

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: P331661-930

Luminaire Tested: **SA2XXRDIP-C485D725U930-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331661-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C485D725U930-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

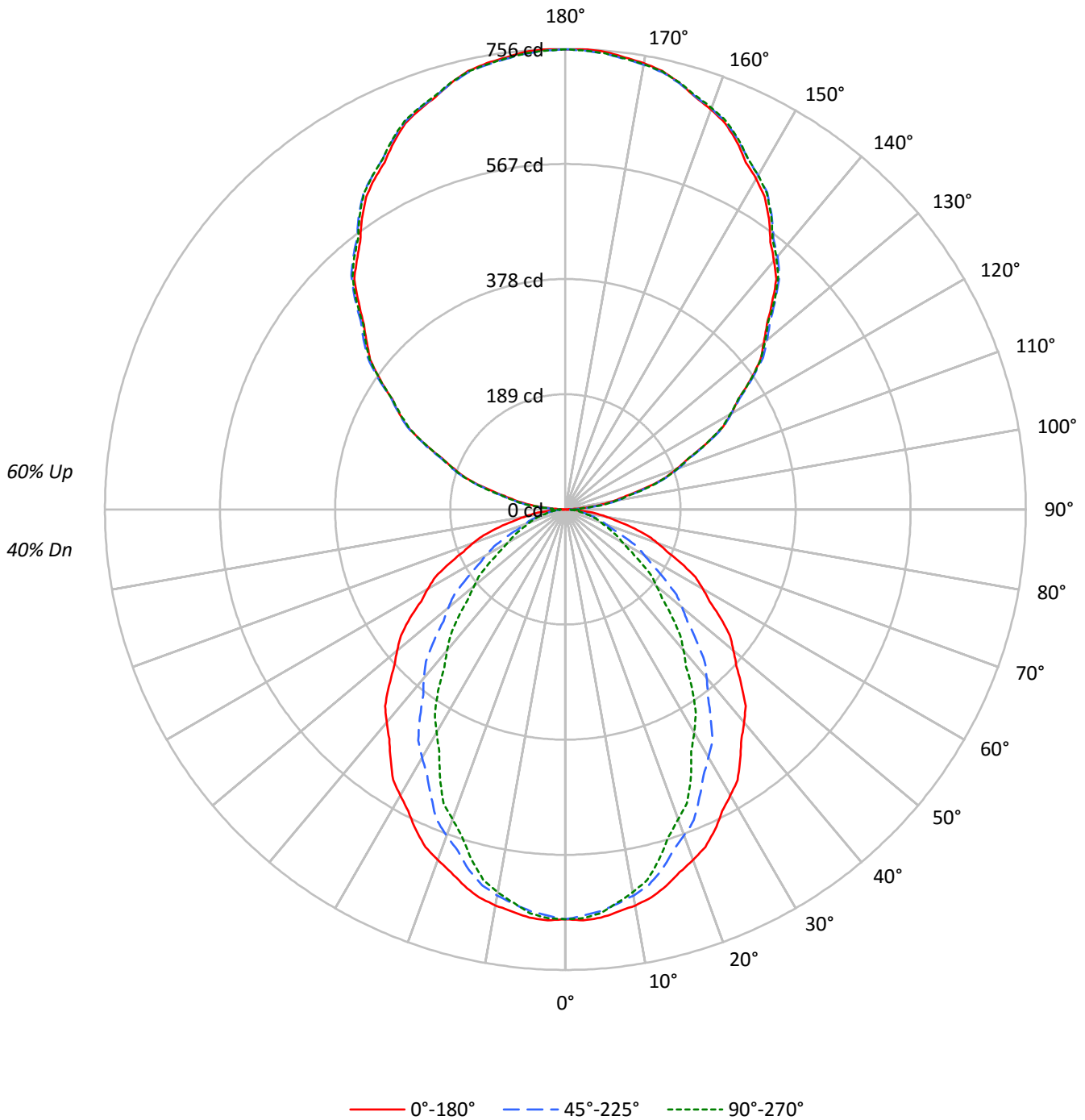
Lumens per Lamp: N/A
Luminaire Lumens: 3498.5 lumens
Efficiency: N/A
Efficacy: 91.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 38.4
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: P331661-930
CATALOG NUMBER: SA2XXRDIP-C485D725U930-4F0-1E-UDD-F1

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	105	105	105	105	95	95	95	95	78	78	78	61	61	61	47	47	47	40
1	96	92	88	85	87	84	80	78	68	66	64	55	53	52	42	41	40	34
2	88	80	75	70	79	74	69	64	60	57	54	48	46	44	37	36	34	29
3	80	71	64	59	73	65	59	54	54	49	46	43	40	37	33	31	30	25
4	73	63	56	50	67	58	51	46	48	43	39	39	35	32	30	28	26	22
5	67	56	49	43	61	52	45	40	43	38	34	35	31	28	27	25	23	19
6	62	51	43	37	57	47	40	35	39	34	30	32	28	25	25	22	20	17
7	58	46	38	33	52	42	35	31	35	30	26	29	25	22	23	20	18	15
8	53	42	34	29	49	38	32	27	32	27	23	26	23	20	21	18	16	14
9	50	38	31	26	45	35	29	24	30	25	21	24	21	18	19	17	15	13
10	46	35	28	23	42	32	26	22	27	22	19	22	19	16	18	15	13	12

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: P331661-930

CATALOG NUMBER: SA2XXRDIP-C485D725U930-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.0	1.8
10°-20°	172.9	4.9
20°-30°	242.8	6.9
30°-40°	264.8	7.6
40°-50°	243.5	7.0
50°-60°	191.2	5.5
60°-70°	124.7	3.6
70°-80°	64.3	1.8
80°-90°	19.7	0.6
90°-100°	47.9	1.4
100°-110°	148.6	4.2
110°-120°	254.0	7.3
120°-130°	334.1	9.5
130°-140°	375.0	10.7
140°-150°	367.7	10.5
150°-160°	308.4	8.8
160°-170°	204.5	5.8
170°-180°	71.5	2.0
0°-30°	478.7	13.7
0°-40°	743.5	21.3
0°-60°	1178.2	33.7
0°-90°	1386.9	39.6
90°-120°	450.5	12.9
90°-150°	1527.2	43.7
90°-180°	2112.0	60.4
0°-180°	3498.5	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°	1	9	22	21	22	3
95°	33	39	41	41	40	38
105°	137	139	140	141	142	145
115°	255	258	258	257	255	252
125°	371	376	375	373	372	331
135°	480	487	488	487	486	371
145°	582	587	591	591	589	364
155°	666	668	670	673	671	306
165°	725	724	724	728	725	204
175°	754	752	751	755	751	72
180°	755	755	755	755	755	



TEST NUMBER: P331661-930

CATALOG NUMBER: SA2XXRDIP-C485D725U930-4F0-1E-UDD-F1

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	7.4	6.8	6.4	5.8	5.9	6.5	7.1	7.7	8.4	8.2
90°	0.7	2.4	4.1	5.7	7.4	9.9	13.0	16.1	19.2	22.3	22.0
92.5°	11.3	12.6	13.9	15.1	16.3	17.3	18.0	18.8	19.6	20.3	20.3
95°	33.1	34.6	36.0	37.4	38.8	39.6	39.9	40.2	40.5	40.8	40.8
97.5°	60.6	61.8	63.0	64.2	65.6	66.4	66.9	67.5	68.0	68.6	68.6
100°	81.0	82.1	83.2	84.3	85.4	86.3	86.7	87.1	87.5	88.0	88.0
102.5°	102.3	103.2	104.2	105.1	106.0	106.7	107.2	107.8	108.3	108.8	108.9
105°	137.1	137.5	137.9	138.3	138.7	139.1	139.3	139.7	139.9	140.2	140.5
107.5°	171.9	172.6	173.2	173.8	174.4	174.7	174.7	174.7	174.7	174.7	174.9
110°	194.4	195.2	196.1	196.9	197.8	198.2	198.2	198.2	198.2	198.2	198.2



TEST NUMBER: P331661-930

CATALOG NUMBER: SA2XXRDIP-C485D725U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	218.8	219.7	220.5	221.4	222.3	222.6	222.5	222.4	222.3	222.2	221.8
115°	254.9	255.8	256.6	257.5	258.3	258.6	258.3	258.0	257.7	257.5	257.3
117.5°	290.8	292.0	293.1	294.2	295.4	295.5	294.7	294.0	293.2	292.4	292.0
120°	314.8	315.9	317.1	318.2	319.4	319.4	318.2	317.1	315.9	314.8	314.8
122.5°	336.7	338.1	339.5	340.8	342.2	342.4	341.7	340.9	340.1	339.2	338.9
125°	370.9	372.2	373.4	374.7	376.0	376.4	376.0	375.5	375.1	374.7	374.3
127.5°	404.1	405.8	407.4	409.0	410.6	411.2	410.7	410.2	409.6	409.1	408.6
130°	425.1	426.9	428.8	430.6	432.4	433.2	432.9	432.6	432.4	432.1	431.8
132.5°	448.5	450.0	451.5	453.0	454.5	455.3	455.3	455.4	455.4	455.5	454.9
135°	479.9	481.4	483.0	484.5	486.1	487.0	487.3	487.5	487.9	488.1	488.0
137.5°	512.9	514.1	515.4	516.7	518.0	518.8	519.2	519.5	519.9	520.2	520.2
140°	532.8	534.0	535.3	536.5	537.9	538.8	539.6	540.3	541.0	541.7	541.7
142.5°	553.2	554.4	555.7	557.0	558.2	559.1	559.6	560.1	560.6	561.1	561.2
145°	582.4	583.4	584.5	585.5	586.4	587.3	588.2	589.1	589.9	590.8	590.9
147.5°	608.6	609.8	611.0	612.1	613.3	614.2	614.8	615.4	616.0	616.5	616.8
150°	626.5	627.3	628.1	629.0	629.8	630.6	631.1	631.7	632.3	632.8	633.2
152.5°	642.2	643.1	643.9	644.8	645.6	646.4	647.1	647.8	648.4	649.1	649.6
155°	665.9	666.3	666.8	667.2	667.6	668.1	668.5	669.0	669.4	669.8	670.5
157.5°	686.2	686.5	686.8	687.1	687.4	687.6	687.9	688.1	688.4	688.6	689.6
160°	698.5	698.7	699.0	699.3	699.6	699.8	699.9	700.1	700.3	700.3	701.2
162.5°	709.6	709.7	709.8	709.8	709.9	710.0	710.1	710.3	710.5	710.5	711.5
165°	724.6	724.5	724.3	724.1	724.0	723.9	723.9	723.9	723.9	723.9	725.0
167.5°	737.0	736.6	736.2	735.8	735.4	735.2	735.2	735.1	735.1	735.0	736.1
170°	743.7	743.3	742.8	742.4	742.0	741.7	741.6	741.4	741.3	741.1	742.2
172.5°	748.3	747.9	747.5	747.0	746.6	746.3	746.2	746.0	745.9	745.8	746.7
175°	753.9	753.5	753.0	752.6	752.2	751.9	751.5	751.3	751.0	750.7	751.7
177.5°	756.2	755.9	755.5	755.1	754.8	754.6	754.3	754.1	753.8	753.7	754.3
180°	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1



TEST NUMBER: P331661-930

CATALOG NUMBER: SA2XXRDIP-C485D725U930-4F0-1E-UDD-F1

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°	8.0	7.8	7.7	7.7	7.7	7.7	7.7	7.7
90°	21.8	21.4	21.2	21.1	21.3	21.4	21.5	21.7
92.5°	20.4	20.5	20.5	20.5	20.5	20.6	20.6	20.6
95°	40.8	40.8	40.8	40.7	40.4	40.1	39.8	39.5
97.5°	68.6	68.6	68.6	68.6	68.6	68.5	68.5	68.4
100°	88.0	88.0	88.0	87.9	87.7	87.6	87.5	87.3
102.5°	109.1	109.2	109.3	109.3	109.2	109.0	108.8	108.7
105°	140.8	141.0	141.4	141.5	141.5	141.5	141.5	141.5
107.5°	175.0	175.0	175.2	175.0	174.3	173.7	173.0	172.4
110°	198.2	198.2	198.2	198.0	197.5	197.1	196.7	196.2



TEST NUMBER: P331661-930

CATALOG NUMBER: SA2XXRDIP-C485D725U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	221.4	221.1	220.8	220.5	220.1	219.8	219.6	219.2
115°	257.1	257.1	256.9	256.6	256.2	255.8	255.4	254.9
117.5°	291.7	291.4	291.0	290.7	290.2	289.8	289.3	288.9
120°	314.8	314.8	314.8	314.6	314.1	313.7	313.3	312.9
122.5°	338.6	338.3	337.9	337.6	337.3	337.0	336.6	336.4
125°	373.9	373.4	373.0	372.8	372.6	372.4	372.3	372.2
127.5°	408.1	407.6	407.1	406.6	406.2	405.7	405.3	404.8
130°	431.5	431.2	431.0	430.5	429.9	429.4	428.8	428.3
132.5°	454.3	453.6	453.1	452.5	452.0	451.6	451.1	450.7
135°	487.9	487.7	487.5	487.3	486.9	486.5	486.0	485.6
137.5°	520.1	519.9	519.8	519.5	518.9	518.4	517.8	517.2
140°	541.7	541.7	541.7	541.4	540.9	540.3	539.7	539.2
142.5°	561.3	561.4	561.5	561.3	560.7	560.1	559.6	559.1
145°	591.0	591.2	591.3	591.1	590.5	590.0	589.4	588.8
147.5°	617.1	617.4	617.8	617.7	617.1	616.5	616.0	615.5
150°	633.7	634.1	634.5	634.5	634.1	633.7	633.2	632.8
152.5°	650.2	650.8	651.3	651.3	650.8	650.2	649.6	649.1
155°	671.2	671.9	672.6	672.8	672.3	671.9	671.5	671.1
157.5°	690.6	691.5	692.5	692.6	691.9	691.3	690.6	689.9
160°	702.1	703.0	703.8	703.9	703.4	702.8	702.2	701.6
162.5°	712.5	713.5	714.4	714.5	713.9	713.2	712.5	711.8
165°	725.9	726.9	727.9	728.1	727.3	726.6	725.9	725.2
167.5°	737.0	738.0	739.0	739.2	738.4	737.7	736.9	736.2
170°	743.1	744.1	745.1	745.2	744.4	743.5	742.7	741.8
172.5°	747.7	748.7	749.7	749.7	748.9	748.0	747.2	746.4
175°	752.7	753.7	754.6	754.7	753.9	753.0	752.2	751.4
177.5°	755.0	755.7	756.4	756.4	755.7	755.0	754.3	753.7
180°	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1

(END OF REPORT)