9	682.7
27.5°	654.3	657.9	661.5	663.7	664.2	664.7	665.3	665.8
30°	641.6	645.5	649.4	651.7	652.3	653.1	653.8	654.5
32.5°	628.1	632.5	636.9	639.8	641.1	642.4	643.7	645.0
35°	608.9	614.2	619.5	622.9	624.6	626.3	627.9	629.7
37.5°	589.0	594.8	600.7	604.5	606.3	608.1	609.9	611.7
40°	575.0	581.3	587.6	591.7	593.9	596.1	598.3	600.5
42.5°	561.5	568.3	575.2	579.7	581.8	584.0	586.1	588.3
45°	540.7	548.1	555.6	560.5	563.0	565.3	567.8	570.1
47.5°	519.1	526.8	534.7	539.9	542.5	545.2	547.8	550.5
50°	504.3	512.4	520.7	526.0	528.6	531.3	533.9	536.6
52.5°	488.2	496.6	504.9	510.5	513.4	516.2	519.0	521.9
55°	464.1	472.8	481.4	487.3	490.4	493.6	496.7	499.8
57.5°	438.6	447.9	457.3	463.6	466.7	469.9	473.0	476.2
60°	421.8	431.0	440.1	446.3	449.7	453.1	456.4	459.8
62.5°	403.9	413.6	423.3	429.8	432.9	436.1	439.3	442.5
65°	376.7	386.6	396.5	402.9	406.0	409.2	412.3	415.4
67.5°	349.2	359.1	369.2	375.8	379.0	382.3	385.6	388.8
70°	330.1	340.4	350.7	357.3	360.3	363.1	366.1	368.9
72.5°	311.5	321.6	331.8	338.6	342.1	345.5	349.0	352.5
75°	283.6	293.9	304.3	311.0	314.1	317.2	320.3	323.5
77.5°	256.2	266.5	276.8	283.6	287.0	290.3	293.8	297.1
80°	237.7	247.8	257.9	264.6	267.9	271.3	274.7	278.0
82.5°	220.4	230.4	240.5	247.2	250.4	253.5	256.7	259.8
85°	195.4	205.5	215.6	222.4	225.8	229.1	232.4	235.9
87.5°	177.7	187.5	197.2	203.7	206.8	209.9	213.0	216.1
90°	177.9	187.3	196.7	202.9	205.9	208.9	211.9	214.8
92.5°	168.8	178.2	187.7	193.9	196.7	199.7	202.6	205.5
95°	172.4	181.6	190.7	196.7	199.3	201.9	204.6	207.3
97.5°	183.0	191.8	200.7	206.6	209.4	212.2	215.0	217.8
100°	190.1	199.0	207.9	213.6	216.2	218.7	221.3	223.8
102.5°	199.1	207.9	216.7	222.3	224.9	227.4	230.0	232.5
105°	212.5	221.2	229.8	235.5	238.1	240.8	243.4	246.1
107.5°	228.0	236.1	244.3	249.5	251.6	253.8	256.0	258.1
110°	239.0	246.6	254.4	259.3	261.7	264.0	266.4	268.7





TEST NUMBER: P331388-930

CATALOG NUMBER: SA2XXDIP-C865D530U930-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	249.9	257.3	264.8	269.7	272.1	274.5	277.0	279.4
115°	266.9	274.1	281.2	285.9	288.2	290.6	292.9	295.2
117.5°	283.1	289.9	296.9	301.3	303.5	305.6	307.8	309.9
120°	294.0	300.7	307.4	312.0	314.3	316.7	318.9	321.3
122.5°	305.7	312.0	318.4	322.5	324.6	326.6	328.6	330.6
125°	322.5	328.7	334.8	339.0	341.0	343.2	345.2	347.2
127.5°	338.7	344.2	349.8	353.5	355.3	357.1	358.9	360.7
130°	350.2	355.7	361.3	364.8	366.3	367.9	369.3	370.9
132.5°	361.2	366.3	371.5	374.8	376.3	378.0	379.5	381.2
135°	377.9	382.9	387.8	391.1	392.7	394.3	395.9	397.5
137.5°	393.9	398.2	402.5	405.4	406.6	407.8	409.0	410.2
140°	405.0	408.9	412.7	415.2	416.2	417.2	418.2	419.3
142.5°	416.0	419.2	422.4	424.4	425.3	426.1	426.9	427.7
145°	434.1	435.6	437.2	438.3	439.1	439.9	440.7	441.5
147.5°	450.6	451.0	451.4	451.8	451.9	452.1	452.3	452.5
150°	462.3	462.6	462.9	462.9	462.6	462.3	461.9	461.7
152.5°	474.3	474.7	475.2	475.2	474.7	474.3	473.9	473.6
155°	489.7	490.2	490.7	490.8	490.5	490.2	489.8	489.6
157.5°	503.8	504.5	505.2	505.3	504.8	504.3	503.9	503.3
160°	512.2	512.8	513.4	513.6	513.1	512.7	512.3	511.8
162.5°	519.8	520.5	521.2	521.3	520.8	520.3	519.8	519.3
165°	529.6	530.4	531.0	531.2	530.6	530.1	529.6	529.0
167.5°	537.7	538.4	539.2	539.2	538.7	538.2	537.6	537.0
170°	542.2	542.9	543.6	543.6	543.0	542.4	541.8	541.2
172.5°	545.5	546.3	546.9	547.0	546.4	545.8	545.1	544.5
175°	549.1	549.8	550.6	550.7	550.0	549.3	548.8	548.1
177.5°	550.8	551.3	551.8	551.8	551.3	550.8	550.3	549.8
180°	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9

(END OF REPORT)