

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: P331497-830

Luminaire Tested: **S122DIW-S485D435U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331497-830
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-S485D435U830-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 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: 3485.9 lumens
Efficiency: N/A
Efficacy: 115.4 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

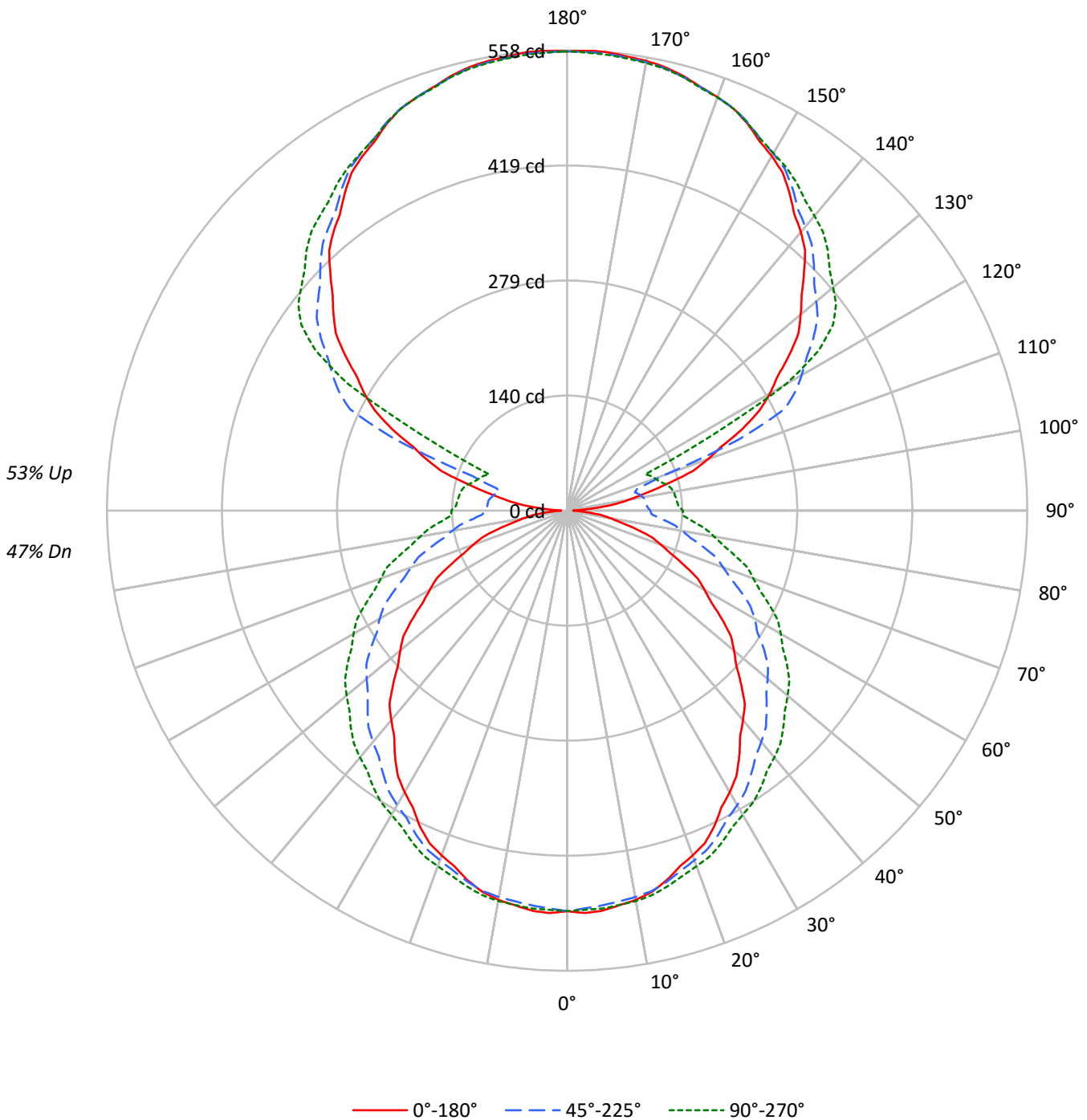
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331497-830

CATALOG NUMBER: S122DIW-S485D435U830-4F0-1E-UDD-D

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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	54	54	54	47
1	96	91	86	82	88	83	80	76	70	67	64	57	55	53	45	44	42	37
2	87	78	72	66	79	72	66	61	60	56	52	49	46	43	39	37	35	30
3	79	69	61	54	72	63	56	51	53	47	43	43	39	36	34	31	29	25
4	72	60	52	46	65	56	48	42	46	41	36	38	34	30	30	27	24	21
5	66	54	45	39	60	49	42	36	41	35	31	34	29	26	27	24	21	18
6	60	48	39	33	55	44	37	31	37	31	27	31	26	23	24	21	18	15
7	56	43	35	29	51	40	32	27	34	28	23	28	23	20	22	19	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12
9	48	36	28	23	44	33	26	21	28	22	18	23	19	16	19	15	13	11
10	45	33	25	20	41	30	23	19	26	20	17	21	17	14	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7842	7842	7842
5°	7880	7549	7520
10°	7831	7327	7244
15°	7723	7090	6952
20°	7587	6836	6671
25°	7453	6592	6417
30°	7262	6342	6160
35°	7069	6100	5981
40°	6869	5895	5801
45°	6677	5709	5648
50°	6471	5541	5495
55°	6254	5363	5341
60°	5990	5177	5178
65°	5716	4959	4983
70°	5407	4723	4775
75°	5013	4495	4582
80°	4391	4260	4385
85°	3800	4054	4232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	1.3
10°-20°	132.0	3.8
20°-30°	200.0	5.7
30°-40°	243.6	7.0
40°-50°	262.1	7.5
50°-60°	254.5	7.3
60°-70°	222.2	6.4
70°-80°	171.1	4.9
80°-90°	116.2	3.3
90°-100°	97.7	2.8
100°-110°	125.9	3.6
110°-120°	220.2	6.3
120°-130°	321.8	9.2
130°-140°	328.5	9.4
140°-150°	298.6	8.6
150°-160°	238.8	6.9
160°-170°	153.9	4.4
170°-180°	53.0	1.5
0°-30°	378.0	10.8
0°-40°	621.6	17.8
0°-60°	1138.1	32.6
0°-90°	1647.6	47.3
90°-120°	443.7	12.7
90°-150°	1392.6	40.0
90°-180°	1838.0	52.7
0°-180°	3485.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	487	485	481	485	484	46
15°	465	466	466	472	472	131
25°	422	427	434	442	444	194
35°	364	376	389	404	410	227
45°	298	318	342	363	371	230
55°	229	255	291	315	325	204
65°	156	191	232	260	270	155
75°	87	126	171	200	210	92
85°	25	69	114	142	153	27
90°	7	53	101	130	140	6
95°	32	53	97	124	134	37
105°	126	153	85	113	124	135
115°	234	251	291	133	104	231
125°	329	336	364	385	394	293
135°	406	413	423	441	447	314
145°	470	470	476	483	485	294
155°	518	514	519	521	518	238
165°	545	543	544	547	544	154
175°	558	555	556	558	555	53
180°	557	557	557	557	557	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	488.5	488.1	487.8	487.4	487.0	486.4	485.5	484.7	483.8	482.9	483.5
5°	487.1	486.6	486.2	485.7	485.2	484.6	483.6	482.7	481.7	480.8	481.7
7.5°	482.8	482.4	482.1	481.8	481.5	481.0	480.2	479.6	478.8	478.1	479.2
10°	479.4	479.1	478.7	478.4	478.2	477.8	477.3	476.8	476.4	475.9	477.1
12.5°	473.7	473.8	473.9	473.9	474.0	473.8	473.5	473.2	472.8	472.5	473.7
15°	464.6	464.9	465.2	465.5	465.8	466.0	466.0	466.0	466.0	466.0	467.4
17.5°	452.8	453.5	454.1	454.8	455.4	456.0	456.5	456.9	457.5	458.0	459.4
20°	444.9	445.6	446.5	447.2	448.0	448.7	449.3	450.0	450.6	451.2	452.9
22.5°	436.4	437.3	438.3	439.1	440.1	440.9	441.9	442.7	443.6	444.5	446.2
25°	422.4	423.5	424.5	425.7	426.7	428.0	429.4	430.8	432.3	433.6	435.5
27.5°	405.5	407.3	409.1	410.9	412.6	414.3	415.9	417.6	419.2	420.9	423.3
30°	394.2	396.2	398.2	400.3	402.4	404.4	406.4	408.4	410.5	412.5	415.0
32.5°	381.8	384.1	386.3	388.7	391.0	393.3	395.7	398.1	400.5	402.9	405.8
35°	363.9	366.6	369.3	371.9	374.6	377.4	380.3	383.3	386.3	389.3	392.7
37.5°	344.5	347.6	350.6	353.7	356.8	360.2	364.1	367.9	371.7	375.6	379.5
40°	331.6	335.0	338.5	341.9	345.3	349.1	353.4	357.6	361.8	366.1	370.1
42.5°	319.1	322.6	326.0	329.5	332.9	337.1	342.0	346.8	351.7	356.5	360.9
45°	298.5	302.7	306.9	311.1	315.4	320.2	325.6	331.1	336.7	342.1	346.9
47.5°	278.1	282.7	287.3	291.8	296.4	302.0	308.4	314.8	321.2	327.6	332.7
50°	264.0	268.8	273.7	278.5	283.3	289.3	296.3	303.4	310.5	317.4	322.8
52.5°	250.4	255.5	260.6	265.8	270.9	277.1	284.6	291.9	299.4	306.8	312.2
55°	228.8	234.4	240.1	245.6	251.3	258.2	266.4	274.5	282.6	290.7	296.3
57.5°	207.4	213.8	220.1	226.4	232.8	240.1	248.4	256.7	264.9	273.2	279.4
60°	192.2	198.9	205.7	212.4	219.0	226.9	235.8	244.7	253.6	262.6	268.5
62.5°	178.6	185.6	192.7	199.6	206.6	214.5	223.4	232.3	241.3	250.2	256.5
65°	156.3	163.9	171.6	179.3	186.9	195.4	204.6	213.9	223.1	232.3	238.7
67.5°	135.7	143.7	151.7	159.8	167.8	176.4	186.0	195.4	204.8	214.2	220.7
70°	121.1	129.2	137.3	145.4	153.6	162.5	172.2	181.9	191.6	201.3	208.0
72.5°	107.5	115.9	124.3	132.7	141.1	150.2	160.0	169.8	179.6	189.5	196.1
75°	86.6	95.4	104.1	112.8	121.6	131.0	141.0	151.0	161.1	171.1	177.8
77.5°	66.4	75.5	84.6	93.8	103.0	112.6	122.8	133.0	143.2	153.4	160.0
80°	52.8	62.3	71.9	81.4	91.0	100.9	111.0	121.1	131.3	141.5	148.1
82.5°	41.6	51.0	60.3	69.7	79.2	89.1	99.3	109.6	119.9	130.3	136.8
85°	25.4	35.1	44.8	54.5	64.1	74.0	84.0	94.0	104.1	114.0	120.6
87.5°	13.9	23.4	32.9	42.4	51.9	61.8	71.9	82.1	92.3	102.5	108.9
90°	7.4	17.5	27.5	37.6	47.7	58.1	68.8	79.6	90.2	100.9	107.6
92.5°	14.6	23.0	31.3	39.7	48.1	57.2	67.2	77.2	87.2	97.2	103.6
95°	31.9	36.2	40.6	45.1	49.4	56.6	66.6	76.6	86.6	96.7	103.0
97.5°	56.9	55.1	53.3	51.6	49.8	54.1	64.6	75.0	85.5	96.0	102.1
100°	76.3	69.7	63.2	56.8	50.3	52.2	62.5	72.8	83.0	93.3	99.8
102.5°	97.0	99.6	102.4	105.0	107.7	107.0	102.7	98.5	94.3	90.0	96.6
105°	126.0	133.2	140.4	147.7	154.9	150.3	134.0	117.7	101.4	85.1	91.6
107.5°	159.9	165.7	171.5	177.3	183.1	175.2	153.7	132.2	110.7	89.2	93.4
110°	181.3	186.2	191.3	196.3	201.3	194.7	176.5	158.3	140.1	121.9	117.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	201.9	206.2	210.5	214.8	219.0	221.7	222.5	223.5	224.3	225.3	197.7
115°	234.5	237.7	240.9	244.2	247.4	253.7	263.0	272.2	281.5	290.8	254.0
117.5°	262.9	265.7	268.5	271.4	274.2	279.6	287.7	295.7	303.7	311.8	306.4
120°	284.1	286.1	288.0	290.0	292.0	296.9	304.8	312.6	320.5	328.4	333.8
122.5°	302.2	303.8	305.5	307.2	308.8	313.5	321.1	328.8	336.4	344.0	348.9
125°	328.9	330.1	331.3	332.4	333.6	337.5	344.2	350.9	357.6	364.4	369.2
127.5°	353.8	355.0	356.1	357.2	358.4	361.6	366.9	372.2	377.5	382.8	387.6
130°	369.7	370.9	372.2	373.4	374.8	377.5	381.7	386.1	390.3	394.5	399.4
132.5°	385.7	386.8	387.9	388.9	390.0	392.3	395.8	399.3	402.8	406.3	410.9
135°	406.0	407.4	408.9	410.3	411.7	413.6	415.9	418.4	420.8	423.1	427.3
137.5°	427.2	428.1	429.1	430.1	431.0	432.3	433.9	435.5	437.2	438.8	442.5
140°	441.0	441.6	442.1	442.7	443.3	444.2	445.5	446.8	448.1	449.4	452.7
142.5°	452.6	453.1	453.6	454.1	454.6	455.4	456.6	457.8	459.0	460.1	462.9
145°	470.1	470.0	470.0	469.9	469.8	470.5	472.0	473.5	475.0	476.5	478.2
147.5°	486.0	485.7	485.3	485.0	484.7	485.2	486.7	488.2	489.7	491.3	491.8
150°	496.3	495.7	495.0	494.5	493.8	494.2	495.7	497.1	498.5	499.9	500.5
152.5°	505.0	504.4	503.6	502.9	502.2	502.6	503.9	505.3	506.6	508.0	508.5
155°	517.6	516.9	516.0	515.3	514.4	514.6	515.7	516.7	517.8	518.9	519.4
157.5°	527.5	526.9	526.2	525.6	524.9	524.9	525.7	526.4	527.2	527.9	528.5
160°	533.4	532.8	532.3	531.8	531.2	531.2	531.8	532.3	532.8	533.4	534.0
162.5°	538.6	538.0	537.4	537.0	536.4	536.4	536.8	537.2	537.7	538.2	538.9
165°	545.4	545.0	544.4	543.8	543.3	543.2	543.5	543.8	544.0	544.2	544.9
167.5°	550.6	550.1	549.6	549.0	548.5	548.4	548.6	548.8	549.1	549.3	550.0
170°	553.6	553.0	552.4	552.0	551.4	551.2	551.4	551.6	551.8	552.0	552.5
172.5°	555.4	555.0	554.4	553.8	553.3	553.2	553.3	553.5	553.6	553.8	554.5
175°	558.0	557.3	556.7	556.1	555.4	555.3	555.4	555.6	555.7	555.9	556.6
177.5°	558.4	557.9	557.3	556.9	556.4	556.1	556.2	556.3	556.4	556.4	556.9
180°	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	484.2	484.7	485.4	485.6	485.3	485.1	484.8	484.6
5°	482.7	483.6	484.6	484.9	484.7	484.7	484.5	484.3
7.5°	480.3	481.5	482.6	483.1	483.0	482.8	482.6	482.5
10°	478.3	479.6	480.9	481.5	481.3	481.1	481.0	480.8
12.5°	474.9	476.3	477.5	478.1	477.9	477.7	477.6	477.4
15°	468.8	470.2	471.6	472.2	472.1	471.9	471.7	471.6
17.5°	460.9	462.4	463.8	464.6	464.6	464.6	464.6	464.6
20°	454.7	456.4	458.1	458.9	458.9	458.9	458.9	458.9
22.5°	447.9	449.6	451.4	452.3	452.6	452.8	453.1	453.4
25°	437.3	439.2	441.1	442.3	442.8	443.3	443.7	444.2
27.5°	425.7	428.1	430.5	431.8	432.2	432.5	432.8	433.2
30°	417.5	420.0	422.5	424.0	424.4	424.9	425.4	425.8
32.5°	408.7	411.5	414.4	416.3	417.2	418.0	418.9	419.7
35°	396.2	399.6	403.0	405.3	406.4	407.5	408.6	409.7
37.5°	383.2	387.1	390.9	393.3	394.5	395.7	396.8	398.0
40°	374.2	378.2	382.3	385.0	386.4	387.9	389.3	390.7
42.5°	365.3	369.8	374.2	377.2	378.5	379.9	381.4	382.8
45°	351.9	356.7	361.5	364.7	366.3	367.9	369.4	371.0
47.5°	337.7	342.8	347.9	351.3	353.0	354.7	356.5	358.2
50°	328.1	333.4	338.7	342.2	344.0	345.7	347.4	349.1
52.5°	317.6	323.1	328.6	332.2	334.0	335.9	337.7	339.6
55°	302.0	307.6	313.2	317.1	319.1	321.1	323.2	325.2
57.5°	285.4	291.4	297.6	301.6	303.7	305.8	307.8	309.9
60°	274.5	280.4	286.3	290.4	292.6	294.8	297.0	299.2
62.5°	262.8	269.1	275.4	279.7	281.7	283.8	285.9	287.9
65°	245.2	251.6	258.0	262.2	264.2	266.3	268.2	270.3
67.5°	227.2	233.7	240.2	244.5	246.6	248.7	250.9	253.0
70°	214.8	221.5	228.2	232.5	234.4	236.3	238.2	240.1
72.5°	202.7	209.3	215.9	220.4	222.5	224.8	227.1	229.3
75°	184.5	191.2	197.9	202.4	204.3	206.4	208.4	210.5
77.5°	166.7	173.4	180.1	184.5	186.7	188.9	191.1	193.3
80°	154.7	161.2	167.8	172.1	174.4	176.5	178.7	180.9
82.5°	143.4	150.0	156.5	160.8	162.9	164.9	167.0	169.1
85°	127.1	133.7	140.3	144.7	146.8	149.1	151.3	153.4
87.5°	115.4	121.9	128.3	132.5	134.6	136.7	138.6	140.7
90°	114.4	121.1	127.8	132.1	134.2	136.3	138.4	140.4
92.5°	109.9	116.3	122.6	126.9	128.8	130.8	132.8	134.8
95°	109.4	115.8	122.2	126.3	128.1	129.9	131.7	133.5
97.5°	108.2	114.3	120.6	124.6	126.5	128.5	130.4	132.3
100°	106.3	112.8	119.3	123.6	125.5	127.3	129.3	131.2
102.5°	103.2	109.8	116.4	120.7	122.7	124.7	126.6	128.6
105°	98.0	104.5	110.9	115.2	117.3	119.4	121.5	123.6
107.5°	97.6	101.9	106.2	109.3	111.4	113.5	115.6	117.6
110°	114.0	110.1	106.1	105.2	107.3	109.3	111.4	113.5



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CATALOG NUMBER: S122DIW-S485D435U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	169.9	142.3	114.6	101.8	103.9	105.8	107.8	109.9
115°	217.3	180.5	143.7	123.0	118.3	113.6	108.9	104.2
117.5°	301.0	295.6	290.2	277.7	258.1	238.6	219.0	199.3
120°	339.3	344.8	350.2	347.7	337.3	327.0	316.6	306.3
122.5°	353.8	358.7	363.6	365.6	364.8	363.9	363.0	362.1
125°	374.1	378.9	383.7	387.0	388.7	390.4	392.0	393.7
127.5°	392.4	397.2	402.0	405.1	406.5	407.9	409.3	410.9
130°	404.1	408.8	413.5	416.5	417.6	418.8	420.0	421.1
132.5°	415.3	419.7	424.2	427.1	428.2	429.3	430.6	431.7
135°	431.5	435.6	439.8	442.4	443.5	444.6	445.6	446.8
137.5°	446.3	450.0	453.7	456.0	456.8	457.5	458.3	459.0
140°	456.0	459.3	462.6	464.5	465.1	465.5	466.0	466.5
142.5°	465.6	468.3	471.1	472.7	473.1	473.4	473.8	474.1
145°	479.8	481.3	482.9	483.8	484.1	484.5	484.7	485.1
147.5°	492.4	493.0	493.6	493.9	493.9	493.9	493.9	493.9
150°	501.1	501.5	502.1	502.2	501.7	501.2	500.8	500.4
152.5°	509.1	509.6	510.2	510.1	509.5	509.0	508.3	507.7
155°	520.0	520.5	521.0	520.9	520.2	519.5	518.8	518.1
157.5°	529.1	529.7	530.4	530.3	529.6	528.9	528.2	527.5
160°	534.4	535.0	535.6	535.5	534.9	534.2	533.6	533.0
162.5°	539.4	540.1	540.6	540.5	539.8	539.0	538.3	537.5
165°	545.5	546.1	546.8	546.8	546.1	545.5	544.9	544.2
167.5°	550.6	551.2	551.9	551.8	550.9	550.2	549.3	548.6
170°	553.2	553.8	554.4	554.3	553.6	552.7	552.0	551.1
172.5°	555.1	555.7	556.4	556.3	555.4	554.7	553.8	553.1
175°	557.2	557.8	558.5	558.4	557.4	556.6	555.6	554.8
177.5°	557.4	557.9	558.5	558.4	557.7	557.0	556.4	555.8
180°	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8

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