

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: P331527-940

Luminaire Tested: **S122DIW-S675D435U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331527-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S675D435U940-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

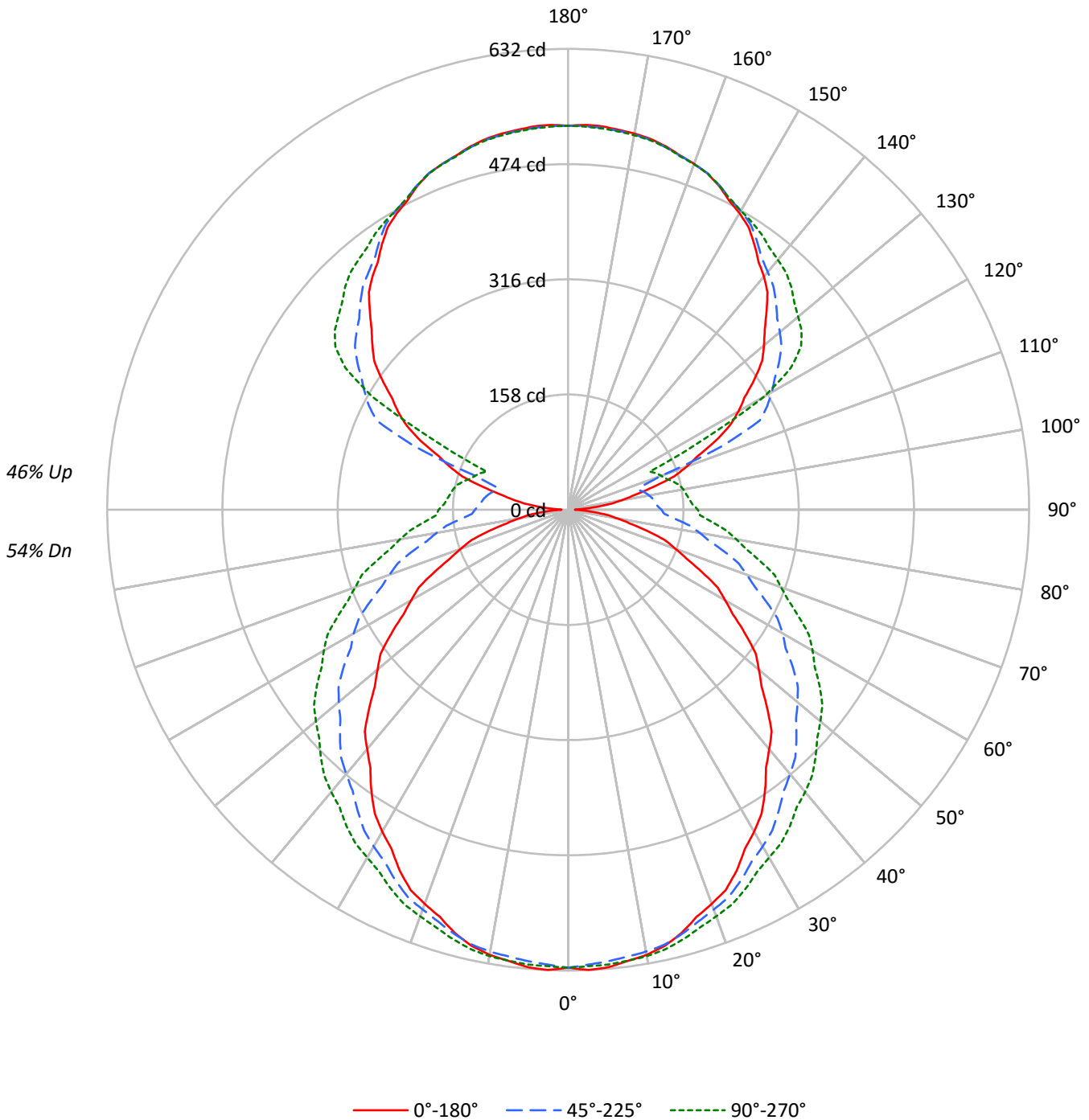
Lumens per Lamp: N/A
Luminaire Lumens: 3941.2 lumens
Efficiency: N/A
Efficacy: 104.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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



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Luminous Intensity Polar Plot





TEST NUMBER: P331527-940

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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	86	86	86	72	72	72	60	60	60	54
1	97	92	87	83	90	85	81	78	73	70	67	61	59	57	50	49	47	42
2	88	79	73	67	81	74	68	62	63	58	54	53	49	46	43	41	39	34
3	80	69	61	55	73	64	57	51	55	49	45	46	42	38	38	35	32	28
4	73	61	52	46	67	57	49	43	48	42	38	41	36	32	34	30	27	24
5	67	54	45	39	61	50	43	37	43	37	32	36	32	28	30	26	23	20
6	61	48	40	34	56	45	37	32	39	33	28	33	28	24	27	23	20	18
7	57	44	35	29	52	41	33	28	35	29	24	30	25	21	25	21	18	15
8	52	40	31	26	48	37	30	24	32	26	22	27	22	19	23	19	16	14
9	49	36	28	23	45	34	27	22	29	23	19	25	20	17	21	17	14	12
10	46	33	26	21	42	31	24	19	27	21	17	23	18	15	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10141	10141	10141
5°	10191	9762	9724
10°	10126	9474	9367
15°	9987	9168	8990
20°	9810	8841	8627
25°	9637	8525	8298
30°	9392	8201	7967
35°	9142	7888	7735
40°	8880	7621	7501
45°	8632	7383	7302
50°	8365	7166	7106
55°	8089	6934	6906
60°	7745	6695	6695
65°	7391	6412	6445
70°	6992	6110	6173
75°	6483	5811	5925
80°	5680	5509	5672
85°	4908	5245	5473



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	1.5
10°-20°	170.7	4.3
20°-30°	258.6	6.6
30°-40°	315.0	8.0
40°-50°	338.9	8.6
50°-60°	329.1	8.4
60°-70°	287.4	7.3
70°-80°	221.2	5.6
80°-90°	149.8	3.8
90°-100°	119.9	3.0
100°-110°	139.1	3.5
110°-120°	221.6	5.6
120°-130°	311.8	7.9
130°-140°	313.9	8.0
140°-150°	283.0	7.2
150°-160°	225.9	5.7
160°-170°	145.6	3.7
170°-180°	50.1	1.3
0°-30°	488.8	12.4
0°-40°	803.8	20.4
0°-60°	1471.8	37.3
0°-90°	2130.2	54.0
90°-120°	480.5	12.2
90°-150°	1389.3	35.3
90°-180°	1811.0	46.0
0°-180°	3941.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	628	628	628	628	628	
5°	630	627	622	627	626	60
15°	601	602	603	610	610	169
25°	546	553	561	571	574	251
35°	471	486	503	523	530	294
45°	386	411	442	470	480	298
55°	296	329	376	408	420	264
65°	202	247	300	336	350	201
75°	112	163	221	259	272	118
85°	33	89	148	184	198	35
90°	10	67	128	165	178	7
95°	32	64	120	155	167	36
105°	120	153	102	136	149	129
115°	223	241	290	148	123	219
125°	312	318	353	379	390	278
135°	384	391	403	425	432	297
145°	445	445	451	459	462	278
155°	490	487	491	493	490	226
165°	516	514	515	517	515	146
175°	528	525	526	528	525	50
180°	527	527	527	527	527	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	631.8	631.2	630.8	630.3	629.8	629.0	627.9	626.7	625.6	624.5	625.3
5°	629.9	629.3	628.7	628.1	627.5	626.6	625.4	624.2	622.9	621.7	622.9
7.5°	624.3	623.8	623.5	623.0	622.7	622.0	621.1	620.1	619.2	618.3	619.7
10°	619.9	619.5	619.1	618.7	618.3	617.8	617.2	616.6	616.0	615.4	617.0
12.5°	612.6	612.7	612.8	612.9	613.0	612.8	612.3	611.9	611.4	611.0	612.6
15°	600.8	601.2	601.6	602.0	602.4	602.6	602.6	602.6	602.6	602.6	604.4
17.5°	585.5	586.4	587.2	588.1	588.9	589.7	590.3	590.9	591.6	592.3	594.1
20°	575.3	576.3	577.3	578.4	579.3	580.2	581.0	581.9	582.7	583.5	585.8
22.5°	564.4	565.5	566.8	567.9	569.1	570.2	571.4	572.5	573.6	574.8	577.0
25°	546.2	547.6	549.0	550.5	551.9	553.5	555.3	557.1	558.9	560.7	563.2
27.5°	524.3	526.6	529.0	531.3	533.6	535.8	538.0	540.1	542.2	544.4	547.4
30°	509.8	512.4	515.1	517.6	520.3	522.9	525.6	528.2	530.8	533.4	536.6
32.5°	493.7	496.7	499.6	502.6	505.6	508.6	511.8	514.8	517.9	521.0	524.8
35°	470.6	474.0	477.5	480.9	484.4	488.0	491.9	495.7	499.5	503.4	507.8
37.5°	445.5	449.5	453.4	457.4	461.4	465.8	470.8	475.8	480.7	485.7	490.7
40°	428.7	433.2	437.7	442.1	446.6	451.5	457.0	462.4	467.9	473.3	478.6
42.5°	412.8	417.1	421.6	426.1	430.5	435.9	442.2	448.4	454.7	461.0	466.7
45°	385.9	391.5	396.9	402.3	407.8	414.1	421.2	428.3	435.3	442.4	448.7
47.5°	359.5	365.5	371.5	377.4	383.3	390.5	398.8	407.1	415.4	423.7	430.3
50°	341.3	347.7	353.9	360.2	366.4	374.2	383.3	392.4	401.4	410.5	417.4
52.5°	323.9	330.5	337.1	343.7	350.3	358.4	367.9	377.6	387.1	396.7	403.8
55°	295.9	303.1	310.4	317.7	324.9	333.9	344.4	354.9	365.4	375.9	383.3
57.5°	268.1	276.4	284.6	292.8	301.0	310.5	321.2	331.9	342.7	353.4	361.2
60°	248.5	257.2	265.9	274.6	283.3	293.5	305.0	316.5	328.0	339.6	347.2
62.5°	231.0	240.0	249.1	258.1	267.2	277.4	288.9	300.4	312.0	323.5	331.7
65°	202.1	212.0	221.9	231.8	241.7	252.6	264.6	276.5	288.5	300.4	308.7
67.5°	175.5	185.8	196.3	206.6	217.0	228.2	240.4	252.6	264.8	277.1	285.4
70°	156.6	167.1	177.6	188.2	198.7	210.2	222.7	235.2	247.8	260.4	269.0
72.5°	139.1	149.9	160.8	171.7	182.4	194.2	207.0	219.6	232.4	245.0	253.6
75°	112.0	123.3	134.6	146.0	157.3	169.4	182.4	195.3	208.2	221.2	229.9
77.5°	85.8	97.6	109.5	121.3	133.1	145.7	158.8	172.0	185.1	198.2	207.0
80°	68.3	80.6	92.9	105.3	117.6	130.4	143.6	156.7	169.8	183.0	191.5
82.5°	53.7	65.9	78.0	90.2	102.5	115.1	128.5	141.8	155.1	168.4	176.9
85°	32.8	45.3	57.9	70.4	82.9	95.7	108.6	121.5	134.6	147.5	156.0
87.5°	17.9	30.1	42.4	54.7	66.9	79.5	92.6	105.8	118.8	131.9	140.2
90°	9.5	22.1	34.8	47.4	60.1	73.3	86.9	100.5	114.1	127.8	136.3
92.5°	16.1	26.9	37.7	48.6	59.4	71.2	84.1	96.8	109.7	122.4	130.6
95°	32.0	38.8	45.5	52.2	58.9	68.7	81.3	94.1	106.8	119.6	127.7
97.5°	55.6	56.1	56.7	57.2	57.9	64.6	77.7	90.7	103.7	116.7	124.6
100°	73.8	69.7	65.6	61.4	57.3	61.7	74.5	87.2	100.0	112.7	120.9
102.5°	93.2	97.6	102.0	106.4	110.8	112.4	111.4	110.3	109.3	108.3	116.5
105°	120.4	128.9	137.2	145.6	154.1	151.9	139.4	126.7	114.1	101.6	109.6
107.5°	152.5	159.3	165.9	172.7	179.4	174.0	156.3	138.7	121.0	103.3	109.2
110°	172.5	178.3	184.1	189.9	195.8	191.5	176.8	162.3	147.8	133.1	131.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	192.0	197.0	202.0	206.9	211.9	216.1	219.5	222.8	226.2	229.6	205.2
115°	222.7	226.5	230.2	233.8	237.5	244.9	256.1	267.3	278.6	289.8	256.6
117.5°	249.4	252.4	255.6	258.6	261.6	268.1	278.0	287.8	297.7	307.6	304.2
120°	269.6	271.6	273.7	275.8	277.9	283.7	293.3	302.9	312.5	322.2	328.9
122.5°	286.6	288.3	289.9	291.6	293.3	298.7	308.0	317.3	326.5	335.7	341.9
125°	311.7	312.8	313.9	315.0	316.1	320.7	328.8	336.8	344.9	353.0	359.1
127.5°	335.2	336.3	337.2	338.3	339.3	343.0	349.5	355.9	362.3	368.7	374.6
130°	350.2	351.3	352.5	353.7	354.8	357.9	363.1	368.3	373.4	378.7	384.4
132.5°	365.4	366.4	367.3	368.3	369.3	371.8	376.0	380.2	384.4	388.6	394.1
135°	384.3	385.7	387.0	388.4	389.8	391.8	394.6	397.3	400.2	403.0	408.0
137.5°	404.4	405.3	406.2	407.1	408.0	409.3	411.1	412.9	414.6	416.3	420.9
140°	417.5	417.9	418.5	418.9	419.4	420.3	421.6	422.9	424.3	425.6	429.6
142.5°	428.5	428.9	429.3	429.7	430.1	430.9	432.0	433.2	434.4	435.4	438.7
145°	444.8	444.7	444.6	444.5	444.4	445.1	446.6	448.0	449.4	450.8	452.7
147.5°	459.8	459.5	459.1	458.9	458.5	459.1	460.5	461.9	463.3	464.8	465.4
150°	469.6	469.0	468.3	467.8	467.2	467.5	469.0	470.3	471.6	473.0	473.5
152.5°	477.8	477.2	476.4	475.8	475.1	475.5	476.7	478.0	479.3	480.6	481.1
155°	489.7	489.0	488.2	487.5	486.7	486.9	487.9	488.8	489.9	490.9	491.4
157.5°	499.1	498.5	497.8	497.2	496.6	496.6	497.3	498.0	498.7	499.4	500.0
160°	504.6	504.1	503.6	503.1	502.6	502.6	503.1	503.6	504.1	504.6	505.2
162.5°	509.5	509.0	508.5	508.0	507.5	507.5	507.8	508.3	508.7	509.2	509.8
165°	516.0	515.6	515.1	514.5	514.0	513.9	514.2	514.4	514.7	514.9	515.5
167.5°	520.9	520.4	520.0	519.4	518.9	518.8	519.0	519.2	519.5	519.7	520.3
170°	523.7	523.2	522.6	522.2	521.7	521.5	521.7	521.8	522.0	522.2	522.7
172.5°	525.5	525.0	524.5	524.0	523.4	523.3	523.4	523.6	523.8	524.0	524.6
175°	527.9	527.3	526.6	526.1	525.5	525.3	525.5	525.7	525.8	525.9	526.6
177.5°	528.2	527.8	527.3	526.8	526.4	526.1	526.2	526.3	526.4	526.4	526.9
180°	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	626.1	626.9	627.7	627.9	627.6	627.3	627.0	626.7
5°	624.2	625.4	626.6	627.1	626.9	626.7	626.5	626.2
7.5°	621.2	622.7	624.1	624.7	624.6	624.3	624.1	623.9
10°	618.6	620.2	621.9	622.5	622.3	622.1	622.0	621.7
12.5°	614.2	615.8	617.5	618.1	618.0	617.8	617.6	617.3
15°	606.3	608.1	609.9	610.7	610.6	610.3	610.1	609.9
17.5°	596.0	598.0	599.9	600.8	600.8	600.8	600.8	600.8
20°	588.0	590.2	592.4	593.5	593.5	593.5	593.5	593.5
22.5°	579.3	581.5	583.6	585.0	585.2	585.6	585.9	586.2
25°	565.6	568.0	570.4	571.9	572.6	573.2	573.8	574.4
27.5°	550.5	553.6	556.7	558.4	558.8	559.3	559.7	560.2
30°	539.9	543.1	546.4	548.3	548.9	549.6	550.1	550.7
32.5°	528.5	532.3	535.9	538.3	539.5	540.6	541.6	542.7
35°	512.3	516.7	521.2	524.1	525.6	527.0	528.3	529.8
37.5°	495.6	500.5	505.5	508.7	510.2	511.7	513.2	514.7
40°	483.8	489.1	494.4	497.9	499.7	501.6	503.4	505.2
42.5°	472.4	478.2	483.9	487.8	489.5	491.4	493.2	495.0
45°	455.0	461.2	467.5	471.6	473.7	475.7	477.7	479.7
47.5°	436.8	443.4	449.9	454.2	456.5	458.7	460.9	463.2
50°	424.3	431.1	438.1	442.6	444.9	447.1	449.2	451.5
52.5°	410.8	417.9	424.9	429.6	431.9	434.4	436.8	439.2
55°	390.5	397.8	405.1	410.0	412.7	415.3	417.9	420.5
57.5°	369.1	376.9	384.8	390.0	392.7	395.4	398.1	400.7
60°	354.9	362.6	370.3	375.6	378.4	381.2	384.1	386.9
62.5°	339.8	348.0	356.2	361.7	364.3	366.9	369.6	372.3
65°	317.0	325.3	333.6	339.0	341.7	344.3	347.0	349.6
67.5°	293.8	302.2	310.6	316.2	318.9	321.6	324.4	327.2
70°	277.8	286.4	295.2	300.7	303.1	305.6	308.0	310.4
72.5°	262.2	270.6	279.2	284.9	287.8	290.8	293.6	296.6
75°	238.6	247.3	256.0	261.6	264.3	266.9	269.6	272.2
77.5°	215.6	224.3	232.9	238.6	241.5	244.3	247.1	249.9
80°	199.9	208.5	217.0	222.7	225.4	228.3	231.1	234.0
82.5°	185.4	193.9	202.4	207.9	210.6	213.3	216.0	218.6
85°	164.4	173.0	181.5	187.1	189.9	192.8	195.6	198.4
87.5°	148.6	156.9	165.2	170.7	173.3	175.9	178.6	181.2
90°	144.8	153.3	161.8	167.4	170.0	172.6	175.2	177.8
92.5°	138.8	146.9	155.1	160.4	162.9	165.4	168.0	170.5
95°	135.8	143.9	151.9	157.2	159.5	161.9	164.3	166.6
97.5°	132.4	140.3	148.0	153.2	155.7	158.2	160.7	163.2
100°	129.1	137.2	145.4	150.7	153.1	155.5	157.8	160.2
102.5°	124.7	132.9	141.1	146.4	148.9	151.3	153.8	156.2
105°	117.5	125.6	133.6	138.8	141.4	144.0	146.6	149.1
107.5°	115.0	120.9	126.8	131.0	133.6	136.1	138.7	141.2
110°	129.1	127.2	125.2	125.5	128.0	130.5	133.1	135.7



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CATALOG NUMBER: S122DIW-S675D435U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	180.7	156.3	131.9	120.9	123.4	125.9	128.4	130.9
115°	223.5	190.4	157.2	138.7	134.8	130.9	127.1	123.2
117.5°	300.6	297.1	293.6	282.9	264.9	246.9	229.0	211.0
120°	335.6	342.2	348.8	347.6	338.4	329.2	319.9	310.8
122.5°	348.0	354.1	360.3	363.1	362.8	362.5	362.1	361.9
125°	365.2	371.1	377.2	381.3	383.3	385.4	387.5	389.6
127.5°	380.5	386.4	392.3	396.1	397.9	399.8	401.5	403.4
130°	390.2	396.0	401.8	405.5	407.0	408.6	410.1	411.6
132.5°	399.6	405.1	410.6	414.1	415.6	417.1	418.7	420.3
135°	413.1	418.2	423.4	426.6	428.0	429.5	431.0	432.4
137.5°	425.4	430.0	434.5	437.4	438.5	439.5	440.7	441.8
140°	433.6	437.7	441.7	444.1	444.8	445.6	446.4	447.2
142.5°	442.0	445.3	448.6	450.6	451.2	451.8	452.5	453.1
145°	454.5	456.3	458.1	459.3	459.9	460.5	461.1	461.6
147.5°	465.9	466.5	467.2	467.5	467.6	467.8	467.9	468.1
150°	474.0	474.5	475.0	475.1	474.7	474.2	473.8	473.4
152.5°	481.6	482.1	482.7	482.6	482.1	481.5	480.9	480.4
155°	492.0	492.4	492.9	492.8	492.1	491.5	490.8	490.2
157.5°	500.6	501.1	501.8	501.7	501.1	500.3	499.7	499.1
160°	505.6	506.1	506.7	506.6	506.0	505.4	504.8	504.3
162.5°	510.3	511.0	511.5	511.4	510.7	510.0	509.3	508.5
165°	516.1	516.7	517.3	517.3	516.7	516.1	515.5	514.9
167.5°	520.9	521.5	522.1	522.0	521.2	520.5	519.7	519.0
170°	523.3	524.0	524.5	524.4	523.7	522.9	522.2	521.4
172.5°	525.1	525.8	526.4	526.3	525.5	524.8	524.0	523.3
175°	527.2	527.7	528.3	528.2	527.4	526.6	525.7	524.9
177.5°	527.4	527.8	528.3	528.2	527.6	527.0	526.4	525.8
180°	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7

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