

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: P331387

Luminaire Tested: **SA2XXDIP-C865D530U835-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331387  
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-C865D530U835-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

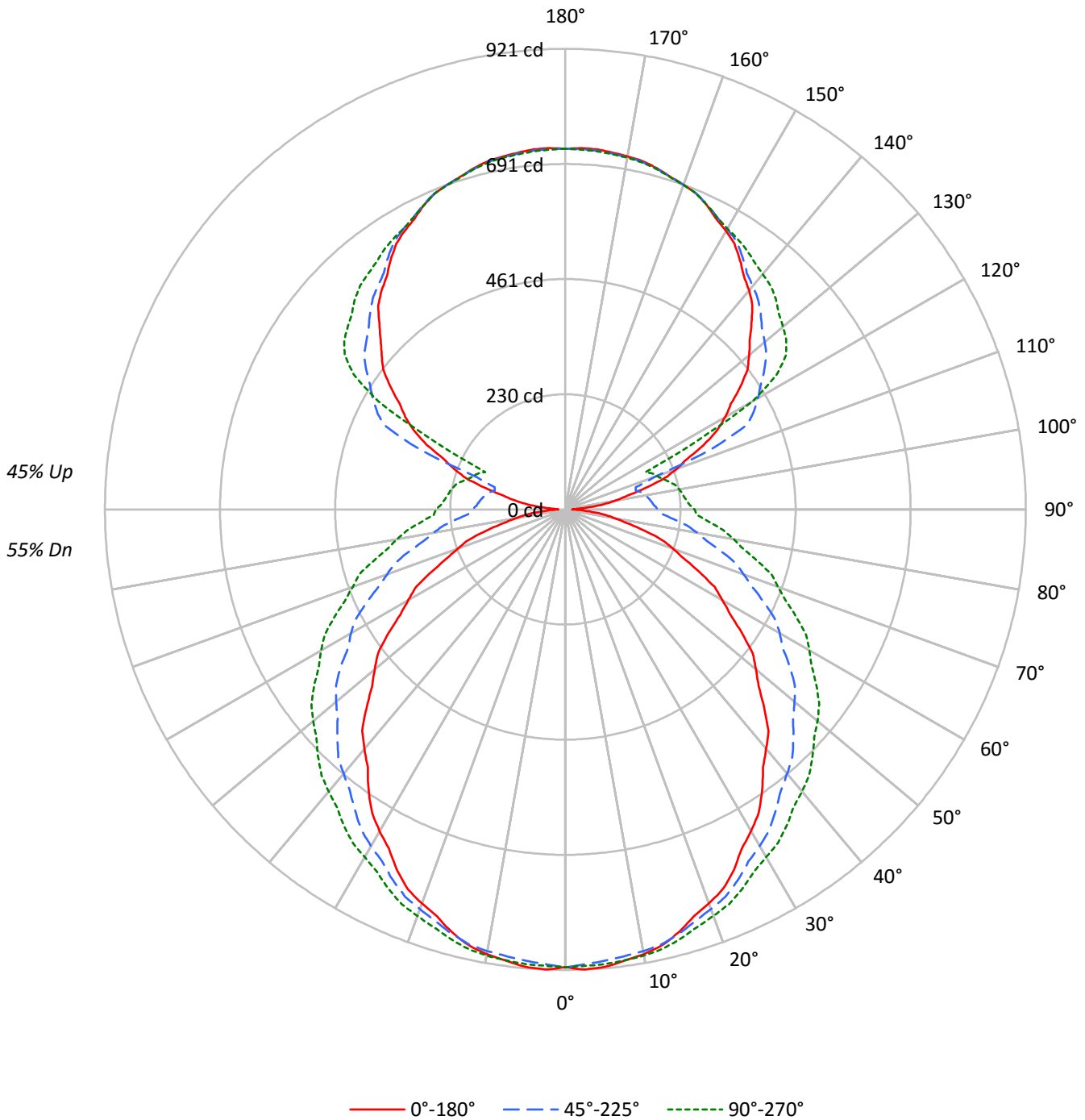
Lumens per Lamp: N/A  
Luminaire Lumens: 5608.4 lumens  
Efficiency: N/A  
Efficacy: 114.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

Input Watts (W): 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: P331387  
CATALOG NUMBER: SA2XXDIP-C865D530U835-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P331387

CATALOG NUMBER: SA2XXDIP-C865D530U835-4F0-1E-UDD-D

**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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	97	92	88	84	90	86	82	78	73	70	67	62	60	58	51	50	48	43
2	88	80	73	67	81	74	68	63	63	59	55	53	50	47	44	42	39	35
3	80	69	61	55	74	65	57	52	55	50	45	47	42	39	39	35	33	29
4	73	61	53	46	67	57	49	43	49	43	38	41	37	33	34	31	28	24
5	67	54	46	39	61	51	43	37	43	37	32	37	32	28	31	27	24	21
6	61	49	40	34	57	45	38	32	39	33	28	33	28	24	28	24	21	18
7	57	44	35	29	52	41	33	28	35	29	25	30	25	22	25	21	18	16
8	53	40	32	26	49	37	30	25	32	26	22	27	23	19	23	19	16	14
9	49	36	28	23	45	34	27	22	29	24	19	25	20	17	21	18	15	13
10	46	33	26	21	42	31	24	20	27	21	17	23	19	15	20	16	13	11

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

	0°	45°	90°
0°	14783	14783	14783
5°	14855	14230	14176
10°	14762	13809	13655
15°	14558	13364	13106
20°	14300	12888	12577
25°	14048	12428	12096
30°	13689	11955	11614
35°	13327	11498	11275
40°	12947	11110	10935
45°	12584	10762	10645
50°	12196	10448	10360
55°	11790	10109	10067
60°	11292	9759	9760
65°	10774	9347	9393
70°	10189	8905	8999
75°	9446	8470	8637
80°	8274	8029	8266
85°	7152	7646	7981



TEST NUMBER: P331387

CATALOG NUMBER: SA2XXDIP-C865D530U835-4F0-1E-UDD-D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.8	1.5
10°-20°	248.8	4.4
20°-30°	377.0	6.7
30°-40°	459.2	8.2
40°-50°	494.0	8.8
50°-60°	479.7	8.6
60°-70°	418.9	7.5
70°-80°	322.5	5.8
80°-90°	218.2	3.9
90°-100°	173.2	3.1
100°-110°	197.1	3.5
110°-120°	307.7	5.5
120°-130°	429.4	7.7
130°-140°	430.8	7.7
140°-150°	387.7	6.9
150°-160°	309.4	5.5
160°-170°	199.4	3.6
170°-180°	68.6	1.2
0°-30°	712.5	12.7
0°-40°	1171.7	20.9
0°-60°	2145.5	38.3
0°-90°	3105.1	55.4
90°-120°	678.0	12.1
90°-150°	1926.0	34.3
90°-180°	2503.0	44.6
0°-180°	5608.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	918	914	906	914	913	87
15°	876	878	878	890	889	247
25°	796	806	817	833	837	366
35°	686	709	734	762	772	429
45°	563	599	645	684	699	434
55°	431	480	548	594	613	385
65°	295	360	438	490	510	293
75°	163	238	322	377	397	173
85°	48	130	215	269	289	51
90°	14	97	186	239	258	10
95°	44	92	173	224	241	50
105°	165	212	146	196	215	177
115°	305	332	402	210	177	300
125°	427	436	486	524	539	381
135°	526	535	553	584	595	407
145°	609	609	617	629	633	381
155°	671	666	672	675	671	309
165°	707	704	705	708	705	200
175°	723	719	720	723	719	69
180°	721	721	721	721	721	



TEST NUMBER: P331387

CATALOG NUMBER: SA2XXDIP-C865D530U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	920.9	920.2	919.5	918.8	918.1	916.9	915.2	913.6	911.9	910.3	911.5
5°	918.2	917.4	916.5	915.6	914.7	913.4	911.6	909.8	908.1	906.3	908.1
7.5°	910.0	909.4	908.8	908.3	907.7	906.7	905.3	904.0	902.6	901.3	903.4
10°	903.7	903.1	902.5	901.9	901.3	900.6	899.7	898.8	897.9	897.0	899.4
12.5°	893.0	893.2	893.3	893.4	893.5	893.2	892.6	891.9	891.3	890.6	893.0
15°	875.8	876.4	877.0	877.6	878.1	878.4	878.4	878.4	878.4	878.4	881.1
17.5°	853.5	854.7	856.0	857.2	858.4	859.5	860.5	861.4	862.4	863.3	866.1
20°	838.6	840.1	841.6	843.1	844.5	845.9	847.0	848.2	849.4	850.6	853.8
22.5°	822.7	824.4	826.1	827.8	829.5	831.2	832.9	834.5	836.2	837.8	841.1
25°	796.2	798.2	800.3	802.4	804.4	806.8	809.4	812.1	814.7	817.4	820.9
27.5°	764.3	767.7	771.0	774.4	777.8	781.0	784.1	787.3	790.4	793.5	798.0
30°	743.1	746.9	750.8	754.6	758.4	762.3	766.1	769.9	773.8	777.6	782.3
32.5°	719.7	724.0	728.3	732.7	737.0	741.4	745.9	750.5	755.0	759.5	765.0
35°	686.0	691.0	696.1	701.1	706.1	711.4	717.0	722.6	728.2	733.8	740.3
37.5°	649.4	655.2	661.0	666.7	672.5	679.0	686.3	693.6	700.8	708.1	715.3
40°	625.0	631.5	638.0	644.5	650.9	658.2	666.1	674.1	682.1	690.0	697.7
42.5°	601.6	608.1	614.6	621.1	627.6	635.4	644.5	653.7	662.8	672.0	680.3
45°	562.6	570.6	578.5	586.5	594.5	603.6	613.9	624.3	634.6	644.9	654.0
47.5°	524.1	532.8	541.5	550.2	558.8	569.2	581.3	593.4	605.5	617.6	627.1
50°	497.6	506.7	515.9	525.0	534.2	545.4	558.6	571.9	585.2	598.5	608.5
52.5°	472.1	481.7	491.4	501.0	510.6	522.4	536.4	550.3	564.3	578.3	588.5
55°	431.3	441.9	452.5	463.1	473.7	486.7	502.0	517.4	532.7	548.0	558.6
57.5°	390.9	402.9	414.9	426.8	438.8	452.6	468.2	483.9	499.5	515.1	526.6
60°	362.3	374.9	387.6	400.3	413.0	427.7	444.5	461.3	478.1	495.0	506.2
62.5°	336.8	349.9	363.1	376.2	389.4	404.4	421.2	438.0	454.8	471.6	483.5
65°	294.6	309.0	323.5	337.9	352.4	368.3	385.7	403.1	420.5	437.9	450.0
67.5°	255.8	270.9	286.0	301.1	316.2	332.7	350.5	368.3	386.1	403.9	416.1
70°	228.2	243.6	258.9	274.2	289.6	306.4	324.7	342.9	361.2	379.5	392.2
72.5°	202.8	218.6	234.4	250.2	266.0	283.1	301.7	320.2	338.7	357.2	369.7
75°	163.2	179.7	196.2	212.8	229.3	247.0	265.8	284.7	303.6	322.4	335.1
77.5°	125.0	142.3	159.6	176.8	194.1	212.3	231.5	250.7	269.8	289.0	301.6
80°	99.5	117.5	135.5	153.5	171.5	190.0	209.2	228.4	247.5	266.7	279.1
82.5°	78.3	96.0	113.8	131.5	149.3	167.9	187.3	206.7	226.1	245.5	257.9
85°	47.8	66.1	84.3	102.6	120.9	139.5	158.3	177.2	196.1	215.0	227.4
87.5°	26.1	43.9	61.8	79.6	97.4	115.9	134.9	154.0	173.0	192.1	204.3
90°	13.8	32.2	50.5	68.9	87.3	106.4	126.2	146.0	165.8	185.6	198.0
92.5°	22.7	38.6	54.4	70.2	86.0	103.2	121.8	140.5	159.1	177.7	189.6
95°	44.5	54.6	64.6	74.6	84.7	98.9	117.4	135.9	154.4	173.0	184.7
97.5°	76.6	78.2	79.7	81.2	82.8	93.0	111.8	130.7	149.6	168.4	179.8
100°	101.7	96.7	91.7	86.7	81.7	88.5	107.0	125.5	144.0	162.4	174.3
102.5°	128.2	134.8	141.4	148.0	154.6	157.6	157.2	156.7	156.3	155.8	167.7
105°	165.3	177.3	189.3	201.4	213.4	211.3	194.9	178.6	162.3	146.0	157.5
107.5°	209.2	218.8	228.5	238.1	247.8	240.9	217.7	194.4	171.1	147.8	156.4
110°	236.5	244.8	253.2	261.5	269.8	264.5	245.4	226.3	207.3	188.2	186.0



TEST NUMBER: P331387

CATALOG NUMBER: SA2XXDIP-C865D530U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	263.2	270.3	277.4	284.5	291.7	297.9	303.4	308.9	314.3	319.8	286.9
115°	305.4	310.6	315.8	321.0	326.2	336.9	353.1	369.3	385.4	401.6	356.8
117.5°	341.7	346.1	350.4	354.7	359.0	368.3	382.6	396.9	411.1	425.4	421.1
120°	369.3	372.2	375.1	378.0	381.0	389.4	403.2	417.1	431.0	444.9	454.5
122.5°	392.7	395.0	397.3	399.6	401.9	409.7	423.1	436.4	449.8	463.2	472.0
125°	426.9	428.4	429.9	431.5	433.0	439.5	451.2	462.8	474.5	486.1	494.9
127.5°	459.2	460.6	461.9	463.3	464.7	470.0	479.3	488.5	497.8	507.0	515.5
130°	479.6	481.2	482.8	484.3	485.9	490.4	497.9	505.3	512.8	520.3	528.6
132.5°	500.5	501.8	503.1	504.4	505.6	509.3	515.4	521.4	527.5	533.5	541.5
135°	526.3	528.2	530.0	531.9	533.7	536.7	540.7	544.7	548.7	552.6	560.0
137.5°	553.8	555.0	556.3	557.5	558.7	560.6	563.1	565.6	568.0	570.5	577.1
140°	571.7	572.4	573.0	573.6	574.3	575.5	577.4	579.2	581.1	583.0	588.7
142.5°	586.8	587.3	587.8	588.4	588.9	590.0	591.6	593.1	594.7	596.3	601.0
145°	609.0	608.9	608.8	608.7	608.6	609.5	611.5	613.4	615.4	617.4	620.0
147.5°	629.6	629.1	628.7	628.3	627.8	628.6	630.5	632.5	634.4	636.4	637.2
150°	642.9	642.1	641.3	640.5	639.7	640.2	642.1	643.9	645.8	647.6	648.3
152.5°	654.2	653.3	652.4	651.5	650.6	651.0	652.8	654.6	656.3	658.1	658.8
155°	670.6	669.6	668.5	667.5	666.4	666.6	668.0	669.4	670.8	672.2	672.9
157.5°	683.4	682.6	681.7	680.8	679.9	680.0	680.9	681.9	682.9	683.9	684.6
160°	691.0	690.3	689.6	688.9	688.2	688.2	688.9	689.6	690.3	691.0	691.7
162.5°	697.6	696.9	696.2	695.5	694.9	694.8	695.4	696.0	696.6	697.2	698.0
165°	706.6	705.9	705.2	704.5	703.8	703.7	704.0	704.3	704.7	705.0	705.9
167.5°	713.3	712.6	711.9	711.2	710.5	710.3	710.6	711.0	711.3	711.6	712.4
170°	717.0	716.4	715.7	715.0	714.3	714.0	714.3	714.5	714.7	715.0	715.8
172.5°	719.6	718.9	718.2	717.5	716.8	716.5	716.8	717.0	717.2	717.5	718.3
175°	722.8	722.0	721.2	720.4	719.5	719.3	719.5	719.7	719.9	720.2	721.0
177.5°	723.3	722.7	722.0	721.4	720.7	720.4	720.5	720.6	720.7	720.8	721.5
180°	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2



TEST NUMBER: P331387

CATALOG NUMBER: SA2XXDIP-C865D530U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	912.6	913.8	915.0	915.4	914.9	914.4	913.9	913.5
5°	909.8	911.6	913.4	914.1	913.8	913.5	913.2	912.9
7.5°	905.5	907.6	909.8	910.7	910.4	910.1	909.8	909.5
10°	901.7	904.1	906.5	907.5	907.2	906.9	906.6	906.3
12.5°	895.4	897.7	900.1	901.1	900.8	900.5	900.2	899.9
15°	883.7	886.4	889.1	890.2	889.9	889.6	889.3	889.1
17.5°	868.9	871.6	874.4	875.8	875.8	875.8	875.8	875.8
20°	857.1	860.3	863.5	865.2	865.2	865.2	865.2	865.2
22.5°	844.3	847.6	850.8	852.7	853.1	853.6	854.1	854.6
25°	824.5	828.0	831.6	833.8	834.6	835.5	836.4	837.3
27.5°	802.5	807.0	811.4	814.0	814.7	815.3	816.0	816.6
30°	787.0	791.7	796.5	799.3	800.1	801.0	801.9	802.8
32.5°	770.4	775.8	781.2	784.8	786.3	787.9	789.5	791.1
35°	746.8	753.3	759.8	764.0	766.1	768.2	770.2	772.3
37.5°	722.4	729.6	736.8	741.5	743.7	745.9	748.1	750.3
40°	705.3	713.0	720.7	725.8	728.5	731.1	733.8	736.5
42.5°	688.7	697.1	705.5	711.0	713.6	716.3	718.9	721.6
45°	663.2	672.3	681.5	687.5	690.5	693.4	696.4	699.3
47.5°	636.7	646.2	655.8	662.2	665.4	668.7	671.9	675.2
50°	618.5	628.5	638.6	645.2	648.4	651.7	654.9	658.2
52.5°	598.8	609.1	619.3	626.2	629.7	633.2	636.6	640.1
55°	569.3	579.9	590.5	597.7	601.5	605.4	609.2	613.0
57.5°	538.0	549.4	560.9	568.6	572.4	576.3	580.2	584.1
60°	517.4	528.6	539.8	547.4	551.6	555.7	559.8	564.0
62.5°	495.4	507.3	519.2	527.2	531.0	534.9	538.8	542.7
65°	462.1	474.2	486.3	494.2	498.0	501.9	505.7	509.5
67.5°	428.3	440.5	452.8	460.9	464.9	468.9	472.9	476.9
70°	404.9	417.5	430.2	438.3	441.9	445.4	449.0	452.5
72.5°	382.1	394.5	407.0	415.3	419.6	423.8	428.1	432.3
75°	347.8	360.5	373.2	381.4	385.3	389.1	392.9	396.8
77.5°	314.3	326.9	339.5	347.9	352.0	356.1	360.3	364.4
80°	291.5	303.9	316.3	324.5	328.6	332.8	336.9	341.0
82.5°	270.3	282.6	295.0	303.2	307.1	310.9	314.8	318.7
85°	239.7	252.1	264.5	272.8	276.9	281.0	285.1	289.3
87.5°	216.4	228.5	240.7	248.7	252.5	256.3	260.1	264.0
90°	210.3	222.7	235.1	243.2	246.9	250.7	254.5	258.2
92.5°	201.4	213.3	225.2	232.9	236.6	240.3	244.0	247.6
95°	196.5	208.3	220.1	227.7	231.1	234.5	238.0	241.4
97.5°	191.2	202.6	213.9	221.4	225.0	228.7	232.3	235.9
100°	186.1	198.0	209.8	217.5	220.9	224.4	227.9	231.4
102.5°	179.6	191.5	203.4	211.1	214.7	218.2	221.8	225.4
105°	169.1	180.7	192.3	200.0	203.7	207.4	211.1	214.8
107.5°	165.0	173.6	182.2	188.4	192.1	195.8	199.5	203.2
110°	183.9	181.7	179.6	180.3	184.0	187.7	191.4	195.2





TEST NUMBER: P331387

CATALOG NUMBER: SA2XXDIP-C865D530U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	254.0	221.2	188.3	173.7	177.3	180.9	184.5	188.1
115°	311.9	267.1	222.2	197.2	192.1	187.0	181.9	176.8
117.5°	416.9	412.6	408.3	394.0	369.6	345.1	320.7	296.3
120°	464.2	473.8	483.5	482.1	469.7	457.3	444.9	432.5
122.5°	480.9	489.7	498.6	502.9	502.6	502.3	502.1	501.8
125°	503.6	512.4	521.2	527.1	530.1	533.1	536.1	539.1
127.5°	524.0	532.5	541.0	546.6	549.2	551.9	554.6	557.2
130°	537.0	545.3	553.7	559.0	561.2	563.5	565.7	568.0
132.5°	549.4	557.3	565.2	570.3	572.6	574.8	577.1	579.3
135°	567.3	574.7	582.1	586.8	588.9	591.0	593.2	595.3
137.5°	583.6	590.2	596.8	600.9	602.5	604.1	605.7	607.3
140°	594.5	600.3	606.0	609.5	610.7	611.9	613.1	614.3
142.5°	605.7	610.5	615.2	618.0	619.0	619.9	620.9	621.9
145°	622.5	625.1	627.7	629.4	630.3	631.2	632.1	633.0
147.5°	638.0	638.9	639.7	640.3	640.5	640.7	640.9	641.1
150°	649.0	649.7	650.4	650.5	649.9	649.3	648.7	648.2
152.5°	659.5	660.2	660.9	660.8	660.1	659.3	658.5	657.8
155°	673.6	674.3	675.0	674.8	673.9	673.0	672.1	671.1
157.5°	685.4	686.2	687.0	687.0	686.0	685.1	684.2	683.3
160°	692.3	693.0	693.7	693.7	692.9	692.1	691.2	690.4
162.5°	698.8	699.6	700.4	700.3	699.3	698.3	697.3	696.3
165°	706.7	707.5	708.3	708.3	707.5	706.7	705.9	705.0
167.5°	713.2	714.1	714.9	714.8	713.7	712.7	711.6	710.6
170°	716.6	717.4	718.2	718.1	717.0	716.0	715.0	713.9
172.5°	719.1	719.9	720.7	720.6	719.6	718.5	717.5	716.4
175°	721.8	722.6	723.4	723.3	722.1	720.9	719.8	718.6
177.5°	722.1	722.8	723.4	723.3	722.5	721.6	720.8	720.0
180°	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2

(END OF REPORT)