

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: P331528-935

Luminaire Tested: **S122DIW-S675D435U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331528-935
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: S122DIW-S675D435U935-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3608.2 lumens
Efficiency: N/A
Efficacy: 95.7 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

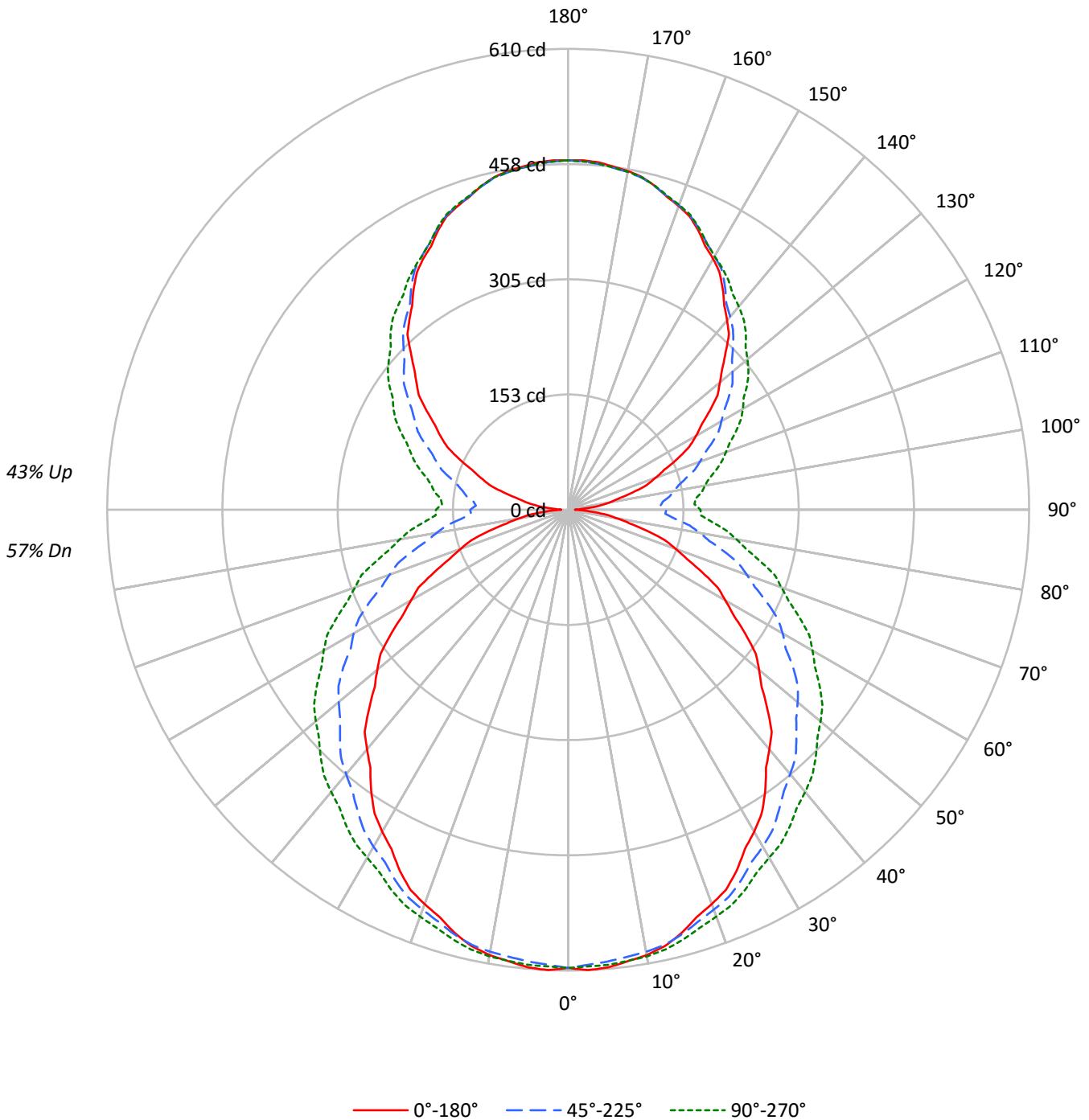
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331528-935

CATALOG NUMBER: S122DIW-S675D435U935-4F0-1E-UDD-D1

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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	63	63	63	57
1	98	93	88	84	91	86	82	78	74	71	68	63	61	58	53	51	49	44
2	88	80	73	67	82	74	68	63	64	59	55	54	51	48	45	43	40	36
3	80	70	62	55	74	65	58	52	56	50	46	47	43	39	40	36	34	30
4	73	61	53	46	67	57	49	44	49	43	38	42	37	33	35	31	28	25
5	67	54	46	39	62	51	43	37	44	38	33	37	32	29	31	28	25	21
6	62	49	40	34	57	45	38	32	39	33	28	34	29	25	28	24	21	19
7	57	44	35	30	53	41	33	28	36	29	25	31	26	22	26	22	19	16
8	53	40	32	26	49	37	30	25	32	26	22	28	23	19	24	20	17	14
9	49	36	28	23	45	34	27	22	30	24	20	26	21	17	22	18	15	13
10	46	33	26	21	43	31	24	20	27	22	18	24	19	16	20	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9792	9792	9792
5°	9839	9426	9390
10°	9778	9148	9044
15°	9643	8853	8681
20°	9473	8536	8331
25°	9305	8231	8014
30°	9067	7919	7694
35°	8828	7615	7468
40°	8576	7358	7243
45°	8334	7127	7051
50°	8078	6920	6861
55°	7810	6696	6668
60°	7480	6465	6465
65°	7135	6192	6222
70°	6751	5899	5960
75°	6257	5612	5720
80°	5488	5319	5476
85°	4743	5064	5286



TEST NUMBER: P331528-935

CATALOG NUMBER: S122DIW-S675D435U935-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.5	1.6
10°-20°	164.8	4.6
20°-30°	249.7	6.9
30°-40°	304.2	8.4
40°-50°	327.2	9.1
50°-60°	317.8	8.8
60°-70°	277.5	7.7
70°-80°	213.6	5.9
80°-90°	145.2	4.0
90°-100°	128.1	3.5
100°-110°	163.1	4.5
110°-120°	203.1	5.6
120°-130°	231.1	6.4
130°-140°	240.7	6.7
140°-150°	227.0	6.3
150°-160°	188.8	5.2
160°-170°	125.2	3.5
170°-180°	43.8	1.2
0°-30°	472.0	13.1
0°-40°	776.1	21.5
0°-60°	1421.1	39.4
0°-90°	2057.4	57.0
90°-120°	494.3	13.7
90°-150°	1193.0	33.1
90°-180°	1551.0	43.0
0°-180°	3608.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	608	605	600	605	605	58
15°	580	582	582	589	589	163
25°	527	534	541	552	555	242
35°	454	469	486	505	512	284
45°	373	397	427	453	463	288
55°	286	318	363	394	406	255
65°	195	239	290	325	338	194
75°	108	158	214	250	263	114
85°	32	86	142	178	192	34
90°	9	65	130	163	175	7
95°	27	73	126	158	169	29
105°	88	116	161	192	203	94
115°	160	173	210	235	245	157
125°	229	234	259	281	289	205
135°	295	299	308	326	332	228
145°	356	359	362	367	370	223
155°	408	409	410	412	411	188
165°	444	443	443	446	444	125
175°	462	460	460	462	460	44
180°	462	462	462	462	462	



TEST NUMBER: P331528-935

CATALOG NUMBER: S122DIW-S675D435U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5
2.5°	610.0	609.5	609.1	608.6	608.1	607.3	606.2	605.1	604.1	603.0	603.7
5°	608.2	607.6	607.1	606.5	605.9	605.0	603.8	602.7	601.5	600.3	601.5
7.5°	602.8	602.4	602.0	601.6	601.2	600.5	599.7	598.7	597.9	597.0	598.4
10°	598.6	598.1	597.8	597.4	597.0	596.5	595.9	595.4	594.8	594.2	595.7
12.5°	591.5	591.6	591.7	591.8	591.9	591.7	591.2	590.8	590.4	590.0	591.5
15°	580.1	580.5	580.9	581.3	581.7	581.9	581.9	581.9	581.9	581.9	583.6
17.5°	565.3	566.2	567.0	567.8	568.6	569.4	570.0	570.6	571.2	571.9	573.7
20°	555.5	556.5	557.4	558.4	559.4	560.3	561.0	561.9	562.7	563.4	565.6
22.5°	544.9	546.0	547.3	548.4	549.5	550.6	551.7	552.8	553.9	555.0	557.2
25°	527.4	528.7	530.1	531.5	532.9	534.4	536.1	538.0	539.7	541.4	543.8
27.5°	506.3	508.5	510.7	513.0	515.2	517.4	519.4	521.5	523.6	525.6	528.6
30°	492.2	494.7	497.3	499.8	502.4	504.9	507.5	510.0	512.6	515.1	518.1
32.5°	476.7	479.6	482.4	485.3	488.2	491.1	494.1	497.1	500.1	503.1	506.7
35°	454.4	457.7	461.1	464.3	467.7	471.2	474.9	478.6	482.3	486.0	490.3
37.5°	430.2	434.0	437.8	441.6	445.5	449.8	454.6	459.4	464.2	469.0	473.8
40°	414.0	418.3	422.6	426.9	431.2	435.9	441.3	446.5	451.8	457.0	462.1
42.5°	398.6	402.8	407.1	411.4	415.7	420.9	427.0	433.0	439.0	445.1	450.6
45°	372.6	378.0	383.2	388.5	393.7	399.8	406.7	413.5	420.3	427.1	433.3
47.5°	347.2	352.9	358.7	364.4	370.1	377.0	385.0	393.0	401.1	409.1	415.4
50°	329.6	335.7	341.7	347.8	353.8	361.3	370.1	378.8	387.6	396.4	403.0
52.5°	312.7	319.1	325.5	331.8	338.2	346.0	355.2	364.5	373.8	383.1	389.9
55°	285.7	292.7	299.7	306.8	313.7	322.4	332.5	342.7	352.8	363.0	370.1
57.5°	258.9	266.9	274.8	282.8	290.7	299.8	310.1	320.5	330.9	341.2	348.8
60°	240.0	248.3	256.8	265.2	273.5	283.4	294.5	305.6	316.7	327.9	335.3
62.5°	223.1	231.8	240.5	249.2	258.0	267.9	279.0	290.1	301.3	312.4	320.3
65°	195.1	204.7	214.3	223.9	233.4	243.9	255.5	267.0	278.5	290.1	298.1
67.5°	169.4	179.4	189.5	199.5	209.5	220.3	232.1	243.9	255.7	267.5	275.6
70°	151.2	161.4	171.5	181.7	191.8	202.9	215.1	227.1	239.3	251.4	259.8
72.5°	134.3	144.7	155.2	165.7	176.2	187.5	199.8	212.1	224.4	236.6	244.9
75°	108.1	119.1	130.0	140.9	151.9	163.6	176.1	188.6	201.0	213.6	222.0
77.5°	82.8	94.3	105.7	117.1	128.5	140.7	153.3	166.1	178.7	191.4	199.8
80°	66.0	77.8	89.7	101.7	113.6	125.9	138.6	151.3	163.9	176.7	184.9
82.5°	51.8	63.6	75.3	87.1	98.9	111.2	124.1	136.9	149.7	162.6	170.8
85°	31.7	43.7	55.9	67.9	80.1	92.4	104.9	117.4	129.9	142.4	150.6
87.5°	17.3	29.2	41.0	52.9	64.7	77.1	90.0	102.8	115.7	128.6	136.6
90°	9.2	21.5	33.9	46.3	58.6	72.1	86.4	100.8	115.3	129.7	137.3
92.5°	15.1	26.3	37.6	49.0	60.3	72.2	84.6	97.1	109.6	122.1	129.8
95°	27.3	37.4	47.4	57.4	67.5	78.4	90.4	102.3	114.2	126.1	133.5
97.5°	43.2	52.2	61.0	70.0	79.0	89.2	100.7	112.4	123.9	135.5	142.8
100°	55.7	63.6	71.5	79.5	87.4	96.9	108.1	119.3	130.5	141.7	149.0
102.5°	68.1	75.3	82.4	89.5	96.7	105.8	116.8	127.7	138.6	149.6	156.7
105°	88.3	94.2	100.1	106.1	111.9	120.1	130.4	140.8	151.1	161.4	168.4
107.5°	109.4	114.3	119.2	124.2	129.2	136.5	146.2	155.9	165.7	175.4	182.0
110°	122.5	126.9	131.3	135.8	140.2	147.2	156.8	166.3	175.9	185.5	191.7



TEST NUMBER: P331528-935

CATALOG NUMBER: S122DIW-S675D435U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	137.5	141.3	145.1	148.9	152.7	159.1	168.2	177.2	186.2	195.2	201.3
115°	159.5	162.2	164.9	167.6	170.2	175.9	184.5	193.1	201.7	210.3	216.1
117.5°	180.6	182.8	184.9	187.0	189.1	193.9	201.6	209.2	216.9	224.5	230.1
120°	195.4	196.8	198.3	199.8	201.2	205.5	212.7	219.8	226.9	234.0	239.4
122.5°	208.8	209.9	211.0	212.2	213.4	217.3	224.2	231.1	237.9	244.8	249.9
125°	228.8	229.5	230.3	231.1	231.9	235.3	241.3	247.3	253.2	259.2	264.2
127.5°	249.2	249.9	250.7	251.5	252.4	255.1	259.8	264.5	269.2	274.0	278.5
130°	261.9	262.9	263.8	264.8	265.7	268.1	272.0	276.0	279.9	283.8	288.3
132.5°	276.3	277.0	277.8	278.4	279.2	281.1	284.4	287.6	290.8	293.9	298.1
135°	294.6	295.6	296.5	297.5	298.4	300.0	302.1	304.2	306.3	308.5	312.5
137.5°	314.8	315.6	316.3	317.0	317.8	318.7	319.8	320.9	321.9	323.0	326.6
140°	327.0	327.6	328.1	328.7	329.3	330.0	330.9	331.7	332.5	333.3	336.5
142.5°	339.5	340.1	340.6	341.2	341.8	342.2	342.7	343.0	343.4	343.8	346.4
145°	356.5	357.1	357.7	358.3	359.0	359.6	360.1	360.6	361.1	361.6	362.8
147.5°	372.6	373.2	374.0	374.7	375.5	376.0	376.3	376.7	377.0	377.4	377.7
150°	383.5	384.0	384.5	385.0	385.6	386.0	386.3	386.7	387.0	387.4	387.6
152.5°	393.1	393.6	394.2	394.7	395.2	395.7	396.1	396.5	396.9	397.4	397.7
155°	407.6	407.9	408.1	408.5	408.7	409.0	409.2	409.5	409.7	410.0	410.4
157.5°	420.1	420.3	420.4	420.6	420.8	420.9	421.0	421.2	421.4	421.5	422.1
160°	427.6	427.7	427.9	428.1	428.3	428.3	428.4	428.5	428.6	428.7	429.2
162.5°	434.4	434.5	434.5	434.5	434.5	434.6	434.7	434.8	434.9	435.0	435.5
165°	443.5	443.4	443.3	443.2	443.2	443.2	443.2	443.2	443.2	443.2	443.8
167.5°	451.2	450.9	450.6	450.4	450.1	450.0	450.0	450.0	450.0	450.0	450.6
170°	455.2	455.0	454.7	454.4	454.2	454.0	453.9	453.8	453.7	453.7	454.3
172.5°	458.1	457.8	457.5	457.3	457.0	456.8	456.8	456.7	456.6	456.5	457.1
175°	461.5	461.2	461.0	460.7	460.5	460.2	460.0	459.9	459.7	459.5	460.1
177.5°	462.9	462.7	462.4	462.3	462.0	461.8	461.8	461.6	461.4	461.3	461.8
180°	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3



TEST NUMBER: P331528-935

CATALOG NUMBER: S122DIW-S675D435U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5
2.5°	604.5	605.3	606.1	606.3	606.0	605.7	605.4	605.1
5°	602.7	603.8	605.0	605.5	605.3	605.1	604.9	604.7
7.5°	599.8	601.2	602.6	603.2	603.0	602.8	602.6	602.4
10°	597.3	598.8	600.5	601.1	600.9	600.7	600.5	600.3
12.5°	593.1	594.6	596.2	596.8	596.7	596.5	596.3	596.1
15°	585.4	587.1	588.9	589.7	589.5	589.3	589.1	588.9
17.5°	575.5	577.4	579.2	580.1	580.1	580.1	580.1	580.1
20°	567.7	569.9	572.0	573.1	573.1	573.1	573.1	573.1
22.5°	559.3	561.5	563.5	564.8	565.1	565.4	565.8	566.0
25°	546.1	548.5	550.8	552.2	552.8	553.5	554.1	554.7
27.5°	531.6	534.5	537.5	539.2	539.6	540.0	540.4	540.9
30°	521.3	524.4	527.5	529.4	530.0	530.6	531.2	531.8
32.5°	510.3	513.9	517.5	519.8	520.9	521.9	523.0	524.0
35°	494.6	498.9	503.3	506.1	507.5	508.9	510.1	511.5
37.5°	478.5	483.3	488.1	491.2	492.7	494.0	495.5	497.0
40°	467.2	472.3	477.3	480.8	482.5	484.3	486.0	487.8
42.5°	456.2	461.8	467.3	471.0	472.7	474.5	476.2	477.9
45°	439.3	445.3	451.4	455.4	457.4	459.3	461.2	463.2
47.5°	421.7	428.1	434.4	438.6	440.7	442.9	445.1	447.2
50°	409.7	416.3	423.0	427.4	429.6	431.7	433.8	435.9
52.5°	396.7	403.5	410.3	414.8	417.1	419.4	421.7	424.0
55°	377.0	384.1	391.2	395.9	398.5	401.0	403.6	406.0
57.5°	356.4	363.9	371.5	376.6	379.2	381.8	384.4	386.9
60°	342.7	350.1	357.6	362.7	365.3	368.1	370.8	373.6
62.5°	328.1	336.0	344.0	349.2	351.7	354.3	356.9	359.5
65°	306.1	314.1	322.1	327.4	329.9	332.4	335.0	337.5
67.5°	283.7	291.8	299.9	305.3	307.9	310.6	313.2	315.9
70°	268.2	276.6	285.0	290.3	292.7	295.1	297.4	299.7
72.5°	253.1	261.3	269.6	275.1	277.9	280.8	283.5	286.4
75°	230.4	238.8	247.2	252.6	255.2	257.7	260.3	262.8
77.5°	208.2	216.5	224.9	230.4	233.2	235.9	238.6	241.3
80°	193.0	201.3	209.5	215.0	217.7	220.4	223.2	225.9
82.5°	179.0	187.2	195.4	200.8	203.4	206.0	208.5	211.1
85°	158.8	167.0	175.2	180.6	183.4	186.1	188.9	191.6
87.5°	144.5	152.4	160.3	165.6	168.1	170.6	173.1	175.6
90°	145.0	152.6	160.2	165.2	167.7	170.1	172.5	175.0
92.5°	137.5	145.2	152.8	157.9	160.2	162.6	165.0	167.3
95°	140.9	148.4	155.8	160.5	162.7	164.9	167.0	169.2
97.5°	150.0	157.1	164.4	169.2	171.4	173.7	176.0	178.3
100°	156.2	163.4	170.7	175.3	177.4	179.4	181.5	183.6
102.5°	163.8	171.0	178.1	182.8	184.9	186.9	188.9	191.0
105°	175.4	182.4	189.4	194.0	196.1	198.3	200.4	202.6
107.5°	188.6	195.3	201.9	206.0	207.8	209.6	211.3	213.1
110°	197.9	204.2	210.5	214.6	216.5	218.3	220.2	222.1



TEST NUMBER: P331528-935

CATALOG NUMBER: S122DIW-S675D435U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	207.3	213.4	219.4	223.4	225.3	227.3	229.3	231.3
115°	221.9	227.6	233.4	237.3	239.1	241.0	242.9	244.8
117.5°	235.7	241.3	246.8	250.5	252.2	253.9	255.6	257.4
120°	245.0	250.4	255.9	259.6	261.5	263.4	265.3	267.1
122.5°	254.9	260.1	265.2	268.5	270.2	271.8	273.5	275.2
125°	269.3	274.3	279.3	282.7	284.3	286.0	287.7	289.3
127.5°	283.0	287.6	292.1	295.1	296.5	298.0	299.5	300.8
130°	292.8	297.4	301.9	304.7	305.9	307.2	308.4	309.6
132.5°	302.2	306.4	310.6	313.2	314.5	315.8	317.1	318.4
135°	316.5	320.6	324.5	327.2	328.5	329.8	331.1	332.4
137.5°	330.1	333.6	337.2	339.4	340.4	341.4	342.3	343.3
140°	339.6	342.7	345.9	347.8	348.6	349.5	350.3	351.1
142.5°	348.9	351.5	354.0	355.7	356.4	357.1	357.7	358.3
145°	364.1	365.4	366.6	367.6	368.2	368.9	369.5	370.1
147.5°	378.1	378.4	378.8	379.0	379.1	379.3	379.4	379.5
150°	387.9	388.1	388.4	388.4	388.1	387.9	387.6	387.4
152.5°	398.0	398.3	398.6	398.6	398.3	398.0	397.7	397.4
155°	410.9	411.3	411.7	411.8	411.6	411.3	411.0	410.8
157.5°	422.7	423.3	423.9	424.0	423.5	423.1	422.8	422.3
160°	429.7	430.2	430.8	430.8	430.5	430.2	429.8	429.5
162.5°	436.1	436.7	437.3	437.4	437.0	436.5	436.1	435.8
165°	444.4	445.0	445.6	445.7	445.2	444.8	444.4	443.9
167.5°	451.2	451.8	452.4	452.5	451.9	451.5	451.1	450.6
170°	454.9	455.5	456.1	456.2	455.6	455.1	454.6	454.1
172.5°	457.7	458.3	458.9	458.9	458.4	457.9	457.4	456.8
175°	460.7	461.3	461.9	462.0	461.5	461.0	460.5	459.9
177.5°	462.2	462.5	463.0	463.0	462.5	462.2	461.8	461.3
180°	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3

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