

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: P331654-930

Luminaire Tested: **SA2XXRDIP-C485D530U930-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331654-930
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: SA2XXRDIP-C485D530U930-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 530 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3108.5 lumens
Efficiency: N/A
Efficacy: 94.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

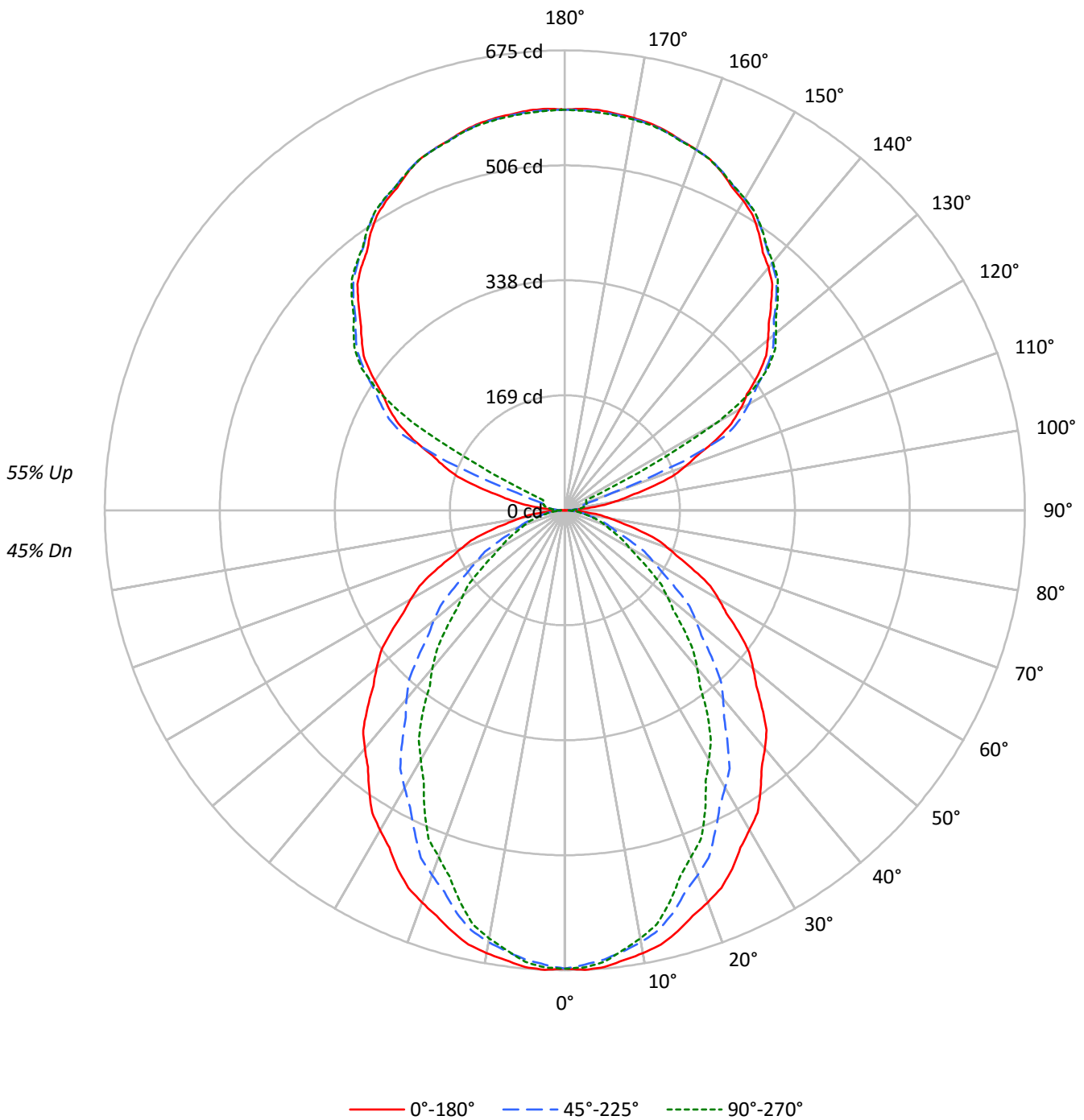
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331654-930

CATALOG NUMBER: SA2XXRDIP-C485D530U930-4F0-1E-UDD-F

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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45
1	97	93	89	86	89	85	82	79	71	69	67	58	56	55	46	45	44	38
2	89	82	76	71	81	75	70	66	63	59	56	51	49	47	41	39	38	33
3	81	72	65	59	74	66	60	55	56	51	48	46	43	40	37	34	33	28
4	74	64	56	51	68	59	52	47	50	45	41	41	37	35	33	30	28	25
5	68	57	49	44	63	53	46	41	45	39	35	37	33	30	30	27	25	22
6	63	51	44	38	58	48	41	36	40	35	31	34	30	27	27	24	22	19
7	58	47	39	33	54	43	36	31	37	31	28	31	27	24	25	22	20	17
8	54	42	35	30	50	39	33	28	34	28	25	28	24	21	23	20	18	16
9	51	39	31	27	46	36	29	25	31	26	22	26	22	19	21	18	16	14
10	47	36	29	24	43	33	27	23	28	23	20	24	20	17	20	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10863	10863	10863
5°	10904	10728	10786
10°	10822	10552	10462
15°	10696	10238	9944
20°	10524	9792	9301
25°	10349	9285	8678
30°	10103	8764	7879
35°	9865	8198	7177
40°	9624	7611	6365
45°	9344	6951	5631
50°	9053	6285	4908
55°	8757	5571	4217
60°	8415	4818	3500
65°	8027	4046	3186
70°	7558	3333	2932
75°	6987	3038	2739
80°	6174	2715	2492
85°	4854	2149	2149



TEST NUMBER: P331654-930

CATALOG NUMBER: SA2XXRDIP-C485D530U930-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.0	2.0
10°-20°	172.9	5.6
20°-30°	242.8	7.8
30°-40°	264.8	8.5
40°-50°	243.5	7.8
50°-60°	191.2	6.2
60°-70°	124.7	4.0
70°-80°	64.3	2.1
80°-90°	18.1	0.6
90°-100°	19.6	0.6
100°-110°	71.9	2.3
110°-120°	192.3	6.2
120°-130°	317.4	10.2
130°-140°	337.5	10.9
140°-150°	313.7	10.1
150°-160°	252.2	8.1
160°-170°	162.5	5.2
170°-180°	55.9	1.8
0°-30°	478.7	15.4
0°-40°	743.5	23.9
0°-60°	1178.2	37.9
0°-90°	1385.3	44.6
90°-120°	283.8	9.1
90°-150°	1252.5	40.3
90°-180°	1723.0	55.4
0°-180°	3108.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	673	673	673	673	673	
5°	673	670	662	667	666	64
15°	640	632	612	601	595	180
25°	581	560	521	497	487	267
35°	500	468	416	379	364	313
45°	409	367	304	263	247	316
55°	311	263	198	163	150	278
65°	210	160	106	86	83	208
75°	112	71	49	45	44	119
85°	26	14	12	12	12	31
90°	0	5	8	11	12	2
95°	28	15	17	19	18	34
105°	129	135	26	30	32	138
115°	245	252	262	75	35	241
125°	346	352	360	362	364	308
135°	428	435	439	443	442	330
145°	496	497	503	506	504	310
155°	547	543	548	550	547	252
165°	576	574	575	578	575	163
175°	589	586	587	590	586	56
180°	588	588	588	588	588	



TEST NUMBER: P331654-930

CATALOG NUMBER: SA2XXRDIP-C485D530U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8
2.5°	675.2	674.7	674.2	673.6	673.1	672.2	671.1	669.8	668.6	667.5	668.5
5°	672.8	672.1	671.5	670.8	670.1	668.9	667.2	665.4	663.7	661.9	663.1
7.5°	665.9	665.0	664.2	663.3	662.5	661.0	659.0	657.0	654.9	652.9	653.2
10°	660.1	659.1	658.1	657.2	656.2	654.4	651.8	649.0	646.3	643.6	643.2
12.5°	652.7	651.6	650.4	649.2	648.1	645.8	642.3	638.9	635.4	631.9	631.2
15°	639.9	638.5	637.0	635.4	634.0	631.0	626.3	621.7	617.2	612.5	610.0
17.5°	624.3	622.0	619.7	617.4	615.1	611.1	605.2	599.2	593.4	587.4	584.4
20°	612.5	609.8	607.2	604.5	601.7	597.0	590.2	583.4	576.7	569.9	566.6
22.5°	599.9	596.9	593.8	590.8	587.7	582.4	574.8	567.1	559.5	551.9	547.6
25°	580.9	576.6	572.3	567.9	563.5	556.9	548.0	539.1	530.1	521.2	515.7
27.5°	558.0	553.3	548.5	543.9	539.2	531.7	521.7	511.6	501.6	491.5	485.0
30°	541.9	536.8	531.7	526.5	521.4	513.4	502.6	491.7	480.9	470.1	463.2
32.5°	526.4	520.3	514.3	508.3	502.3	493.7	482.7	471.7	460.6	449.6	441.7
35°	500.5	493.6	486.7	479.8	472.9	463.5	451.6	439.7	427.8	415.9	407.3
37.5°	474.7	467.1	459.5	451.9	444.4	434.2	421.6	408.9	396.2	383.5	374.1
40°	456.6	448.6	440.4	432.4	424.2	413.6	400.5	387.3	374.2	361.1	351.5
42.5°	438.1	429.6	421.0	412.5	404.0	392.9	379.4	365.7	352.2	338.7	328.7
45°	409.2	400.1	391.0	382.0	372.9	361.3	347.1	332.9	318.6	304.4	294.8
47.5°	380.9	371.3	361.7	352.1	342.5	330.4	315.7	301.0	286.3	271.7	262.1
50°	360.4	350.8	341.3	331.7	322.0	309.8	294.9	280.1	265.1	250.2	240.9
52.5°	340.5	330.4	320.4	310.4	300.4	288.0	273.5	258.9	244.3	229.8	220.8
55°	311.1	300.6	290.0	279.5	269.0	256.3	241.7	227.1	212.5	197.9	189.8
57.5°	281.0	270.3	259.4	248.6	237.7	225.3	211.3	197.2	183.2	169.2	161.7
60°	260.6	249.8	239.0	228.1	217.3	205.0	191.0	177.1	163.1	149.2	142.3
62.5°	240.6	229.8	219.0	208.1	197.3	185.3	172.0	158.7	145.4	132.2	125.6
65°	210.1	199.1	188.2	177.2	166.2	154.7	142.5	130.3	118.1	105.9	101.3
67.5°	180.6	169.7	158.8	148.0	137.1	126.1	115.2	104.3	93.3	82.3	80.2
70°	160.1	149.6	139.0	128.5	117.9	107.9	98.7	89.3	80.0	70.6	69.3
72.5°	140.6	130.5	120.4	110.3	100.2	91.4	83.9	76.4	68.9	61.4	60.3
75°	112.0	102.6	93.1	83.6	74.1	67.1	62.5	57.9	53.3	48.7	47.8
77.5°	83.9	75.6	67.3	58.9	50.7	45.4	43.2	41.0	38.7	36.5	36.0
80°	66.4	59.4	52.6	45.7	38.7	34.7	33.3	32.0	30.6	29.2	28.7
82.5°	50.3	44.9	39.5	34.2	28.8	25.6	24.7	23.7	22.8	21.9	21.6
85°	26.2	23.3	20.5	17.7	14.8	13.2	12.8	12.4	12.0	11.6	11.6
87.5°	7.9	7.3	6.5	5.9	5.2	5.0	5.1	5.3	5.5	5.6	5.6
90°	0.4	1.5	2.5	3.5	4.6	5.5	6.3	7.0	7.7	8.5	9.0
92.5°	8.6	8.5	8.4	8.3	8.2	8.4	8.7	9.1	9.5	9.9	10.1
95°	27.6	24.5	21.4	18.3	15.2	13.9	14.6	15.2	15.9	16.6	17.0
97.5°	54.9	46.1	37.3	28.5	19.7	16.1	17.6	19.2	20.7	22.2	22.6
100°	75.3	62.4	49.4	36.4	23.5	17.9	19.4	21.0	22.7	24.2	25.0
102.5°	97.8	95.1	92.3	89.5	86.8	78.7	65.3	51.9	38.4	24.9	25.9
105°	129.3	132.2	135.0	137.9	140.7	129.2	103.4	77.6	51.8	25.9	27.0
107.5°	165.3	167.6	169.9	172.2	174.5	160.1	129.2	98.2	67.3	36.4	35.3
110°	188.5	190.5	192.5	194.4	196.4	183.8	156.5	129.1	101.7	74.4	65.0



TEST NUMBER: P331654-930

CATALOG NUMBER: SA2XXRDIP-C485D530U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	210.3	212.1	213.8	215.6	217.3	214.8	208.1	201.3	194.5	187.8	153.3
115°	244.7	246.2	247.9	249.5	251.1	253.1	255.4	257.8	260.2	262.5	218.7
117.5°	275.4	277.2	279.0	280.8	282.6	284.3	285.9	287.6	289.2	290.7	280.2
120°	297.8	299.2	300.7	302.1	303.5	305.1	306.8	308.5	310.1	311.9	313.0
122.5°	316.9	318.4	319.9	321.4	322.9	324.6	326.4	328.2	330.1	332.0	332.6
125°	345.9	347.2	348.4	349.6	350.8	352.4	354.2	356.0	357.8	359.5	360.2
127.5°	372.2	373.6	375.0	376.3	377.6	379.0	380.3	381.7	383.0	384.4	385.3
130°	388.9	390.4	391.9	393.5	394.9	396.2	397.3	398.3	399.3	400.4	401.5
132.5°	405.9	407.2	408.5	409.8	411.1	412.2	413.3	414.3	415.3	416.4	417.3
135°	428.0	429.6	431.0	432.6	434.1	435.3	436.1	437.0	437.8	438.6	439.6
137.5°	450.5	451.4	452.5	453.6	454.6	455.7	456.6	457.6	458.5	459.5	460.5
140°	465.0	465.8	466.6	467.3	468.1	469.0	470.0	471.1	472.1	473.1	474.0
142.5°	477.3	478.0	478.7	479.3	480.0	480.9	482.2	483.3	484.5	485.8	486.5
145°	496.5	496.4	496.4	496.3	496.2	496.9	498.6	500.1	501.7	503.4	504.0
147.5°	513.3	512.9	512.6	512.3	511.8	512.5	514.0	515.7	517.2	518.9	519.3
150°	524.2	523.5	522.9	522.2	521.5	522.0	523.5	525.0	526.5	528.0	528.6
152.5°	533.4	532.6	531.9	531.2	530.4	530.8	532.2	533.7	535.1	536.5	537.1
155°	546.7	545.9	545.0	544.2	543.3	543.5	544.6	545.8	546.9	548.0	548.6
157.5°	557.2	556.5	555.8	555.1	554.3	554.4	555.1	556.0	556.8	557.6	558.2
160°	563.4	562.8	562.2	561.7	561.1	561.1	561.7	562.2	562.8	563.4	563.9
162.5°	568.8	568.2	567.6	567.0	566.6	566.5	567.0	567.4	567.9	568.4	569.1
165°	576.1	575.5	574.9	574.4	573.8	573.7	574.0	574.2	574.5	574.8	575.5
167.5°	581.6	581.0	580.4	579.8	579.3	579.1	579.4	579.7	579.9	580.2	580.8
170°	584.6	584.1	583.5	582.9	582.4	582.1	582.4	582.5	582.7	582.9	583.6
172.5°	586.7	586.1	585.5	585.0	584.4	584.2	584.4	584.6	584.7	585.0	585.6
175°	589.3	588.6	588.0	587.3	586.6	586.4	586.6	586.8	586.9	587.2	587.8
177.5°	589.7	589.2	588.6	588.2	587.6	587.3	587.4	587.5	587.6	587.7	588.2
180°	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0



TEST NUMBER: P331654-930

CATALOG NUMBER: SA2XXRDIP-C485D530U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8
2.5°	669.6	670.7	671.8	672.2	672.1	671.8	671.6	671.4
5°	664.3	665.5	666.8	667.2	666.8	666.3	665.9	665.5
7.5°	653.5	653.9	654.3	654.1	653.4	652.6	652.0	651.3
10°	642.8	642.4	642.0	641.4	640.6	639.8	639.0	638.1
12.5°	630.5	629.7	629.0	627.9	626.6	625.3	623.9	622.6
15°	607.4	604.9	602.3	600.3	598.9	597.6	596.2	594.9
17.5°	581.3	578.3	575.2	572.5	570.2	567.9	565.6	563.2
20°	563.1	559.8	556.4	553.2	550.2	547.2	544.3	541.3
22.5°	543.2	538.8	534.5	531.2	529.0	526.8	524.6	522.3
25°	510.1	504.6	499.0	495.2	493.2	491.1	489.2	487.1
27.5°	478.6	472.1	465.6	460.8	457.5	454.4	451.1	447.9
30°	456.2	449.4	442.5	437.2	433.5	429.9	426.2	422.6
32.5°	433.8	426.0	418.1	412.5	409.0	405.6	402.1	398.7
35°	398.8	390.3	381.8	376.0	373.1	370.1	367.1	364.1
37.5°	364.7	355.3	345.9	339.5	336.1	332.7	329.3	325.9
40°	341.9	332.2	322.6	316.1	312.6	309.1	305.5	302.0
42.5°	318.8	308.8	299.0	292.3	288.9	285.4	282.0	278.6
45°	285.2	275.7	266.0	259.6	256.3	253.1	249.8	246.6
47.5°	252.6	243.0	233.5	227.2	224.3	221.4	218.3	215.4
50°	231.5	222.3	212.9	206.8	204.0	201.1	198.3	195.4
52.5°	211.7	202.8	193.7	187.9	185.3	182.7	180.0	177.4
55°	181.6	173.5	165.4	160.0	157.5	154.9	152.4	149.8
57.5°	154.3	146.8	139.4	134.6	132.4	130.3	128.1	125.9
60°	135.3	128.5	121.6	117.1	114.9	112.7	110.6	108.4
62.5°	119.0	112.4	105.8	101.9	100.6	99.3	98.0	96.7
65°	96.8	92.1	87.6	85.0	84.6	84.2	83.8	83.4
67.5°	78.1	76.0	73.9	72.6	72.2	71.7	71.3	70.8
70°	67.9	66.6	65.2	64.2	63.8	63.2	62.6	62.1
72.5°	59.1	58.0	56.8	56.1	55.8	55.4	55.1	54.8
75°	46.8	45.9	44.9	44.4	44.3	44.1	43.9	43.9
77.5°	35.5	34.9	34.4	34.0	33.8	33.6	33.3	33.1
80°	28.1	27.6	27.1	26.8	26.8	26.8	26.8	26.8
82.5°	21.3	21.0	20.6	20.5	20.5	20.5	20.5	20.5
85°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
87.5°	5.5	5.5	5.5	5.5	5.6	5.6	5.7	5.7
90°	9.5	9.9	10.4	10.8	10.9	11.1	11.3	11.5
92.5°	10.4	10.6	10.8	11.0	11.2	11.3	11.4	11.5
95°	17.5	18.0	18.5	18.7	18.6	18.5	18.4	18.3
97.5°	23.0	23.3	23.7	24.0	24.1	24.2	24.3	24.5
100°	25.8	26.5	27.3	27.7	28.0	28.1	28.3	28.5
102.5°	26.9	27.9	28.9	29.5	29.8	30.0	30.2	30.6
105°	28.0	29.1	30.1	30.8	31.2	31.6	32.0	32.4
107.5°	34.2	33.2	32.1	31.8	32.1	32.5	32.9	33.3
110°	55.5	46.1	36.6	32.1	32.4	32.9	33.3	33.6



TEST NUMBER: P331654-930

CATALOG NUMBER: SA2XXRDIP-C485D530U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	118.8	84.3	49.8	32.8	33.0	33.3	33.7	33.9
115°	175.0	131.2	87.4	62.1	55.3	48.5	41.7	34.9
117.5°	269.6	259.0	248.4	232.0	209.5	187.2	164.9	142.4
120°	314.1	315.3	316.4	310.6	297.8	285.1	272.3	259.5
122.5°	333.3	334.0	334.7	333.8	331.3	328.8	326.4	323.8
125°	360.9	361.5	362.2	362.6	363.0	363.2	363.5	363.8
127.5°	386.3	387.3	388.2	388.7	388.8	388.9	388.9	389.0
130°	402.4	403.5	404.6	405.0	404.9	404.8	404.7	404.6
132.5°	418.2	419.1	420.0	420.3	420.2	420.1	420.0	420.0
135°	440.6	441.5	442.5	442.9	442.6	442.5	442.3	442.1
137.5°	461.4	462.3	463.3	463.5	463.2	462.8	462.6	462.3
140°	474.8	475.6	476.5	476.7	476.2	475.8	475.3	474.8
142.5°	487.3	488.0	488.9	489.0	488.5	488.0	487.5	487.1
145°	504.7	505.3	506.0	506.1	505.6	505.2	504.7	504.2
147.5°	519.8	520.3	520.8	520.8	520.5	520.1	519.7	519.3
150°	529.1	529.7	530.3	530.4	529.9	529.4	528.9	528.5
152.5°	537.7	538.3	538.8	538.7	538.2	537.5	536.9	536.3
155°	549.2	549.8	550.3	550.2	549.4	548.7	548.0	547.1
157.5°	558.8	559.5	560.1	560.1	559.3	558.6	557.8	557.1
160°	564.4	565.0	565.6	565.6	564.9	564.3	563.5	562.9
162.5°	569.7	570.4	571.0	571.0	570.1	569.3	568.5	567.7
165°	576.2	576.8	577.5	577.5	576.8	576.2	575.5	574.8
167.5°	581.5	582.2	582.9	582.8	581.9	581.1	580.2	579.4
170°	584.2	584.9	585.5	585.5	584.6	583.8	582.9	582.0
172.5°	586.3	586.9	587.6	587.5	586.7	585.8	585.0	584.1
175°	588.5	589.1	589.8	589.7	588.7	587.7	586.9	585.9
177.5°	588.7	589.3	589.8	589.7	589.1	588.3	587.7	587.0
180°	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0

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