

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: P331387-840

Luminaire Tested: **SA2XXDIP-C865D530U840-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331387-840
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-C865D530U840-4F0-1E-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

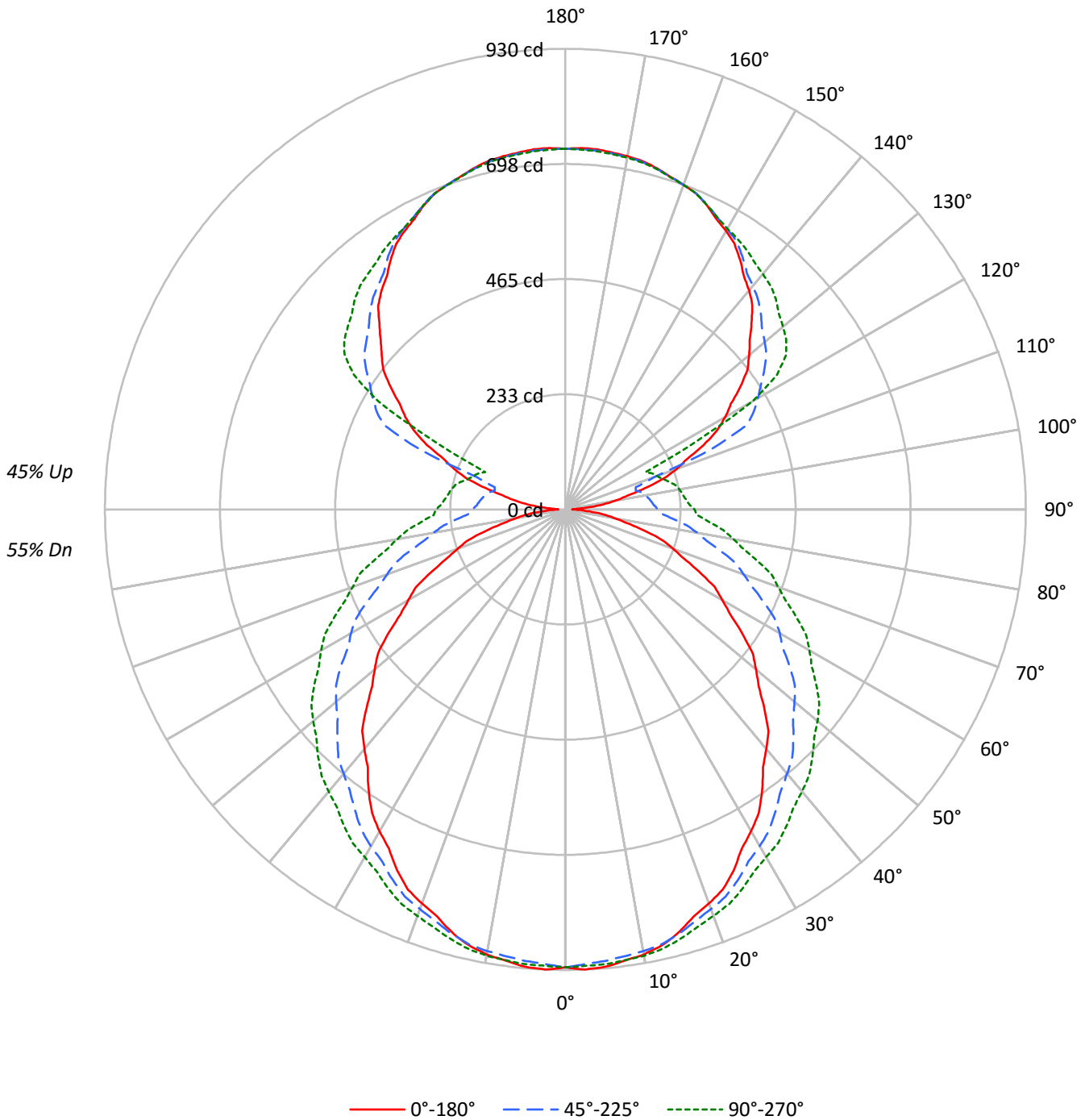
Lumens per Lamp: N/A
Luminaire Lumens: 5663.7 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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: P331387-840
CATALOG NUMBER: SA2XXDIP-C865D530U840-4F0-1E-UDD-D

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	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°	14928	14928	14928
5°	15002	14370	14315
10°	14907	13945	13789
15°	14701	13496	13236
20°	14442	13015	12701
25°	14187	12551	12216
30°	13824	12074	11729
35°	13459	11611	11386
40°	13075	11219	11044
45°	12709	10869	10750
50°	12316	10551	10462
55°	11908	10209	10166
60°	11404	9856	9857
65°	10880	9439	9485
70°	10292	8992	9089
75°	9539	8554	8722
80°	8357	8107	8349
85°	7227	7720	8061



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CATALOG NUMBER: SA2XXDIP-C865D530U840-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.6	1.5
10°-20°	251.2	4.4
20°-30°	380.7	6.7
30°-40°	463.7	8.2
40°-50°	498.9	8.8
50°-60°	484.5	8.6
60°-70°	423.0	7.5
70°-80°	325.7	5.8
80°-90°	220.4	3.9
90°-100°	174.9	3.1
100°-110°	199.0	3.5
110°-120°	310.8	5.5
120°-130°	433.7	7.7
130°-140°	435.1	7.7
140°-150°	391.5	6.9
150°-160°	312.4	5.5
160°-170°	201.3	3.6
170°-180°	69.3	1.2
0°-30°	719.6	12.7
0°-40°	1183.3	20.9
0°-60°	2166.6	38.3
0°-90°	3135.7	55.4
90°-120°	684.7	12.1
90°-150°	1945.0	34.3
90°-180°	2528.0	44.6
0°-180°	5663.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	925	925	925	925	925	
5°	927	923	915	923	922	88
15°	884	887	887	898	898	249
25°	804	814	826	841	846	369
35°	693	716	741	769	780	433
45°	568	605	651	691	706	438
55°	436	485	553	600	619	389
65°	298	364	442	495	514	295
75°	165	240	326	381	401	174
85°	48	132	217	271	292	52
90°	14	98	187	242	261	11
95°	45	93	175	226	244	50
105°	167	214	147	198	217	179
115°	308	335	406	212	178	303
125°	431	441	491	529	544	385
135°	532	540	558	590	601	411
145°	615	615	624	635	639	385
155°	677	673	679	682	678	312
165°	714	711	712	715	712	202
175°	730	726	727	730	726	69
180°	728	728	728	728	728	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6
2.5°	930.0	929.3	928.6	927.9	927.2	925.9	924.2	922.6	920.9	919.3	920.5
5°	927.3	926.5	925.5	924.6	923.7	922.4	920.6	918.8	917.1	915.2	917.1
7.5°	919.0	918.4	917.8	917.3	916.7	915.6	914.2	912.9	911.5	910.2	912.3
10°	912.6	912.0	911.4	910.8	910.2	909.5	908.6	907.7	906.8	905.8	908.3
12.5°	901.8	902.0	902.1	902.2	902.3	902.0	901.4	900.7	900.1	899.4	901.8
15°	884.4	885.0	885.7	886.3	886.8	887.1	887.1	887.1	887.1	887.1	889.8
17.5°	861.9	863.1	864.4	865.7	866.9	868.0	869.0	869.9	870.9	871.8	874.6
20°	846.9	848.4	849.9	851.4	852.8	854.2	855.4	856.6	857.8	859.0	862.2
22.5°	830.8	832.5	834.2	836.0	837.7	839.4	841.1	842.7	844.4	846.1	849.4
25°	804.1	806.1	808.2	810.3	812.3	814.8	817.4	820.1	822.7	825.5	829.0
27.5°	771.8	775.3	778.6	782.0	785.5	788.7	791.8	795.1	798.2	801.3	805.9
30°	750.4	754.3	758.2	762.0	765.9	769.8	773.7	777.5	781.4	785.3	790.0
32.5°	726.8	731.1	735.5	739.9	744.3	748.7	753.3	757.9	762.4	767.0	772.5
35°	692.8	697.8	703.0	708.0	713.1	718.4	724.1	729.7	735.4	741.0	747.6
37.5°	655.8	661.7	667.5	673.3	679.1	685.7	693.1	700.4	707.7	715.1	722.4
40°	631.2	637.7	644.3	650.9	657.3	664.7	672.7	680.8	688.8	696.8	704.6
42.5°	607.5	614.1	620.7	627.2	633.8	641.7	650.9	660.1	669.3	678.6	687.0
45°	568.2	576.2	584.2	592.3	600.4	609.6	620.0	630.5	640.9	651.3	660.5
47.5°	529.3	538.1	546.8	555.6	564.3	574.8	587.0	599.3	611.5	623.7	633.3
50°	502.5	511.7	521.0	530.2	539.5	550.8	564.1	577.5	591.0	604.4	614.5
52.5°	476.8	486.5	496.2	505.9	515.6	527.6	541.7	555.7	569.9	584.0	594.3
55°	435.6	446.3	457.0	467.7	478.4	491.5	507.0	522.5	538.0	553.4	564.1
57.5°	394.8	406.9	419.0	431.0	443.1	457.1	472.8	488.7	504.4	520.2	531.8
60°	365.9	378.6	391.4	404.2	417.1	431.9	448.9	465.9	482.8	499.9	511.2
62.5°	340.1	353.4	366.7	379.9	393.2	408.4	425.4	442.3	459.3	476.3	488.3
65°	297.5	312.0	326.7	341.2	355.9	371.9	389.5	407.1	424.6	442.2	454.4
67.5°	258.3	273.6	288.8	304.1	319.3	336.0	354.0	371.9	389.9	407.9	420.2
70°	230.5	246.0	261.5	276.9	292.5	309.4	327.9	346.3	364.8	383.2	396.1
72.5°	204.8	220.8	236.7	252.7	268.6	285.9	304.7	323.4	342.0	360.7	373.3
75°	164.8	181.5	198.1	214.9	231.6	249.4	268.4	287.5	306.6	325.6	338.4
77.5°	126.2	143.7	161.2	178.5	196.0	214.4	233.8	253.2	272.5	291.9	304.6
80°	100.5	118.7	136.8	155.0	173.2	191.9	211.3	230.7	249.9	269.3	281.9
82.5°	79.1	96.9	114.9	132.8	150.8	169.6	189.1	208.7	228.3	247.9	260.4
85°	48.3	66.8	85.1	103.6	122.1	140.9	159.9	178.9	198.0	217.1	229.6
87.5°	26.4	44.3	62.4	80.4	98.4	117.0	136.2	155.5	174.7	194.0	206.3
90°	13.9	32.5	51.0	69.6	88.2	107.4	127.4	147.4	167.4	187.4	200.0
92.5°	22.9	39.0	54.9	70.9	86.8	104.2	123.0	141.9	160.7	179.5	191.5
95°	44.9	55.1	65.2	75.3	85.5	99.9	118.6	137.2	155.9	174.7	186.5
97.5°	77.4	79.0	80.5	82.0	83.6	93.9	112.9	132.0	151.1	170.1	181.6
100°	102.7	97.7	92.6	87.6	82.5	89.4	108.1	126.7	145.4	164.0	176.0
102.5°	129.5	136.1	142.8	149.5	156.1	159.2	158.8	158.2	157.8	157.3	169.4
105°	166.9	179.0	191.2	203.4	215.5	213.4	196.8	180.4	163.9	147.4	159.1
107.5°	211.3	221.0	230.8	240.4	250.2	243.3	219.8	196.3	172.8	149.3	157.9
110°	238.8	247.2	255.7	264.1	272.5	267.1	247.8	228.5	209.3	190.1	187.8



TEST NUMBER: P331387-840

CATALOG NUMBER: SA2XXDIP-C865D530U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	265.8	273.0	280.1	287.3	294.6	300.8	306.4	311.9	317.4	323.0	289.7
115°	308.4	313.7	318.9	324.2	329.4	340.2	356.6	372.9	389.2	405.6	360.3
117.5°	345.1	349.5	353.9	358.2	362.5	371.9	386.4	400.8	415.2	429.6	425.3
120°	372.9	375.9	378.8	381.7	384.8	393.2	407.2	421.2	435.3	449.3	459.0
122.5°	396.6	398.9	401.2	403.5	405.9	413.7	427.3	440.7	454.2	467.8	476.7
125°	431.1	432.6	434.1	435.8	437.3	443.8	455.7	467.4	479.2	490.9	499.8
127.5°	463.7	465.1	466.5	467.9	469.3	474.6	484.0	493.3	502.7	512.0	520.6
130°	484.3	485.9	487.6	489.1	490.7	495.2	502.8	510.3	517.9	525.4	533.8
132.5°	505.4	506.8	508.1	509.4	510.6	514.3	520.5	526.5	532.7	538.8	546.8
135°	531.5	533.4	535.2	537.1	539.0	542.0	546.0	550.1	554.1	558.1	565.5
137.5°	559.3	560.5	561.8	563.0	564.2	566.1	568.7	571.2	573.6	576.1	582.8
140°	577.3	578.0	578.7	579.3	580.0	581.2	583.1	584.9	586.8	588.8	594.5
142.5°	592.6	593.1	593.6	594.2	594.7	595.8	597.4	599.0	600.6	602.2	606.9
145°	615.0	614.9	614.8	614.7	614.6	615.5	617.5	619.5	621.5	623.5	626.1
147.5°	635.8	635.3	634.9	634.5	634.0	634.8	636.7	638.7	640.7	642.7	643.5
150°	649.2	648.4	647.6	646.8	646.0	646.5	648.4	650.3	652.2	654.0	654.7
152.5°	660.7	659.7	658.8	657.9	657.0	657.4	659.2	661.1	662.8	664.6	665.3
155°	677.2	676.2	675.1	674.1	673.0	673.2	674.6	676.0	677.4	678.8	679.5
157.5°	690.1	689.3	688.4	687.5	686.6	686.7	687.6	688.6	689.6	690.6	691.4
160°	697.8	697.1	696.4	695.7	695.0	695.0	695.7	696.4	697.1	697.8	698.5
162.5°	704.5	703.8	703.1	702.4	701.8	701.7	702.3	702.9	703.5	704.1	704.9
165°	713.6	712.9	712.2	711.4	710.7	710.6	710.9	711.2	711.7	712.0	712.9
167.5°	720.3	719.6	718.9	718.2	717.5	717.3	717.6	718.0	718.3	718.6	719.4
170°	724.1	723.5	722.8	722.1	721.3	721.0	721.3	721.5	721.8	722.1	722.9
172.5°	726.7	726.0	725.3	724.6	723.9	723.6	723.9	724.1	724.3	724.6	725.4
175°	729.9	729.1	728.3	727.5	726.6	726.4	726.6	726.8	727.0	727.3	728.1
177.5°	730.4	729.8	729.1	728.5	727.8	727.5	727.6	727.7	727.8	727.9	728.6
180°	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3



TEST NUMBER: P331387-840

CATALOG NUMBER: SA2XXDIP-C865D530U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6
2.5°	921.6	922.8	924.0	924.4	923.9	923.4	922.9	922.5
5°	918.8	920.6	922.4	923.1	922.8	922.5	922.2	921.9
7.5°	914.4	916.6	918.8	919.7	919.4	919.1	918.8	918.5
10°	910.6	913.0	915.4	916.5	916.1	915.8	915.5	915.2
12.5°	904.2	906.6	909.0	910.0	909.7	909.4	909.1	908.8
15°	892.4	895.1	897.9	899.0	898.7	898.4	898.1	897.9
17.5°	877.5	880.2	883.0	884.4	884.4	884.4	884.4	884.4
20°	865.6	868.8	872.0	873.7	873.7	873.7	873.7	873.7
22.5°	852.6	856.0	859.2	861.1	861.5	862.0	862.5	863.0
25°	832.6	836.2	839.8	842.0	842.8	843.7	844.7	845.6
27.5°	810.4	815.0	819.4	822.0	822.7	823.3	824.0	824.7
30°	794.8	799.5	804.4	807.2	808.0	808.9	809.8	810.7
32.5°	778.0	783.5	788.9	792.5	794.1	795.7	797.3	798.9
35°	754.2	760.7	767.3	771.5	773.7	775.8	777.8	779.9
37.5°	729.5	736.8	744.1	748.8	751.0	753.3	755.5	757.7
40°	712.3	720.0	727.8	733.0	735.7	738.3	741.0	743.8
42.5°	695.5	704.0	712.5	718.0	720.6	723.4	726.0	728.7
45°	669.7	678.9	688.2	694.3	697.3	700.2	703.3	706.2
47.5°	643.0	652.6	662.3	668.7	672.0	675.3	678.5	681.9
50°	624.6	634.7	644.9	651.6	654.8	658.1	661.4	664.7
52.5°	604.7	615.1	625.4	632.4	635.9	639.4	642.9	646.4
55°	574.9	585.6	596.3	603.6	607.4	611.4	615.2	619.0
57.5°	543.3	554.8	566.4	574.2	578.0	582.0	585.9	589.9
60°	522.5	533.8	545.1	552.8	557.0	561.2	565.3	569.6
62.5°	500.3	512.3	524.3	532.4	536.2	540.2	544.1	548.1
65°	466.7	478.9	491.1	499.1	502.9	506.9	510.7	514.5
67.5°	432.5	444.8	457.3	465.4	469.5	473.5	477.6	481.6
70°	408.9	421.6	434.4	442.6	446.3	449.8	453.4	457.0
72.5°	385.9	398.4	411.0	419.4	423.7	428.0	432.3	436.6
75°	351.2	364.1	376.9	385.2	389.1	392.9	396.8	400.7
77.5°	317.4	330.1	342.8	351.3	355.5	359.6	363.9	368.0
80°	294.4	306.9	319.4	327.7	331.8	336.1	340.2	344.4
82.5°	273.0	285.4	297.9	306.2	310.1	314.0	317.9	321.8
85°	242.1	254.6	267.1	275.5	279.6	283.8	287.9	292.2
87.5°	218.5	230.8	243.1	251.2	255.0	258.8	262.7	266.6
90°	212.4	224.9	237.4	245.6	249.3	253.2	257.0	260.7
92.5°	203.4	215.4	227.4	235.2	238.9	242.7	246.4	250.0
95°	198.4	210.4	222.3	229.9	233.4	236.8	240.3	243.8
97.5°	193.1	204.6	216.0	223.6	227.2	231.0	234.6	238.2
100°	187.9	200.0	211.9	219.6	223.1	226.6	230.1	233.7
102.5°	181.4	193.4	205.4	213.2	216.8	220.4	224.0	227.6
105°	170.8	182.5	194.2	202.0	205.7	209.4	213.2	216.9
107.5°	166.6	175.3	184.0	190.3	194.0	197.7	201.5	205.2
110°	185.7	183.5	181.4	182.1	185.8	189.6	193.3	197.1



TEST NUMBER: P331387-840

CATALOG NUMBER: SA2XXDIP-C865D530U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	256.5	223.4	190.2	175.4	179.0	182.7	186.3	190.0
115°	315.0	269.7	224.4	199.1	194.0	188.8	183.7	178.5
117.5°	421.0	416.7	412.3	397.9	373.2	348.5	323.9	299.2
120°	468.8	478.5	488.3	486.9	474.3	461.8	449.3	436.8
122.5°	485.6	494.5	503.5	507.9	507.6	507.3	507.1	506.8
125°	508.6	517.5	526.3	532.3	535.3	538.4	541.4	544.4
127.5°	529.2	537.8	546.3	552.0	554.6	557.3	560.1	562.7
130°	542.3	550.7	559.2	564.5	566.7	569.1	571.3	573.6
132.5°	554.8	562.8	570.8	575.9	578.2	580.5	582.8	585.0
135°	572.9	580.4	587.8	592.6	594.7	596.8	599.1	601.2
137.5°	589.4	596.0	602.7	606.8	608.4	610.1	611.7	613.3
140°	600.4	606.2	612.0	615.5	616.7	617.9	619.1	620.4
142.5°	611.7	616.5	621.3	624.1	625.1	626.0	627.0	628.0
145°	628.6	631.3	633.9	635.6	636.5	637.4	638.3	639.2
147.5°	644.3	645.2	646.0	646.6	646.8	647.0	647.2	647.4
150°	655.4	656.1	656.8	656.9	656.3	655.7	655.1	654.6
152.5°	666.0	666.7	667.4	667.3	666.6	665.8	665.0	664.3
155°	680.2	681.0	681.7	681.5	680.5	679.6	678.7	677.7
157.5°	692.2	693.0	693.8	693.8	692.8	691.9	690.9	690.0
160°	699.1	699.8	700.5	700.5	699.7	698.9	698.0	697.2
162.5°	705.7	706.5	707.3	707.2	706.2	705.2	704.2	703.2
165°	713.7	714.5	715.3	715.3	714.5	713.7	712.9	712.0
167.5°	720.2	721.1	722.0	721.9	720.7	719.7	718.6	717.6
170°	723.7	724.5	725.3	725.2	724.1	723.1	722.1	720.9
172.5°	726.2	727.0	727.8	727.7	726.7	725.6	724.6	723.5
175°	728.9	729.7	730.5	730.4	729.2	728.0	726.9	725.7
177.5°	729.2	729.9	730.5	730.4	729.6	728.7	727.9	727.1
180°	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3

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