

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: P331342

Luminaire Tested: **SA2XXDIP-C675D530U835-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331342
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-C675D530U835-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

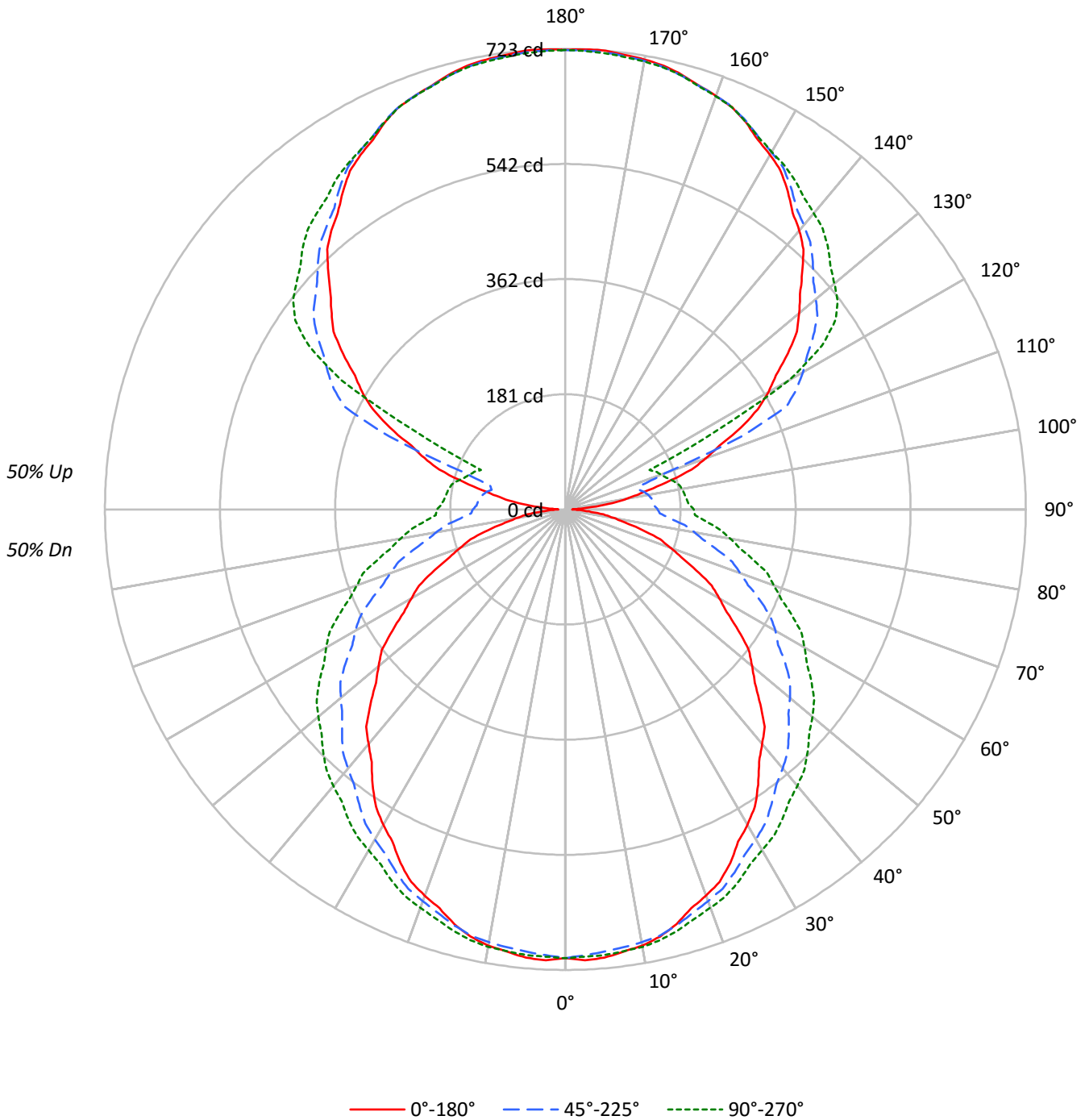
Lumens per Lamp: N/A
Luminaire Lumens: 4802.7 lumens
Efficiency: N/A
Efficacy: 119.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 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



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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	0
RCR																		
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	96	91	87	83	88	84	80	77	71	68	65	58	56	54	47	46	44	39
2	87	79	72	66	80	73	67	62	61	57	53	50	47	44	41	38	36	31
3	79	69	61	55	72	63	57	51	53	48	44	44	40	37	35	33	30	26
4	72	61	52	46	66	56	48	43	47	41	37	39	35	31	31	28	25	22
5	66	54	45	39	60	50	42	36	42	36	31	35	30	27	28	25	22	19
6	61	48	40	34	56	44	37	31	38	32	27	31	27	23	25	22	19	16
7	56	43	35	29	51	40	33	27	34	28	24	28	24	20	23	20	17	14
8	52	39	31	26	48	36	29	24	31	25	21	26	21	18	21	18	15	13
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	20	16	14	11
10	45	33	25	20	41	30	24	19	26	21	17	22	18	15	18	15	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11373	11373	11373
5°	11428	10947	10905
10°	11356	10624	10504
15°	11200	10282	10083
20°	11002	9915	9676
25°	10807	9560	9307
30°	10532	9197	8935
35°	10254	8846	8673
40°	9960	8547	8413
45°	9681	8279	8190
50°	9382	8037	7969
55°	9070	7777	7745
60°	8686	7508	7509
65°	8287	7191	7227
70°	7841	6852	6923
75°	7270	6518	6643
80°	6370	6177	6361
85°	5506	5882	6138



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.4
10°-20°	191.4	4.0
20°-30°	290.0	6.0
30°-40°	353.3	7.4
40°-50°	380.0	7.9
50°-60°	369.1	7.7
60°-70°	322.3	6.7
70°-80°	248.1	5.2
80°-90°	168.3	3.5
90°-100°	138.8	2.9
100°-110°	172.0	3.6
110°-120°	291.2	6.1
120°-130°	420.2	8.7
130°-140°	427.0	8.9
140°-150°	387.1	8.1
150°-160°	309.4	6.4
160°-170°	199.4	4.2
170°-180°	68.6	1.4
0°-30°	548.2	11.4
0°-40°	901.4	18.8
0°-60°	1650.6	34.4
0°-90°	2389.2	49.7
90°-120°	601.9	12.5
90°-150°	1836.1	38.2
90°-180°	2413.0	50.2
0°-180°	4802.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	704	704	704	704	704	
5°	706	703	697	703	702	67
15°	674	676	676	684	684	190
25°	612	620	629	641	644	281
35°	528	545	564	586	594	330
45°	433	461	496	527	538	334
55°	332	369	422	457	472	297
65°	227	277	337	377	392	225
75°	126	183	248	290	305	133
85°	37	100	165	207	222	40
90°	11	76	145	187	202	8
95°	42	75	138	178	191	48
105°	164	202	120	160	174	175
115°	304	326	383	182	146	299
125°	426	435	476	506	518	380
135°	526	535	549	575	583	406
145°	609	609	617	627	630	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: P331342

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	708.5	707.9	707.4	706.8	706.3	705.4	704.1	702.8	701.6	700.3	701.2
5°	706.4	705.7	705.1	704.4	703.7	702.7	701.3	700.0	698.6	697.2	698.6
7.5°	700.1	699.6	699.2	698.7	698.3	697.5	696.5	695.4	694.4	693.4	695.0
10°	695.2	694.7	694.3	693.8	693.4	692.8	692.1	691.5	690.8	690.1	691.9
12.5°	687.0	687.1	687.2	687.3	687.4	687.2	686.7	686.2	685.7	685.2	687.0
15°	673.8	674.2	674.7	675.1	675.6	675.8	675.8	675.8	675.8	675.8	677.8
17.5°	656.6	657.6	658.5	659.5	660.4	661.3	662.0	662.7	663.4	664.2	666.3
20°	645.2	646.3	647.4	648.6	649.7	650.7	651.6	652.6	653.5	654.4	656.9
22.5°	632.9	634.2	635.6	636.9	638.2	639.5	640.8	642.0	643.3	644.6	647.1
25°	612.5	614.1	615.7	617.3	618.9	620.7	622.7	624.8	626.8	628.8	631.6
27.5°	588.0	590.6	593.2	595.8	598.4	600.9	603.3	605.7	608.1	610.5	613.9
30°	571.7	574.6	577.6	580.5	583.5	586.4	589.4	592.3	595.3	598.2	601.8
32.5°	553.7	557.0	560.3	563.6	567.0	570.4	573.9	577.3	580.8	584.3	588.5
35°	527.8	531.6	535.5	539.3	543.2	547.3	551.6	555.9	560.2	564.5	569.5
37.5°	499.6	504.1	508.5	512.9	517.4	522.4	528.0	533.6	539.1	544.7	550.3
40°	480.8	485.8	490.8	495.8	500.8	506.3	512.5	518.6	524.7	530.8	536.7
42.5°	462.9	467.8	472.8	477.8	482.8	488.8	495.9	502.9	509.9	517.0	523.4
45°	432.8	439.0	445.1	451.2	457.3	464.4	472.3	480.3	488.2	496.1	503.2
47.5°	403.2	409.9	416.6	423.2	429.9	437.9	447.2	456.5	465.8	475.1	482.5
50°	382.8	389.9	396.9	403.9	410.9	419.6	429.8	440.0	450.2	460.4	468.1
52.5°	363.2	370.6	378.0	385.4	392.8	401.9	412.6	423.4	434.1	444.9	452.8
55°	331.8	339.9	348.1	356.3	364.4	374.4	386.2	398.0	409.8	421.6	429.8
57.5°	300.7	310.0	319.2	328.4	337.6	348.2	360.2	372.2	384.3	396.3	405.1
60°	278.7	288.4	298.2	308.0	317.7	329.1	342.0	354.9	367.8	380.8	389.4
62.5°	259.1	269.2	279.3	289.4	299.6	311.1	324.0	336.9	349.9	362.8	372.0
65°	226.6	237.7	248.9	260.0	271.1	283.3	296.7	310.1	323.5	336.9	346.2
67.5°	196.8	208.4	220.1	231.7	243.3	255.9	269.6	283.3	297.0	310.7	320.1
70°	175.6	187.4	199.2	211.0	222.8	235.7	249.8	263.8	277.9	292.0	301.7
72.5°	156.0	168.1	180.3	192.5	204.6	217.8	232.1	246.3	260.6	274.8	284.4
75°	125.6	138.3	151.0	163.7	176.4	190.0	204.5	219.0	233.5	248.1	257.8
77.5°	96.2	109.5	122.8	136.0	149.3	163.4	178.1	192.9	207.6	222.3	232.1
80°	76.6	90.4	104.2	118.1	131.9	146.2	161.0	175.7	190.4	205.2	214.7
82.5°	60.2	73.9	87.5	101.2	114.9	129.1	144.1	159.0	173.9	188.9	198.4
85°	36.8	50.8	64.9	78.9	93.0	107.3	121.8	136.3	150.9	165.4	174.9
87.5°	20.1	33.9	47.7	61.4	75.2	89.5	104.2	118.9	133.6	148.3	157.6
90°	10.7	25.2	39.6	54.0	68.5	83.4	98.9	114.3	129.7	145.2	154.8
92.5°	19.9	32.1	44.2	56.3	68.5	81.8	96.2	110.6	125.1	139.5	148.7
95°	42.1	48.9	55.8	62.6	69.4	80.1	94.5	108.9	123.3	137.8	147.0
97.5°	74.5	73.2	71.9	70.6	69.3	76.1	91.0	106.0	120.9	135.9	144.7
100°	99.5	92.0	84.5	77.0	69.5	73.1	87.8	102.5	117.2	131.8	141.2
102.5°	126.3	130.6	134.9	139.2	143.5	143.6	139.4	135.3	131.1	126.9	136.4
105°	163.8	173.8	183.9	193.9	204.0	199.1	179.2	159.4	139.5	119.6	128.8
107.5°	207.7	215.8	223.8	231.9	240.0	230.7	204.0	177.3	150.7	124.0	130.3
110°	235.3	242.2	249.2	256.2	263.2	255.4	233.0	210.6	188.2	165.8	161.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	262.0	268.0	273.9	279.9	285.9	290.0	292.3	294.6	296.9	299.2	264.1
115°	304.2	308.6	313.1	317.6	322.0	330.8	343.9	357.0	370.1	383.2	336.4
117.5°	340.8	344.7	348.5	352.3	356.2	363.8	375.2	386.7	398.1	409.5	403.3
120°	368.4	371.0	373.7	376.3	379.0	385.9	397.0	408.2	419.3	430.5	438.3
122.5°	391.8	393.9	396.1	398.3	400.5	407.0	417.8	428.6	439.4	450.2	457.2
125°	426.3	427.8	429.3	430.8	432.4	437.8	447.3	456.8	466.2	475.7	482.6
127.5°	458.6	460.0	461.5	462.9	464.3	468.8	476.3	483.8	491.3	498.8	505.6
130°	479.0	480.7	482.3	483.9	485.5	489.4	495.4	501.5	507.5	513.5	520.3
132.5°	499.9	501.3	502.6	504.0	505.3	508.5	513.4	518.4	523.3	528.3	534.6
135°	526.0	527.9	529.7	531.6	533.4	536.0	539.3	542.7	546.0	549.3	555.2
137.5°	553.5	554.7	556.0	557.2	558.5	560.2	562.4	564.6	566.7	568.9	574.2
140°	571.4	572.1	572.8	573.5	574.2	575.4	577.2	578.9	580.6	582.4	587.0
142.5°	586.5	587.1	587.7	588.3	588.9	590.0	591.5	593.1	594.6	596.2	600.0
145°	609.0	608.9	608.8	608.7	608.6	609.5	611.5	613.4	615.4	617.4	619.5
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: P331342

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	702.1	703.0	703.9	704.2	703.8	703.5	703.1	702.8
5°	700.0	701.3	702.7	703.3	703.0	702.8	702.6	702.3
7.5°	696.6	698.3	699.9	700.6	700.4	700.1	699.9	699.7
10°	693.7	695.5	697.4	698.1	697.9	697.7	697.5	697.2
12.5°	688.8	690.6	692.5	693.2	693.0	692.8	692.6	692.3
15°	679.9	681.9	684.0	684.9	684.7	684.4	684.2	684.0
17.5°	668.4	670.6	672.7	673.8	673.8	673.8	673.8	673.8
20°	659.4	661.9	664.3	665.6	665.6	665.6	665.6	665.6
22.5°	649.6	652.1	654.5	656.0	656.3	656.7	657.1	657.4
25°	634.3	637.0	639.7	641.4	642.1	642.8	643.5	644.2
27.5°	617.4	620.8	624.3	626.2	626.7	627.2	627.7	628.2
30°	605.5	609.1	612.7	614.9	615.6	616.3	616.9	617.6
32.5°	592.7	596.9	601.0	603.7	605.0	606.2	607.4	608.6
35°	574.5	579.5	584.5	587.8	589.4	591.0	592.5	594.1
37.5°	555.8	561.3	566.9	570.5	572.2	573.8	575.5	577.2
40°	542.6	548.5	554.4	558.4	560.4	562.5	564.5	566.6
42.5°	529.8	536.3	542.7	547.0	549.0	551.1	553.1	555.1
45°	510.2	517.2	524.3	528.9	531.2	533.5	535.7	538.0
47.5°	489.8	497.2	504.5	509.4	511.9	514.4	516.9	519.4
50°	475.8	483.5	491.3	496.4	498.9	501.4	503.8	506.3
52.5°	460.7	468.6	476.5	481.8	484.4	487.1	489.8	492.5
55°	437.9	446.1	454.3	459.8	462.8	465.7	468.7	471.6
57.5°	413.9	422.7	431.5	437.4	440.4	443.4	446.4	449.4
60°	398.0	406.6	415.3	421.2	424.3	427.5	430.7	433.9
62.5°	381.1	390.3	399.5	405.6	408.5	411.5	414.5	417.5
65°	355.5	364.8	374.1	380.2	383.2	386.1	389.1	392.0
67.5°	329.5	338.9	348.3	354.6	357.6	360.7	363.8	366.9
70°	311.5	321.2	331.0	337.2	339.9	342.7	345.4	348.1
72.5°	294.0	303.5	313.1	319.5	322.8	326.1	329.3	332.6
75°	267.6	277.3	287.1	293.4	296.4	299.3	302.3	305.2
77.5°	241.8	251.5	261.2	267.6	270.8	274.0	277.1	280.3
80°	224.2	233.8	243.3	249.7	252.8	256.0	259.2	262.4
82.5°	207.9	217.4	227.0	233.2	236.2	239.2	242.2	245.2
85°	184.4	194.0	203.5	209.8	213.0	216.2	219.4	222.5
87.5°	167.0	176.4	185.8	191.9	194.9	197.8	200.8	203.7
90°	164.5	174.2	183.8	190.1	193.1	196.0	199.0	201.9
92.5°	157.9	167.1	176.3	182.3	185.2	188.0	190.9	193.8
95°	156.2	165.4	174.6	180.5	183.1	185.7	188.3	190.9
97.5°	153.6	162.4	171.3	177.1	179.9	182.8	185.6	188.4
100°	150.5	159.8	169.1	175.1	177.9	180.6	183.3	186.1
102.5°	145.8	155.2	164.6	170.7	173.6	176.4	179.2	182.0
105°	138.1	147.3	156.5	162.6	165.5	168.5	171.5	174.4
107.5°	136.6	143.0	149.3	153.9	156.9	159.8	162.8	165.8
110°	157.2	152.8	148.5	147.8	150.8	153.7	156.7	159.6



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CATALOG NUMBER: SA2XXDIP-C675D530U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	229.1	194.0	159.0	142.9	145.7	148.6	151.5	154.3
115°	289.5	242.6	195.7	169.3	163.5	157.6	151.8	145.9
117.5°	397.0	390.7	384.4	368.7	343.6	318.5	293.4	268.2
120°	446.0	453.7	461.5	458.8	445.6	432.5	419.3	406.1
122.5°	464.3	471.3	478.3	481.3	480.4	479.5	478.6	477.7
125°	489.6	496.5	503.4	508.1	510.5	512.9	515.3	517.7
127.5°	512.4	519.2	526.1	530.5	532.6	534.6	536.7	538.8
130°	527.0	533.7	540.4	544.6	546.3	548.0	549.7	551.4
132.5°	541.0	547.3	553.7	557.7	559.4	561.1	562.8	564.5
135°	561.1	567.0	573.0	576.7	578.3	579.9	581.5	583.1
137.5°	579.5	584.9	590.2	593.4	594.5	595.7	596.8	598.0
140°	591.7	596.4	601.1	603.8	604.6	605.3	606.1	606.9
142.5°	603.9	607.7	611.6	613.8	614.4	615.0	615.6	616.2
145°	621.7	623.9	626.1	627.4	628.0	628.5	629.1	629.6
147.5°	637.9	638.7	639.5	639.9	640.0	640.0	640.1	640.2
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)