

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: P331788-930

Luminaire Tested: **S122RDIW-S485D435U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331788-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S485D435U930-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2609.5 lumens
Efficiency: N/A
Efficacy: 86.4 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

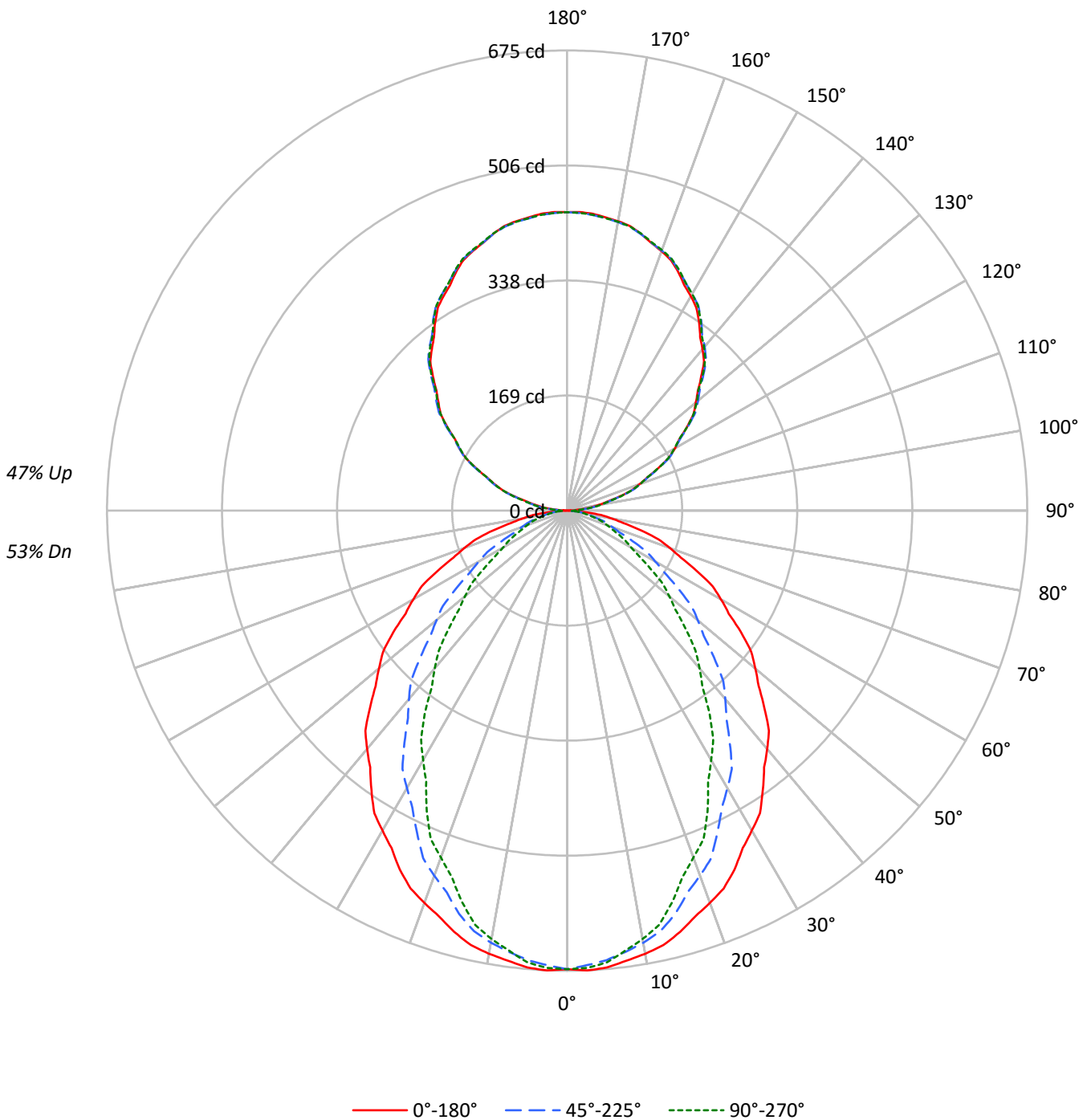
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331788-930

CATALOG NUMBER: S122RDIW-S485D435U930-4F0-1E-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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	99	95	91	88	92	88	85	82	75	73	71	64	62	61	53	52	51	46
2	91	83	77	72	84	78	72	68	67	63	59	56	54	51	47	45	44	39
3	83	74	67	61	77	69	62	57	59	55	51	50	47	44	42	40	38	34
4	76	66	58	52	70	61	54	49	53	48	44	45	41	38	38	35	33	29
5	70	59	51	45	65	55	48	43	48	42	38	41	37	33	35	31	29	26
6	65	53	45	39	60	50	42	37	43	38	33	37	33	30	32	28	26	23
7	60	48	40	35	56	45	38	33	39	34	30	34	30	26	29	26	23	21
8	56	44	36	31	52	41	34	29	36	30	27	31	27	24	27	23	21	19
9	52	40	33	28	48	38	31	26	33	28	24	29	25	21	25	21	19	17
10	49	37	30	25	45	35	28	24	31	25	22	27	22	19	23	20	17	15

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: P331788-930

CATALOG NUMBER: S122RDIW-S485D435U930-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.0	2.4
10°-20°	172.9	6.6
20°-30°	242.8	9.3
30°-40°	264.8	10.1
40°-50°	243.5	9.3
50°-60°	191.2	7.3
60°-70°	124.7	4.8
70°-80°	64.3	2.5
80°-90°	18.4	0.7
90°-100°	27.7	1.1
100°-110°	86.1	3.3
110°-120°	147.2	5.6
120°-130°	193.6	7.4
130°-140°	217.3	8.3
140°-150°	213.1	8.2
150°-160°	178.7	6.8
160°-170°	118.6	4.5
170°-180°	41.4	1.6
0°-30°	478.7	18.3
0°-40°	743.5	28.5
0°-60°	1178.2	45.2
0°-90°	1385.6	53.1
90°-120°	261.1	10.0
90°-150°	885.2	33.9
90°-180°	1224.0	46.9
0°-180°	2609.5	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	13	12	13	2
95°	19	23	24	24	23	22
105°	79	80	81	82	82	84
115°	148	150	149	149	148	146
125°	215	218	217	216	216	192
135°	278	282	283	282	281	215
145°	338	340	342	343	341	211
155°	386	387	388	390	389	178
165°	420	420	420	422	420	118
175°	437	436	435	437	436	41
180°	438	438	438	438	438	



TEST NUMBER: P331788-930

CATALOG NUMBER: S122RDIW-S485D435U930-4F0-1E-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	7.2	6.5	5.9	5.2	5.1	5.4	5.8	6.1	6.5	6.4
90°	0.4	1.4	2.4	3.3	4.3	5.7	7.5	9.3	11.1	13.0	12.8
92.5°	6.6	7.3	8.0	8.7	9.5	10.0	10.4	10.9	11.3	11.7	11.7
95°	19.2	20.1	20.9	21.7	22.5	23.0	23.2	23.3	23.5	23.6	23.6
97.5°	35.1	35.8	36.5	37.3	38.0	38.5	38.8	39.1	39.5	39.7	39.7
100°	46.9	47.5	48.2	48.9	49.6	50.0	50.2	50.5	50.7	51.0	51.0
102.5°	59.4	59.8	60.3	60.9	61.4	61.9	62.1	62.5	62.8	63.1	63.2
105°	79.4	79.7	79.9	80.1	80.4	80.6	80.8	81.0	81.1	81.3	81.4
107.5°	99.6	100.0	100.4	100.8	101.1	101.3	101.3	101.3	101.3	101.3	101.3
110°	112.7	113.2	113.7	114.1	114.6	114.9	114.9	114.9	114.9	114.9	114.9



TEST NUMBER: P331788-930

CATALOG NUMBER: S122RDIW-S485D435U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	126.9	127.3	127.8	128.3	128.8	129.1	129.0	128.9	128.8	128.7	128.6
115°	147.7	148.2	148.7	149.2	149.7	149.9	149.7	149.5	149.4	149.2	149.1
117.5°	168.6	169.3	169.9	170.6	171.2	171.3	170.9	170.4	169.9	169.5	169.3
120°	182.5	183.1	183.8	184.4	185.1	185.1	184.4	183.8	183.1	182.5	182.5
122.5°	195.2	196.0	196.7	197.5	198.4	198.5	198.0	197.5	197.1	196.7	196.5
125°	215.0	215.7	216.5	217.2	217.9	218.2	217.9	217.7	217.4	217.2	217.0
127.5°	234.2	235.2	236.1	237.1	238.0	238.3	238.1	237.7	237.4	237.2	236.8
130°	246.4	247.4	248.5	249.6	250.6	251.1	250.9	250.8	250.6	250.5	250.3
132.5°	260.0	260.8	261.7	262.6	263.4	263.9	263.9	264.0	264.0	264.0	263.7
135°	278.2	279.1	280.0	280.9	281.8	282.3	282.4	282.6	282.7	282.9	282.8
137.5°	297.3	298.0	298.7	299.5	300.2	300.7	300.9	301.2	301.3	301.6	301.5
140°	308.8	309.6	310.3	311.0	311.8	312.3	312.7	313.2	313.6	314.0	314.0
142.5°	320.7	321.4	322.1	322.9	323.6	324.1	324.3	324.7	324.9	325.2	325.3
145°	337.6	338.2	338.8	339.3	339.9	340.5	341.0	341.4	341.9	342.4	342.5
147.5°	352.8	353.4	354.2	354.8	355.6	356.0	356.4	356.7	357.0	357.3	357.5
150°	363.1	363.6	364.1	364.6	365.1	365.5	365.8	366.2	366.5	366.8	367.0
152.5°	372.3	372.8	373.2	373.7	374.2	374.7	375.0	375.4	375.9	376.3	376.6
155°	386.0	386.2	386.5	386.8	387.0	387.3	387.5	387.8	388.0	388.2	388.7
157.5°	397.8	397.9	398.1	398.3	398.4	398.5	398.7	398.8	399.0	399.2	399.7
160°	404.9	405.0	405.2	405.4	405.5	405.6	405.7	405.8	405.9	405.9	406.4
162.5°	411.3	411.4	411.4	411.4	411.5	411.6	411.6	411.7	411.8	411.9	412.4
165°	420.0	419.9	419.8	419.7	419.6	419.6	419.6	419.6	419.6	419.6	420.2
167.5°	427.2	427.0	426.7	426.5	426.2	426.1	426.1	426.1	426.1	426.1	426.6
170°	431.0	430.8	430.6	430.3	430.1	429.9	429.8	429.7	429.7	429.6	430.2
172.5°	433.7	433.5	433.3	433.0	432.8	432.6	432.5	432.4	432.4	432.3	432.8
175°	437.0	436.8	436.5	436.3	436.0	435.8	435.6	435.5	435.3	435.1	435.7
177.5°	438.3	438.1	437.9	437.7	437.5	437.3	437.2	437.1	436.9	436.8	437.2
180°	437.7	437.7	437.7	437.7	437.7	437.7	437.7	437.7	437.7	437.7	437.7



TEST NUMBER: P331788-930

CATALOG NUMBER: S122RDIW-S485D435U930-4F0-1E-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°	6.2	6.0	6.0	5.9	5.9	5.9	5.9	6.0
90°	12.6	12.5	12.3	12.2	12.3	12.4	12.5	12.6
92.5°	11.8	11.8	11.9	11.9	11.9	11.9	12.0	12.0
95°	23.6	23.6	23.6	23.6	23.4	23.2	23.1	22.9
97.5°	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7
100°	51.0	51.0	51.0	51.0	50.9	50.8	50.7	50.6
102.5°	63.2	63.3	63.3	63.3	63.3	63.2	63.1	63.0
105°	81.6	81.8	81.9	82.0	82.0	82.0	82.0	82.0
107.5°	101.4	101.5	101.6	101.4	101.0	100.6	100.3	99.9
110°	114.9	114.9	114.9	114.7	114.5	114.2	114.0	113.7



TEST NUMBER: P331788-930

CATALOG NUMBER: S122RDIW-S485D435U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	128.4	128.2	128.0	127.8	127.6	127.4	127.3	127.1
115°	149.0	149.0	148.9	148.7	148.5	148.2	148.0	147.7
117.5°	169.1	168.8	168.7	168.4	168.2	168.0	167.7	167.5
120°	182.5	182.5	182.5	182.4	182.1	181.9	181.6	181.4
122.5°	196.2	196.1	195.8	195.7	195.5	195.3	195.1	194.9
125°	216.7	216.5	216.2	216.1	216.0	215.9	215.8	215.7
127.5°	236.5	236.3	235.9	235.7	235.4	235.1	234.9	234.6
130°	250.1	250.0	249.8	249.6	249.2	248.9	248.6	248.3
132.5°	263.3	262.9	262.6	262.3	262.0	261.7	261.5	261.2
135°	282.7	282.7	282.6	282.4	282.2	281.9	281.7	281.4
137.5°	301.4	301.3	301.3	301.1	300.8	300.4	300.1	299.8
140°	314.0	314.0	314.0	313.8	313.5	313.2	312.8	312.5
142.5°	325.3	325.4	325.5	325.3	325.0	324.7	324.3	324.0
145°	342.6	342.7	342.8	342.6	342.3	341.9	341.6	341.3
147.5°	357.7	357.9	358.1	358.0	357.7	357.3	357.0	356.8
150°	367.3	367.5	367.8	367.8	367.5	367.3	367.0	366.8
152.5°	376.8	377.2	377.5	377.5	377.2	376.8	376.6	376.3
155°	389.1	389.5	389.9	390.0	389.7	389.5	389.2	389.0
157.5°	400.2	400.8	401.4	401.5	401.0	400.6	400.3	399.9
160°	406.9	407.4	407.9	408.0	407.6	407.3	407.0	406.7
162.5°	412.9	413.5	414.1	414.2	413.8	413.4	412.9	412.6
165°	420.8	421.3	421.9	422.0	421.6	421.2	420.8	420.4
167.5°	427.2	427.8	428.4	428.4	428.0	427.5	427.1	426.7
170°	430.7	431.3	431.9	431.9	431.5	431.0	430.5	430.0
172.5°	433.4	434.0	434.6	434.6	434.1	433.6	433.1	432.6
175°	436.3	436.8	437.4	437.5	437.0	436.5	436.0	435.5
177.5°	437.7	438.0	438.4	438.4	438.0	437.7	437.2	436.8
180°	437.7	437.7	437.7	437.7	437.7	437.7	437.7	437.7

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