

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: P331347-830

Luminaire Tested: **SA2XXDIP-C675D530U830-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331347-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D530U830-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

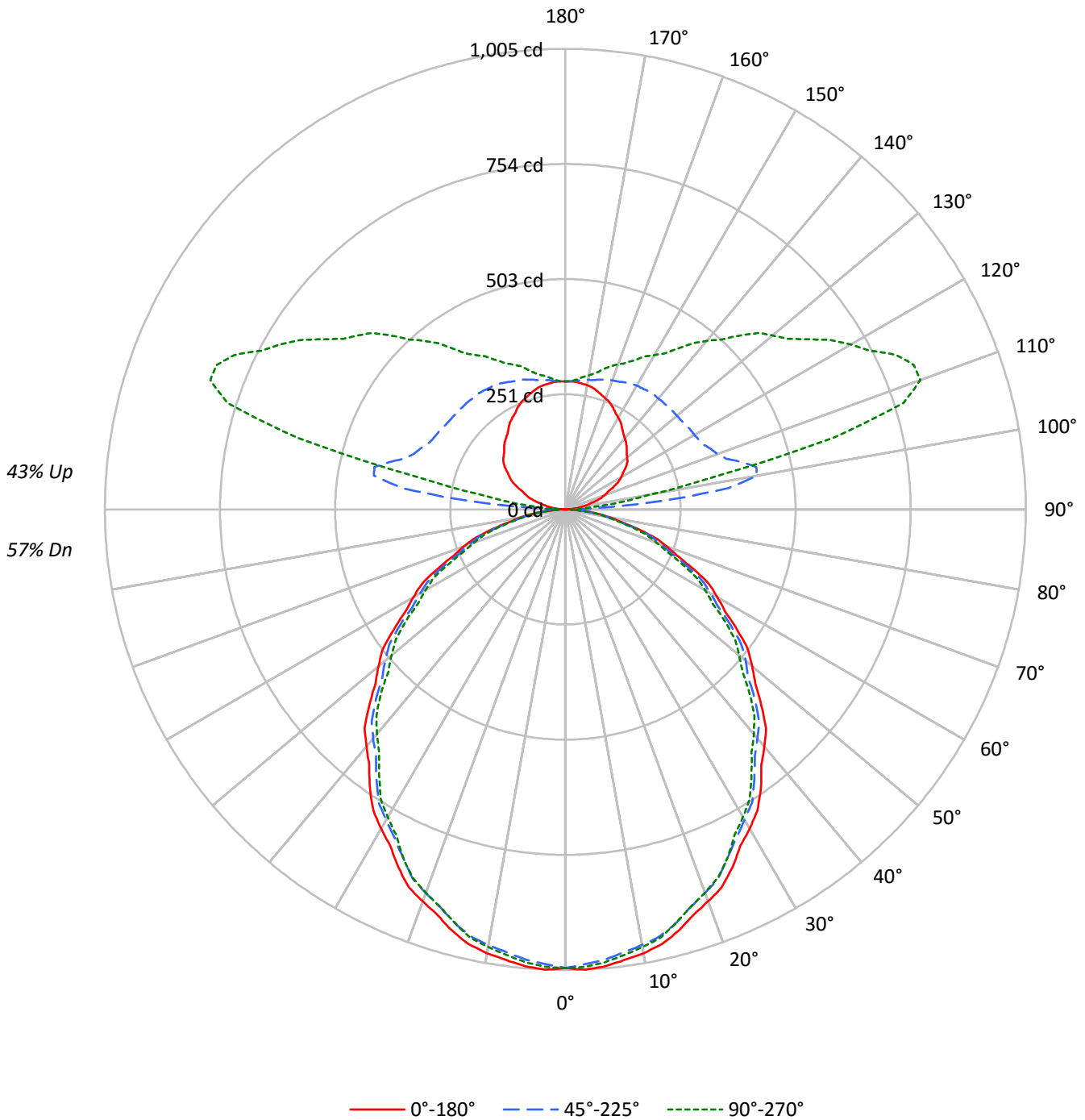
Lumens per Lamp: N/A
Luminaire Lumens: 4493.4 lumens
Efficiency: N/A
Efficacy: 111.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 40.3
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: P331347-830
CATALOG NUMBER: SA2XXDIP-C675D530U830-4F0-1E-UDD-F4

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	101	101	101	101	87	87	87	74	74	74	62	62	62	57
1	99	95	91	87	92	88	85	82	76	74	72	65	63	62	55	54	53	48
2	90	83	77	71	84	77	72	67	67	63	59	57	54	52	48	46	44	40
3	82	73	65	60	76	68	62	56	59	54	50	51	47	44	43	40	38	34
4	75	65	57	50	70	60	53	48	53	47	43	45	41	37	38	35	33	29
5	69	58	49	43	64	54	47	41	47	41	37	41	36	32	35	31	28	25
6	64	52	43	38	59	48	41	36	42	36	32	37	32	28	31	28	25	22
7	59	47	39	33	55	44	37	31	38	33	28	33	29	25	29	25	22	20
8	55	42	35	29	51	40	33	28	35	29	25	31	26	23	26	23	20	18
9	51	39	31	26	48	37	30	25	32	27	23	28	24	20	24	21	18	16
10	48	36	28	23	45	34	27	22	30	24	20	26	22	18	23	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16157	16157	16157
5°	16219	15985	16078
10°	16123	15823	15901
15°	15921	15616	15600
20°	15639	15309	15292
25°	15358	14931	14931
30°	14997	14585	14458
35°	14661	14168	13957
40°	14235	13748	13487
45°	13819	13337	13006
50°	13366	12906	12446
55°	12892	12405	11944
60°	12368	11806	11370
65°	11801	11213	10697
70°	11084	10494	9994
75°	10081	9669	9426
80°	8945	8675	8229
85°	7317	6947	6224



TEST NUMBER: P331347-830

CATALOG NUMBER: SA2XXDIP-C675D530U830-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.1	2.1
10°-20°	264.8	5.9
20°-30°	389.2	8.7
30°-40°	452.1	10.1
40°-50°	451.6	10.0
50°-60°	393.8	8.8
60°-70°	291.2	6.5
70°-80°	164.9	3.7
80°-90°	46.9	1.0
90°-100°	111.8	2.5
100°-110°	379.3	8.4
110°-120°	402.9	9.0
120°-130°	331.7	7.4
130°-140°	266.3	5.9
140°-150°	201.3	4.5
150°-160°	141.4	3.1
160°-170°	83.3	1.9
170°-180°	27.1	0.6
0°-30°	748.0	16.6
0°-40°	1200.1	26.7
0°-60°	2045.4	45.5
0°-90°	2548.4	56.7
90°-120°	893.9	19.9
90°-150°	1693.2	37.7
90°-180°	1945.0	43.3
0°-180°	4493.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1001	1001	1001	1001	1001	
5°	1001	996	986	993	992	95
15°	952	946	934	938	933	268
25°	862	854	838	840	838	396
35°	744	734	719	713	708	464
45°	605	598	584	574	570	467
55°	458	452	441	430	424	409
65°	309	303	294	285	280	305
75°	162	160	155	150	151	173
85°	40	38	38	35	34	45
90°	1	7	18	17	18	3
95°	19	46	211	80	61	20
105°	66	99	398	712	606	70
115°	116	146	333	688	797	115
125°	161	191	320	557	647	143
135°	189	226	317	468	536	146
145°	216	248	315	391	428	136
155°	246	265	306	346	360	113
165°	268	276	293	311	316	75
175°	279	279	282	285	284	26
180°	280	280	280	280	280	



TEST NUMBER: P331347-830

CATALOG NUMBER: SA2XXDIP-C675D530U830-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	1005.3	1004.5	1003.6	1002.8	1001.9	1000.5	998.6	996.7	994.9	993.0	994.7
5°	1000.7	999.8	999.0	998.2	997.3	995.7	993.3	991.0	988.6	986.3	988.0
7.5°	991.8	990.5	989.2	987.9	986.6	984.7	982.3	979.9	977.5	975.1	976.8
10°	983.4	981.8	980.3	978.8	977.4	975.3	972.8	970.3	967.6	965.1	966.8
12.5°	971.9	970.5	969.1	967.8	966.5	964.6	962.0	959.4	956.9	954.3	955.5
15°	952.5	951.3	950.0	948.8	947.4	945.4	942.6	939.8	937.1	934.2	935.2
17.5°	927.9	926.6	925.4	924.1	922.8	920.8	917.9	915.1	912.3	909.5	910.5
20°	910.2	909.0	907.7	906.3	905.1	903.0	899.9	897.0	894.0	891.0	891.6
22.5°	892.5	890.7	888.9	887.1	885.3	883.1	880.2	877.4	874.6	871.8	871.9
25°	862.1	860.4	858.8	857.0	855.3	852.6	848.9	845.4	841.7	838.1	838.5
27.5°	827.5	826.0	824.4	822.8	821.3	819.2	816.2	813.4	810.5	807.7	807.0
30°	804.4	802.7	801.0	799.3	797.6	795.1	791.9	788.7	785.5	782.3	781.7
32.5°	779.8	778.4	777.0	775.6	774.3	771.9	768.5	765.2	761.8	758.4	757.2
35°	743.8	741.7	739.5	737.4	735.2	732.4	729.1	725.6	722.2	718.8	717.5
37.5°	703.1	701.3	699.4	697.5	695.7	693.0	689.6	686.2	682.8	679.3	677.7
40°	675.4	673.7	672.0	670.3	668.6	666.1	662.6	659.2	655.8	652.3	650.4
42.5°	648.6	646.8	645.1	643.4	641.7	639.1	635.7	632.3	628.9	625.5	623.3
45°	605.2	603.7	602.2	600.8	599.3	596.9	593.7	590.5	587.3	584.1	581.7
47.5°	562.1	560.7	559.3	557.9	556.5	554.1	550.7	547.4	544.1	540.7	538.3
50°	532.1	531.0	530.0	528.9	527.8	525.8	522.8	519.8	516.8	513.8	510.9
52.5°	502.8	501.4	500.0	498.6	497.2	495.1	492.3	489.5	486.6	483.8	481.4
55°	458.0	456.8	455.4	454.1	452.9	450.9	448.4	445.8	443.3	440.7	438.1
57.5°	412.9	412.0	410.9	409.9	408.9	407.0	404.2	401.3	398.5	395.7	393.1
60°	383.0	382.1	381.3	380.4	379.6	377.6	374.7	371.6	368.6	365.6	363.3
62.5°	353.7	352.3	351.0	349.6	348.3	346.4	344.1	341.8	339.5	337.1	335.0
65°	308.9	307.6	306.3	305.0	303.7	302.0	299.9	297.7	295.6	293.5	291.5
67.5°	263.3	262.2	261.2	260.1	259.1	257.7	255.7	253.8	251.9	250.0	248.5
70°	234.8	233.9	233.1	232.2	231.4	230.0	228.0	226.1	224.2	222.3	220.7
72.5°	205.6	204.6	203.8	202.9	202.1	201.0	199.8	198.6	197.4	196.0	194.6
75°	161.6	161.2	160.8	160.3	159.9	159.2	158.2	157.0	156.0	155.0	153.6
77.5°	122.4	121.7	120.9	120.2	119.5	118.9	118.5	118.0	117.6	117.2	116.6
80°	96.2	96.0	95.8	95.6	95.4	95.0	94.6	94.2	93.8	93.3	92.7
82.5°	71.6	71.5	71.5	71.4	71.4	71.3	71.0	70.8	70.5	70.2	69.5
85°	39.5	39.2	39.0	38.8	38.5	38.4	38.2	38.0	37.7	37.5	36.9
87.5°	13.9	13.9	14.0	13.9	13.8	13.8	13.9	14.3	14.7	14.4	13.9
90°	0.6	2.2	4.3	5.4	6.4	8.1	10.7	14.5	17.7	18.3	17.7
92.5°	6.6	9.4	13.3	15.7	19.3	24.4	36.6	53.6	68.9	69.8	59.0
95°	18.9	20.9	26.3	31.2	39.8	52.7	77.4	124.1	186.5	210.8	184.4
97.5°	30.6	33.6	39.2	46.6	56.5	71.1	102.2	167.3	270.9	359.7	377.3
100°	41.4	43.0	47.9	56.5	67.2	82.3	110.7	176.3	292.4	424.6	502.0
102.5°	51.3	52.5	57.3	65.9	77.1	92.1	118.5	176.7	284.3	426.8	548.5
105°	65.6	67.8	71.4	79.6	91.3	106.4	131.7	179.6	268.2	398.3	541.3
107.5°	81.1	82.8	86.4	93.9	105.6	120.7	145.2	186.9	260.2	367.8	494.1
110°	91.3	93.5	96.8	103.8	115.0	130.6	154.3	192.9	258.5	353.2	464.4



TEST NUMBER: P331347-830

CATALOG NUMBER: SA2XXDIP-C675D530U830-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	100.9	103.0	106.6	113.2	124.0	140.1	162.9	199.4	259.0	343.7	443.7
115°	115.6	118.3	121.5	127.9	138.6	153.2	176.3	209.1	261.3	333.3	418.2
117.5°	130.8	133.0	136.2	141.9	152.2	167.3	188.7	219.4	265.1	328.2	402.1
120°	140.3	142.4	145.6	150.5	161.3	176.3	197.3	226.3	267.7	325.2	393.5
122.5°	149.3	151.1	154.3	159.6	170.3	185.8	205.5	232.3	270.7	323.5	386.2
125°	161.3	162.9	166.1	172.6	183.3	198.3	217.7	241.9	275.2	320.4	375.7
127.5°	170.7	172.9	177.4	184.5	194.8	210.3	229.1	250.8	279.8	318.6	366.1
130°	176.3	178.4	183.8	191.3	202.1	217.2	236.0	256.4	283.2	317.6	359.6
132.5°	181.4	184.1	189.8	197.8	209.0	224.0	242.0	262.0	286.7	317.3	354.4
135°	189.2	191.3	197.8	205.9	218.2	233.3	250.5	269.3	290.8	316.6	347.2
137.5°	196.5	199.1	205.6	214.1	226.4	240.3	257.4	274.8	294.5	316.5	342.1
140°	202.1	204.2	210.8	219.3	231.1	245.2	261.3	277.9	296.1	316.0	339.2
142.5°	207.7	209.4	215.5	224.0	235.4	248.5	264.3	280.5	297.5	316.0	336.2
145°	216.1	218.2	223.6	231.7	242.4	254.2	268.7	283.8	298.9	315.0	332.2
147.5°	225.1	226.7	231.9	239.3	248.3	258.7	272.4	285.7	299.3	313.0	328.1
150°	231.1	232.7	237.0	244.0	252.1	261.7	274.1	286.5	298.9	311.8	324.7
152.5°	237.1	237.9	242.2	248.4	256.0	264.8	275.9	286.9	298.0	309.6	321.7
155°	245.6	246.2	249.4	255.3	261.3	269.3	278.4	287.6	296.7	305.9	316.0
157.5°	252.7	253.3	255.9	261.0	265.8	272.5	280.2	287.6	294.3	302.0	310.8
160°	257.5	258.0	260.1	264.5	268.7	274.7	281.2	287.6	292.9	299.4	306.9
162.5°	262.2	261.8	264.0	267.5	271.4	276.0	281.5	287.1	291.6	297.3	303.5
165°	267.7	267.1	268.2	271.5	274.1	277.4	282.2	286.0	289.2	292.9	297.7
167.5°	272.2	271.5	272.5	274.6	276.5	278.5	282.1	285.2	286.7	289.2	292.2
170°	275.2	274.1	274.7	276.3	277.4	279.0	281.6	284.4	285.4	287.0	289.2
172.5°	276.9	276.3	276.0	277.6	278.2	279.4	281.3	283.0	283.7	284.5	286.2
175°	279.0	278.4	277.9	279.0	279.0	279.5	280.6	281.6	281.2	281.6	282.2
177.5°	279.9	279.1	278.6	279.5	279.5	279.5	279.9	280.8	279.9	279.5	279.9
180°	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5



TEST NUMBER: P331347-830

CATALOG NUMBER: SA2XXDIP-C675D530U830-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	996.4	998.2	999.8	1000.5	1000.1	999.8	999.5	999.2
5°	989.7	991.4	993.1	993.7	993.3	992.9	992.5	992.0
7.5°	978.5	980.2	981.9	982.5	982.0	981.7	981.2	980.7
10°	968.5	970.3	971.9	972.4	971.9	971.2	970.5	969.9
12.5°	956.7	957.9	959.1	959.4	958.9	958.6	958.1	957.6
15°	936.0	936.9	937.7	937.6	936.5	935.5	934.4	933.3
17.5°	911.4	912.4	913.4	913.4	912.4	911.3	910.3	909.3
20°	892.3	893.0	893.5	893.4	892.6	891.7	890.9	890.0
22.5°	872.0	872.1	872.2	872.0	871.6	871.0	870.5	870.1
25°	839.0	839.3	839.8	839.8	839.3	839.0	838.5	838.1
27.5°	806.3	805.8	805.1	804.3	803.2	802.2	801.2	800.1
30°	781.0	780.3	779.7	778.9	778.1	777.2	776.4	775.5
32.5°	756.1	755.0	753.8	752.8	752.0	751.1	750.2	749.3
35°	716.2	714.9	713.6	712.5	711.4	710.3	709.3	708.1
37.5°	676.2	674.6	673.0	671.7	670.6	669.6	668.6	667.6
40°	648.6	646.6	644.7	643.3	642.4	641.6	640.7	639.9
42.5°	621.2	619.2	617.1	615.4	614.2	613.0	611.8	610.6
45°	579.4	577.0	574.7	573.1	572.2	571.4	570.5	569.6
47.5°	535.8	533.3	530.8	529.0	527.7	526.5	525.3	524.1
50°	507.8	504.8	501.8	499.8	498.7	497.7	496.6	495.5
52.5°	478.8	476.4	473.9	471.9	470.5	469.1	467.7	466.3
55°	435.5	433.0	430.5	428.6	427.5	426.5	425.4	424.3
57.5°	390.6	388.0	385.6	383.9	383.0	382.3	381.4	380.6
60°	360.9	358.5	356.2	354.8	354.1	353.5	352.8	352.1
62.5°	332.8	330.6	328.5	327.0	326.1	325.3	324.5	323.7
65°	289.6	287.7	285.8	284.3	283.2	282.1	281.1	280.0
67.5°	246.9	245.5	244.0	242.8	242.0	241.1	240.3	239.4
70°	219.2	217.8	216.3	215.1	214.2	213.4	212.5	211.7
72.5°	193.1	191.6	190.1	189.0	188.3	187.7	187.0	186.2
75°	152.3	151.1	149.8	149.4	149.8	150.2	150.6	151.1
77.5°	115.9	115.3	114.6	114.0	113.4	112.8	112.3	111.6
80°	92.1	91.4	90.8	90.2	89.8	89.4	89.0	88.5
82.5°	68.6	67.8	67.0	66.5	66.4	66.4	66.3	66.2
85°	36.3	35.6	35.0	34.5	34.3	34.1	33.9	33.6
87.5°	13.2	12.4	12.2	12.0	11.8	11.6	11.4	11.2
90°	17.2	16.1	17.2	17.7	17.7	17.7	17.7	17.7
92.5°	46.8	40.2	35.7	32.3	32.0	30.3	30.6	29.8
95°	140.8	108.0	85.5	73.6	66.6	62.4	60.7	61.3
97.5°	328.7	268.9	210.8	171.9	146.2	133.0	125.2	120.6
100°	490.8	424.1	350.4	285.4	240.8	217.7	202.1	192.5
102.5°	597.0	581.9	528.1	459.1	410.7	371.2	351.8	338.7
105°	653.1	713.8	720.9	703.0	669.8	636.4	613.3	605.8
107.5°	612.7	704.2	760.1	786.1	790.2	788.4	783.8	773.8
110°	577.9	674.0	742.8	786.9	810.0	820.3	825.1	824.5



TEST NUMBER: P331347-830

CATALOG NUMBER: SA2XXDIP-C675D530U830-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	546.0	638.4	711.9	762.4	794.6	811.6	820.8	823.7
115°	506.9	589.7	660.1	715.5	753.6	778.4	792.3	797.1
117.5°	477.4	550.1	614.0	665.9	704.8	730.9	745.6	749.7
120°	462.8	529.4	586.4	635.4	673.0	698.2	713.8	719.2
122.5°	451.2	512.3	566.2	610.4	644.1	669.0	682.9	687.4
125°	434.3	489.7	537.0	577.3	608.5	628.9	642.3	646.7
127.5°	417.6	467.8	512.4	549.6	576.7	595.9	607.5	611.0
130°	406.9	453.2	495.6	531.0	557.4	575.7	586.4	590.7
132.5°	396.6	439.4	478.4	511.7	537.6	555.9	565.8	569.7
135°	382.2	417.6	453.2	483.2	506.3	524.1	533.8	535.9
137.5°	370.7	400.4	428.5	454.8	475.8	491.1	499.5	502.8
140°	363.4	389.2	413.9	437.5	454.8	468.7	476.7	480.0
142.5°	357.3	379.3	400.6	420.4	436.7	449.4	456.6	457.2
145°	348.8	366.6	383.2	398.9	411.7	420.8	426.2	427.8
147.5°	342.3	356.3	369.3	380.7	391.3	398.6	402.3	403.2
150°	337.5	349.4	360.7	370.3	378.4	384.8	388.0	388.6
152.5°	332.8	343.8	353.4	361.7	368.1	373.7	376.1	376.2
155°	326.3	334.9	342.9	348.8	354.8	358.5	360.7	359.6
157.5°	318.7	325.8	332.6	337.2	341.4	344.6	345.5	345.5
160°	313.9	319.8	325.7	329.5	333.3	335.9	336.5	336.5
162.5°	309.2	314.2	319.3	322.2	325.9	327.8	328.3	327.9
165°	302.1	305.9	309.6	311.8	313.9	316.0	316.0	315.6
167.5°	295.3	298.2	300.8	302.7	303.7	304.9	304.8	304.2
170°	291.9	293.5	295.7	296.7	297.3	298.9	298.3	297.3
172.5°	288.0	289.2	290.9	291.5	292.1	292.8	292.3	291.6
175°	283.8	284.4	284.9	285.4	285.4	286.0	285.4	284.4
177.5°	280.8	280.8	281.3	281.3	281.3	281.3	280.8	279.9
180°	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5

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