

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: P331528-927

Luminaire Tested: **S122DIW-S675D435U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331528-927
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-S675D435U927-4F0-1E-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: 3319.8 lumens
Efficiency: N/A
Efficacy: 88.1 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

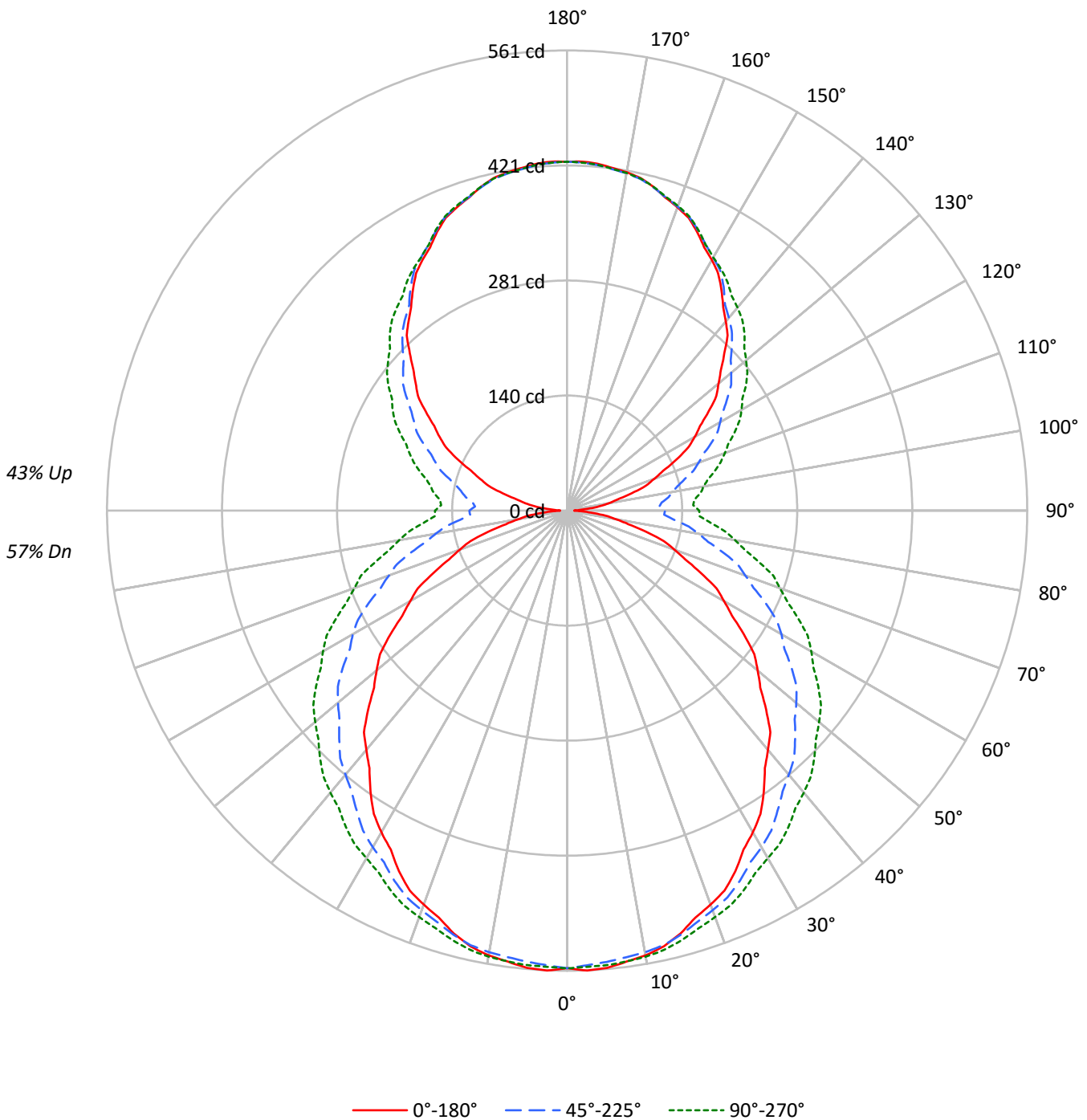
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331528-927

CATALOG NUMBER: S122DIW-S675D435U927-4F0-1E-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°	9009	9009	9009
5°	9053	8672	8638
10°	8996	8417	8321
15°	8873	8146	7988
20°	8716	7854	7665
25°	8561	7573	7372
30°	8343	7286	7079
35°	8122	7007	6870
40°	7890	6771	6665
45°	7670	6558	6488
50°	7431	6366	6313
55°	7184	6161	6135
60°	6882	5948	5948
65°	6564	5697	5724
70°	6211	5427	5485
75°	5759	5163	5263
80°	5048	4895	5040
85°	4369	4658	4864



TEST NUMBER: P331528-927

CATALOG NUMBER: S122DIW-S675D435U927-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.9	1.6
10°-20°	151.6	4.6
20°-30°	229.8	6.9
30°-40°	279.8	8.4
40°-50°	301.1	9.1
50°-60°	292.4	8.8
60°-70°	255.3	7.7
70°-80°	196.5	5.9
80°-90°	133.6	4.0
90°-100°	117.8	3.5
100°-110°	150.1	4.5
110°-120°	186.9	5.6
120°-130°	212.6	6.4
130°-140°	221.4	6.7
140°-150°	208.8	6.3
150°-160°	173.7	5.2
160°-170°	115.2	3.5
170°-180°	40.3	1.2
0°-30°	434.3	13.1
0°-40°	714.1	21.5
0°-60°	1307.5	39.4
0°-90°	1893.0	57.0
90°-120°	454.8	13.7
90°-150°	1097.7	33.1
90°-180°	1427.0	43.0
0°-180°	3319.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	558	558	558	558	558	
5°	560	557	552	557	556	53
15°	534	535	535	542	542	150
25°	485	491	498	507	510	223
35°	418	432	447	464	471	261
45°	343	365	393	417	426	265
55°	263	293	334	362	374	235
65°	180	220	267	299	310	178
75°	100	145	196	230	242	105
85°	29	79	131	164	176	31
90°	8	60	119	150	161	6
95°	25	67	116	146	156	27
105°	81	107	148	176	186	86
115°	147	159	194	217	225	145
125°	210	215	238	259	266	188
135°	271	275	284	300	306	210
145°	328	331	333	338	341	205
155°	375	376	377	379	378	173
165°	408	408	408	410	408	115
175°	425	424	423	425	423	40
180°	425	425	425	425	425	



TEST NUMBER: P331528-927

CATALOG NUMBER: S122DIW-S675D435U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0
2.5°	561.3	560.8	560.4	559.9	559.5	558.8	557.8	556.7	555.8	554.8	555.5
5°	559.6	559.0	558.6	558.0	557.5	556.7	555.6	554.5	553.4	552.3	553.4
7.5°	554.6	554.2	553.9	553.5	553.2	552.5	551.8	550.9	550.1	549.3	550.6
10°	550.7	550.3	550.0	549.6	549.3	548.8	548.3	547.8	547.2	546.7	548.1
12.5°	544.2	544.3	544.4	544.5	544.5	544.4	544.0	543.6	543.2	542.8	544.2
15°	533.8	534.1	534.5	534.8	535.2	535.4	535.4	535.4	535.4	535.4	536.9
17.5°	520.1	520.9	521.7	522.4	523.2	523.9	524.4	525.0	525.5	526.2	527.8
20°	511.1	512.0	512.9	513.8	514.7	515.5	516.2	517.0	517.7	518.4	520.4
22.5°	501.4	502.4	503.5	504.5	505.6	506.6	507.6	508.6	509.6	510.6	512.6
25°	485.2	486.5	487.7	489.0	490.3	491.7	493.3	495.0	496.5	498.1	500.3
27.5°	465.8	467.9	469.9	472.0	474.0	476.0	477.9	479.8	481.7	483.6	486.3
30°	452.9	455.2	457.6	459.9	462.2	464.5	466.9	469.2	471.6	473.9	476.7
32.5°	438.6	441.2	443.9	446.5	449.2	451.9	454.6	457.3	460.1	462.9	466.2
35°	418.1	421.1	424.2	427.2	430.3	433.6	437.0	440.4	443.8	447.2	451.1
37.5°	395.8	399.3	402.8	406.3	409.9	413.8	418.3	422.7	427.1	431.5	435.9
40°	380.9	384.8	388.8	392.8	396.7	401.1	406.0	410.8	415.7	420.5	425.2
42.5°	366.7	370.6	374.5	378.5	382.5	387.2	392.8	398.4	403.9	409.6	414.6
45°	342.9	347.8	352.6	357.4	362.3	367.9	374.1	380.5	386.7	393.0	398.6
47.5°	319.4	324.7	330.0	335.3	340.6	346.9	354.3	361.6	369.0	376.4	382.2
50°	303.2	308.9	314.4	320.0	325.5	332.4	340.5	348.6	356.6	364.7	370.8
52.5°	287.7	293.6	299.4	305.3	311.2	318.4	326.9	335.4	343.9	352.4	358.7
55°	262.8	269.3	275.8	282.3	288.7	296.6	305.9	315.3	324.6	334.0	340.5
57.5°	238.2	245.6	252.9	260.2	267.4	275.8	285.3	294.9	304.4	313.9	320.9
60°	220.8	228.5	236.2	244.0	251.7	260.7	270.9	281.1	291.4	301.7	308.5
62.5°	205.3	213.3	221.3	229.3	237.3	246.4	256.7	266.9	277.2	287.4	294.7
65°	179.5	188.3	197.2	206.0	214.8	224.4	235.0	245.7	256.3	266.9	274.3
67.5°	155.9	165.1	174.4	183.5	192.7	202.7	213.6	224.4	235.3	246.1	253.6
70°	139.1	148.5	157.8	167.2	176.5	186.7	197.9	209.0	220.1	231.3	239.0
72.5°	123.6	133.2	142.8	152.5	162.1	172.5	183.9	195.1	206.4	217.7	225.3
75°	99.5	109.6	119.6	129.7	139.7	150.5	162.0	173.5	185.0	196.5	204.2
77.5°	76.2	86.7	97.3	107.7	118.3	129.4	141.1	152.8	164.5	176.1	183.9
80°	60.7	71.6	82.5	93.6	104.5	115.8	127.5	139.2	150.8	162.6	170.1
82.5°	47.7	58.5	69.3	80.2	91.0	102.3	114.2	126.0	137.8	149.6	157.2
85°	29.2	40.2	51.4	62.5	73.7	85.0	96.5	108.0	119.5	131.0	138.6
87.5°	15.9	26.9	37.7	48.6	59.5	70.9	82.8	94.6	106.5	118.4	125.6
90°	8.5	19.8	31.2	42.6	53.9	66.3	79.5	92.8	106.1	119.3	126.4
92.5°	13.9	24.2	34.6	45.1	55.5	66.4	77.9	89.4	100.8	112.3	119.4
95°	25.1	34.4	43.6	52.8	62.1	72.2	83.2	94.1	105.0	116.0	122.8
97.5°	39.8	48.0	56.2	64.4	72.6	82.1	92.7	103.4	114.0	124.7	131.3
100°	51.3	58.5	65.8	73.1	80.4	89.2	99.5	109.8	120.1	130.4	137.0
102.5°	62.7	69.2	75.8	82.4	89.0	97.4	107.4	117.5	127.5	137.7	144.2
105°	81.2	86.7	92.1	97.6	103.0	110.5	120.0	129.5	139.0	148.5	155.0
107.5°	100.7	105.2	109.7	114.3	118.8	125.6	134.5	143.5	152.4	161.4	167.5
110°	112.7	116.8	120.8	124.9	129.0	135.5	144.3	153.0	161.8	170.6	176.4



TEST NUMBER: P331528-927

CATALOG NUMBER: S122DIW-S675D435U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	126.5	130.0	133.5	137.0	140.5	146.4	154.7	163.0	171.3	179.6	185.2
115°	146.8	149.2	151.7	154.2	156.6	161.8	169.8	177.7	185.6	193.5	198.8
117.5°	166.2	168.2	170.1	172.1	174.0	178.4	185.4	192.5	199.6	206.5	211.7
120°	179.7	181.1	182.4	183.8	185.1	189.1	195.7	202.2	208.7	215.3	220.3
122.5°	192.1	193.1	194.2	195.2	196.3	199.9	206.3	212.6	218.9	225.2	229.9
125°	210.5	211.2	211.9	212.6	213.3	216.5	222.0	227.5	233.0	238.5	243.1
127.5°	229.3	230.0	230.7	231.4	232.2	234.7	239.1	243.4	247.7	252.1	256.3
130°	241.0	241.9	242.7	243.6	244.5	246.7	250.3	253.9	257.5	261.1	265.3
132.5°	254.2	254.8	255.6	256.2	256.9	258.6	261.7	264.6	267.5	270.5	274.3
135°	271.1	272.0	272.8	273.7	274.6	276.0	278.0	279.9	281.9	283.8	287.5
137.5°	289.6	290.3	291.0	291.7	292.4	293.2	294.2	295.2	296.2	297.2	300.5
140°	300.9	301.4	301.9	302.5	303.0	303.6	304.4	305.1	305.9	306.7	309.6
142.5°	312.4	312.9	313.4	313.9	314.5	314.9	315.3	315.6	315.9	316.3	318.7
145°	328.0	328.6	329.2	329.7	330.3	330.8	331.3	331.8	332.2	332.7	333.8
147.5°	342.8	343.4	344.1	344.8	345.5	345.9	346.3	346.6	346.9	347.2	347.5
150°	352.8	353.3	353.8	354.3	354.7	355.1	355.5	355.8	356.1	356.4	356.6
152.5°	361.7	362.2	362.7	363.1	363.6	364.1	364.4	364.8	365.2	365.6	365.9
155°	375.0	375.3	375.5	375.8	376.0	376.3	376.5	376.8	377.0	377.2	377.6
157.5°	386.5	386.7	386.8	387.0	387.1	387.2	387.4	387.5	387.7	387.9	388.4
160°	393.4	393.6	393.7	393.9	394.0	394.1	394.2	394.3	394.3	394.4	394.9
162.5°	399.7	399.7	399.7	399.7	399.8	399.9	400.0	400.1	400.1	400.2	400.7
165°	408.1	408.0	407.9	407.8	407.7	407.7	407.7	407.7	407.7	407.7	408.3
167.5°	415.1	414.9	414.6	414.4	414.2	414.0	414.0	414.0	414.0	414.0	414.5
170°	418.8	418.6	418.4	418.1	417.9	417.7	417.6	417.6	417.5	417.4	418.0
172.5°	421.4	421.2	421.0	420.7	420.5	420.3	420.3	420.2	420.1	420.0	420.6
175°	424.6	424.4	424.1	423.9	423.7	423.4	423.3	423.1	422.9	422.8	423.3
177.5°	425.9	425.7	425.5	425.3	425.1	424.9	424.8	424.7	424.5	424.5	424.8
180°	425.3	425.3	425.3	425.3	425.3	425.3	425.3	425.3	425.3	425.3	425.3



TEST NUMBER: P331528-927

CATALOG NUMBER: S122DIW-S675D435U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0
2.5°	556.2	556.9	557.6	557.9	557.5	557.3	557.0	556.7
5°	554.5	555.6	556.7	557.1	556.9	556.7	556.6	556.3
7.5°	551.8	553.2	554.4	555.0	554.8	554.6	554.4	554.3
10°	549.5	551.0	552.5	553.0	552.9	552.7	552.5	552.3
12.5°	545.7	547.1	548.6	549.1	549.0	548.8	548.7	548.4
15°	538.6	540.2	541.9	542.6	542.4	542.2	542.0	541.9
17.5°	529.5	531.2	532.9	533.8	533.8	533.8	533.8	533.8
20°	522.4	524.3	526.2	527.3	527.3	527.3	527.3	527.3
22.5°	514.6	516.6	518.5	519.7	519.9	520.2	520.5	520.8
25°	502.5	504.6	506.8	508.1	508.7	509.2	509.8	510.3
27.5°	489.1	491.8	494.6	496.1	496.5	496.9	497.3	497.6
30°	479.7	482.5	485.4	487.1	487.7	488.2	488.7	489.3
32.5°	469.5	472.9	476.1	478.2	479.3	480.2	481.2	482.1
35°	455.1	459.1	463.0	465.6	466.9	468.2	469.4	470.6
37.5°	440.3	444.7	449.1	451.9	453.3	454.6	455.9	457.2
40°	429.8	434.5	439.2	442.4	443.9	445.6	447.2	448.9
42.5°	419.7	424.8	429.9	433.3	434.9	436.6	438.2	439.7
45°	404.2	409.7	415.3	419.0	420.8	422.6	424.4	426.2
47.5°	388.0	393.9	399.7	403.5	405.5	407.5	409.5	411.5
50°	376.9	383.0	389.2	393.2	395.2	397.2	399.1	401.1
52.5°	365.0	371.2	377.5	381.7	383.7	385.9	388.0	390.1
55°	346.9	353.4	359.9	364.2	366.6	368.9	371.3	373.6
57.5°	327.9	334.9	341.8	346.5	348.9	351.3	353.6	356.0
60°	315.3	322.1	329.0	333.7	336.1	338.7	341.2	343.7
62.5°	301.9	309.2	316.5	321.3	323.6	326.0	328.4	330.7
65°	281.6	289.0	296.4	301.2	303.6	305.9	308.2	310.5
67.5°	261.0	268.5	275.9	280.9	283.3	285.7	288.2	290.7
70°	246.8	254.4	262.2	267.1	269.3	271.5	273.6	275.8
72.5°	232.9	240.4	248.0	253.1	255.7	258.3	260.9	263.5
75°	212.0	219.7	227.4	232.4	234.8	237.1	239.5	241.8
77.5°	191.5	199.2	206.9	212.0	214.5	217.1	219.5	222.0
80°	177.6	185.2	192.7	197.8	200.3	202.8	205.3	207.9
82.5°	164.7	172.2	179.8	184.7	187.1	189.5	191.9	194.2
85°	146.1	153.7	161.2	166.2	168.7	171.3	173.8	176.3
87.5°	132.9	140.2	147.5	152.3	154.6	156.9	159.3	161.6
90°	133.4	140.4	147.4	152.0	154.3	156.5	158.8	161.0
92.5°	126.5	133.6	140.6	145.3	147.4	149.6	151.8	153.9
95°	129.6	136.5	143.3	147.7	149.7	151.7	153.7	155.7
97.5°	138.0	144.6	151.2	155.7	157.7	159.9	161.9	164.1
100°	143.7	150.4	157.0	161.3	163.2	165.1	167.0	168.9
102.5°	150.8	157.3	163.9	168.2	170.1	172.0	173.8	175.7
105°	161.4	167.9	174.3	178.5	180.5	182.4	184.4	186.4
107.5°	173.6	179.7	185.8	189.6	191.2	192.8	194.4	196.1
110°	182.1	187.9	193.7	197.4	199.2	200.9	202.6	204.4



TEST NUMBER: P331528-927

CATALOG NUMBER: S122DIW-S675D435U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	190.8	196.3	201.8	205.6	207.3	209.1	211.0	212.8
115°	204.1	209.5	214.8	218.3	220.0	221.7	223.5	225.2
117.5°	216.8	222.0	227.0	230.4	232.0	233.6	235.2	236.8
120°	225.4	230.4	235.4	238.8	240.6	242.3	244.1	245.7
122.5°	234.6	239.3	244.0	247.1	248.6	250.1	251.7	253.2
125°	247.8	252.4	257.0	260.1	261.6	263.2	264.7	266.2
127.5°	260.4	264.6	268.8	271.5	272.8	274.2	275.5	276.8
130°	269.4	273.6	277.7	280.4	281.5	282.7	283.8	284.9
132.5°	278.1	281.9	285.7	288.2	289.4	290.6	291.8	292.9
135°	291.2	294.9	298.6	301.0	302.2	303.4	304.7	305.9
137.5°	303.7	307.0	310.2	312.3	313.1	314.1	315.0	315.8
140°	312.4	315.3	318.2	320.0	320.8	321.5	322.3	323.1
142.5°	321.0	323.4	325.7	327.3	327.9	328.5	329.1	329.7
145°	335.0	336.2	337.3	338.2	338.8	339.4	339.9	340.6
147.5°	347.8	348.2	348.5	348.7	348.8	349.0	349.1	349.2
150°	356.9	357.1	357.4	357.4	357.1	356.9	356.6	356.4
152.5°	366.1	366.5	366.8	366.8	366.5	366.1	365.9	365.6
155°	378.0	378.4	378.8	378.9	378.7	378.4	378.2	378.0
157.5°	388.9	389.4	390.0	390.1	389.7	389.3	389.0	388.6
160°	395.4	395.9	396.3	396.4	396.1	395.8	395.5	395.1
162.5°	401.2	401.8	402.3	402.4	402.0	401.6	401.2	400.9
165°	408.8	409.4	410.0	410.0	409.6	409.2	408.8	408.4
167.5°	415.1	415.7	416.2	416.3	415.8	415.4	415.0	414.6
170°	418.5	419.1	419.6	419.7	419.2	418.7	418.3	417.8
172.5°	421.1	421.7	422.2	422.2	421.8	421.3	420.8	420.3
175°	423.9	424.5	425.0	425.1	424.6	424.1	423.7	423.2
177.5°	425.2	425.6	426.0	426.0	425.6	425.2	424.8	424.5
180°	425.3	425.3	425.3	425.3	425.3	425.3	425.3	425.3

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