

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: P331792-840

Luminaire Tested: **S122RDIW-S485D710U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331792-840  
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-S485D710U840-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4200.6 lumens  
Efficiency: N/A  
Efficacy: 111.7 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

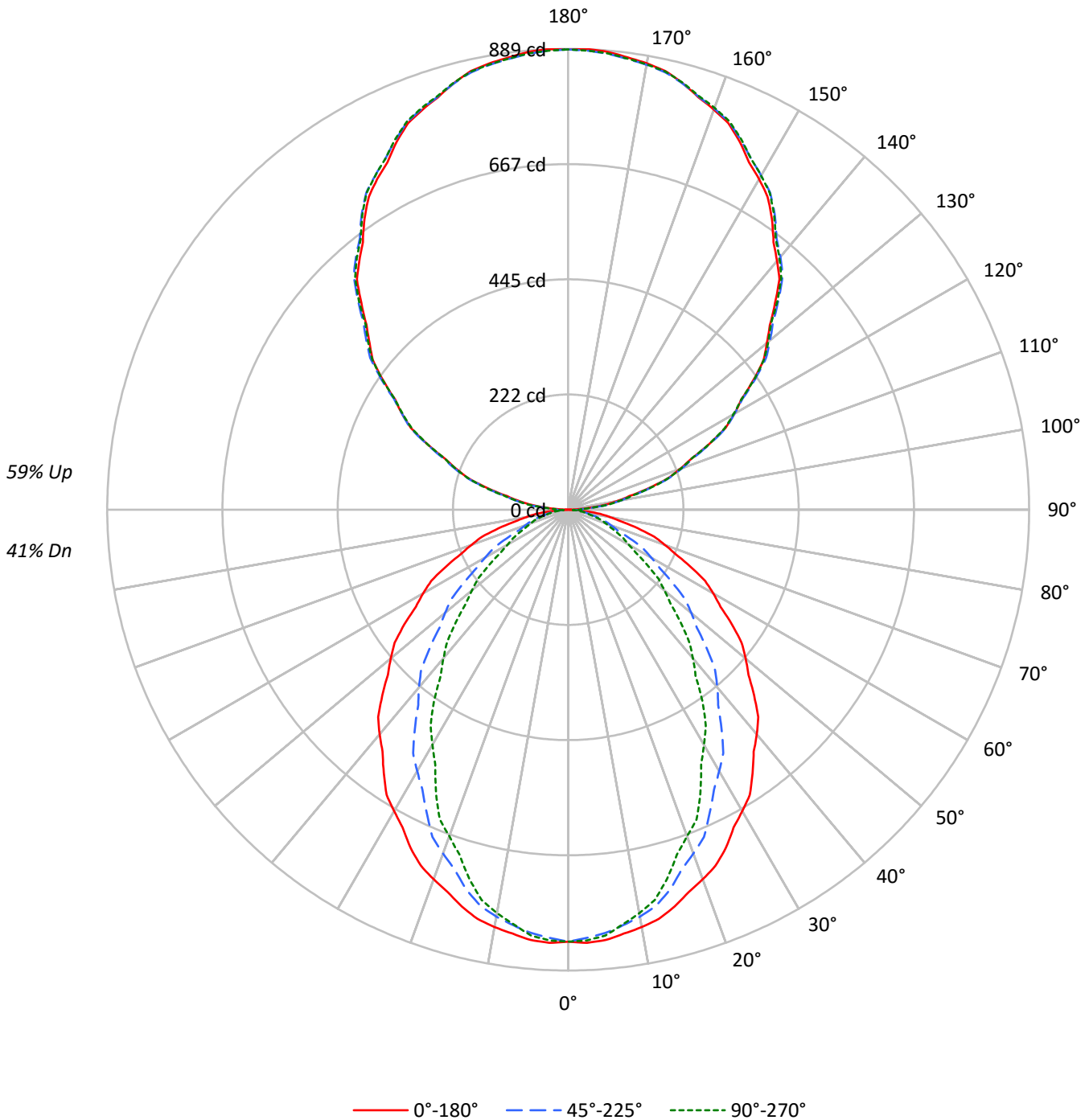
Input Watts (W): 37.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	105	105	105	105	96	96	96	96	78	78	78	62	62	62	48	48	48	41																												
1	96	92	88	85	87	84	81	78	69	67	65	55	54	53	43	42	41	35																												
2	88	81	75	70	80	74	69	65	61	57	54	49	47	45	38	37	35	30																												
3	80	71	64	59	73	65	59	54	54	50	46	44	41	38	34	32	30	26																												
4	74	63	56	50	67	58	52	46	48	43	40	39	36	33	31	28	26	23																												
5	68	57	49	43	62	52	45	40	43	38	34	35	32	29	28	25	23	20																												
6	62	51	43	37	57	47	40	35	39	34	30	32	28	25	25	23	21	18																												
7	58	46	38	33	53	42	36	31	36	30	27	29	25	23	23	21	19	16																												
8	54	42	34	29	49	39	32	27	33	27	24	27	23	20	21	19	17	14																												
9	50	38	31	26	46	35	29	24	30	25	21	25	21	18	20	17	15	13																												
10	47	35	28	23	43	32	26	22	28	23	19	23	19	17	18	16	14	12																												

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	13454	13454	13454
5°	13506	13287	13361
10°	13404	13070	12959
15°	13249	12682	12318
20°	13036	12129	11519
25°	12818	11501	10750
30°	12515	10856	9758
35°	12220	10153	8889
40°	11921	9428	7885
45°	11574	8611	6976
50°	11215	7784	6081
55°	10849	6899	5222
60°	10424	5968	4334
65°	9941	5012	3947
70°	9361	4131	3635
75°	8659	3762	3387
80°	7643	3366	3087
85°	6002	2649	2649



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.0	1.9
10°-20°	214.2	5.1
20°-30°	300.8	7.2
30°-40°	328.0	7.8
40°-50°	301.6	7.2
50°-60°	236.8	5.6
60°-70°	154.4	3.7
70°-80°	79.6	1.9
80°-90°	24.2	0.6
90°-100°	56.3	1.3
100°-110°	174.8	4.2
110°-120°	298.7	7.1
120°-130°	392.8	9.4
130°-140°	440.9	10.5
140°-150°	432.3	10.3
150°-160°	362.6	8.6
160°-170°	240.5	5.7
170°-180°	84.1	2.0
0°-30°	593.0	14.1
0°-40°	921.0	21.9
0°-60°	1459.4	34.7
0°-90°	1717.6	40.9
90°-120°	529.8	12.6
90°-150°	1795.8	42.8
90°-180°	2483.0	59.1
0°-180°	4200.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	833	833	833	833	833	
5°	833	829	820	826	824	79
15°	793	783	759	745	737	223
25°	720	694	646	616	603	331
35°	620	580	515	469	451	388
45°	507	455	377	326	306	391
55°	385	325	245	202	186	344
65°	260	199	131	107	103	258
75°	139	87	60	55	54	147
85°	32	17	14	14	14	38
90°	1	10	26	25	25	3
95°	39	46	48	48	46	45
105°	161	163	165	166	166	170
115°	300	304	303	302	300	296
125°	436	442	441	438	438	390
135°	564	572	574	573	571	436
145°	685	690	695	695	692	428
155°	783	785	788	791	789	360
165°	852	851	851	856	853	240
175°	886	884	883	888	884	84
180°	888	888	888	888	888	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3
2.5°	836.4	835.8	835.1	834.4	833.7	832.6	831.2	829.7	828.2	826.8	828.1
5°	833.3	832.5	831.7	830.9	830.0	828.5	826.4	824.2	822.0	819.8	821.3
7.5°	824.8	823.7	822.7	821.6	820.6	818.8	816.3	813.7	811.2	808.7	809.1
10°	817.6	816.4	815.2	814.1	812.8	810.6	807.3	803.9	800.5	797.2	796.7
12.5°	808.5	807.1	805.6	804.2	802.7	799.9	795.6	791.3	787.0	782.7	781.8
15°	792.6	790.8	789.0	787.1	785.3	781.5	775.8	770.1	764.5	758.7	755.6
17.5°	773.3	770.4	767.6	764.8	761.9	756.9	749.6	742.3	735.0	727.6	723.9
20°	758.7	755.4	752.0	748.7	745.3	739.4	731.0	722.7	714.3	705.9	701.8
22.5°	743.1	739.3	735.5	731.7	728.0	721.4	712.0	702.5	693.1	683.6	678.2
25°	719.5	714.2	708.8	703.4	698.0	689.8	678.7	667.7	656.6	645.6	638.7
27.5°	691.2	685.3	679.4	673.7	667.8	658.6	646.2	633.7	621.3	608.7	600.8
30°	671.3	664.9	658.5	652.2	645.8	635.9	622.5	609.0	595.6	582.3	573.7
32.5°	652.0	644.5	637.0	629.7	622.2	611.6	597.9	584.2	570.6	556.9	547.1
35°	620.0	611.4	602.9	594.3	585.7	574.1	559.4	544.6	529.9	515.1	504.5
37.5°	587.9	578.6	569.2	559.8	550.5	537.9	522.2	506.4	490.7	475.0	463.3
40°	565.6	555.6	545.5	535.5	525.4	512.3	496.0	479.8	463.5	447.3	435.4
42.5°	542.7	532.1	521.5	511.0	500.4	486.7	469.9	453.0	436.3	419.5	407.2
45°	506.9	495.6	484.3	473.1	461.9	447.5	429.9	412.3	394.7	377.1	365.2
47.5°	471.8	459.9	448.1	436.2	424.2	409.2	391.0	372.8	354.7	336.5	324.7
50°	446.5	434.5	422.7	410.8	398.9	383.7	365.3	346.9	328.4	309.9	298.4
52.5°	421.7	409.3	396.9	384.5	372.0	356.8	338.7	320.7	302.7	284.7	273.5
55°	385.4	372.3	359.2	346.2	333.2	317.5	299.4	281.3	263.2	245.1	235.1
57.5°	348.1	334.8	321.3	307.9	294.5	279.1	261.8	244.3	226.9	209.5	200.3
60°	322.8	309.4	296.0	282.6	269.1	253.9	236.6	219.3	202.1	184.8	176.2
62.5°	298.0	284.7	271.2	257.8	244.4	229.5	213.1	196.6	180.2	163.7	155.5
65°	260.2	246.6	233.1	219.4	205.9	191.6	176.5	161.4	146.3	131.2	125.5
67.5°	223.7	210.3	196.7	183.3	169.8	156.2	142.7	129.2	115.5	102.0	99.4
70°	198.3	185.3	172.2	159.2	146.0	133.7	122.2	110.6	99.1	87.5	85.8
72.5°	174.2	161.7	149.2	136.6	124.1	113.2	103.9	94.6	85.3	76.0	74.6
75°	138.8	127.0	115.3	103.6	91.8	83.1	77.5	71.7	66.0	60.3	59.2
77.5°	103.9	93.6	83.3	73.0	62.8	56.2	53.5	50.8	48.0	45.2	44.5
80°	82.2	73.6	65.1	56.6	48.0	42.9	41.2	39.6	37.9	36.2	35.5
82.5°	62.3	55.6	49.0	42.3	35.6	31.7	30.6	29.4	28.3	27.2	26.8
85°	32.4	28.9	25.3	21.9	18.4	16.4	15.9	15.3	14.8	14.3	14.3
87.5°	9.8	9.1	8.5	7.8	7.1	7.2	7.9	8.6	9.3	10.1	9.9
90°	0.7	2.7	4.7	6.8	8.8	11.6	15.2	18.9	22.5	26.3	25.9
92.5°	13.3	14.8	16.3	17.8	19.2	20.4	21.2	22.1	22.9	23.8	23.9
95°	39.0	40.6	42.3	43.9	45.6	46.7	47.0	47.3	47.7	48.0	48.0
97.5°	71.2	72.6	74.1	75.5	77.1	78.1	78.8	79.4	80.0	80.6	80.6
100°	95.1	96.5	97.9	99.2	100.5	101.4	101.9	102.4	102.9	103.4	103.4
102.5°	120.4	121.4	122.5	123.5	124.6	125.4	126.1	126.7	127.3	127.9	128.2
105°	161.1	161.6	162.1	162.6	163.1	163.5	163.9	164.2	164.5	164.9	165.2
107.5°	202.2	202.9	203.7	204.4	205.1	205.5	205.5	205.5	205.5	205.5	205.6
110°	228.5	229.5	230.6	231.6	232.6	233.1	233.1	233.1	233.1	233.1	233.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	257.3	258.3	259.3	260.3	261.4	261.8	261.7	261.5	261.4	261.3	260.8
115°	299.7	300.7	301.7	302.8	303.8	304.1	303.8	303.4	303.1	302.8	302.6
117.5°	342.0	343.4	344.7	346.0	347.3	347.5	346.6	345.7	344.8	343.9	343.5
120°	370.2	371.5	372.8	374.2	375.5	375.5	374.2	372.8	371.5	370.2	370.2
122.5°	396.0	397.6	399.2	400.7	402.3	402.7	401.7	400.8	399.9	399.0	398.6
125°	436.2	437.7	439.1	440.6	442.1	442.6	442.1	441.6	441.1	440.6	440.1
127.5°	475.2	477.2	479.1	480.9	482.8	483.5	482.9	482.3	481.7	481.1	480.5
130°	499.8	502.0	504.1	506.3	508.5	509.4	509.1	508.8	508.4	508.1	507.8
132.5°	527.5	529.2	531.0	532.7	534.4	535.4	535.4	535.5	535.6	535.6	534.9
135°	564.3	566.1	567.9	569.8	571.6	572.7	573.0	573.4	573.7	574.0	573.8
137.5°	603.1	604.6	606.1	607.6	609.0	610.1	610.5	611.0	611.4	611.8	611.7
140°	626.5	627.9	629.4	631.0	632.5	633.6	634.5	635.3	636.1	636.9	636.9
142.5°	650.5	652.0	653.5	655.0	656.4	657.5	658.0	658.6	659.1	659.7	659.8
145°	684.9	686.1	687.2	688.4	689.6	690.6	691.7	692.7	693.7	694.7	694.8
147.5°	715.7	717.0	718.4	719.8	721.2	722.3	723.0	723.6	724.3	725.0	725.3
150°	736.6	737.6	738.6	739.6	740.6	741.4	742.1	742.8	743.5	744.2	744.7
152.5°	755.2	756.2	757.2	758.2	759.2	760.1	760.9	761.7	762.5	763.4	764.0
155°	783.0	783.6	784.1	784.6	785.1	785.6	786.1	786.6	787.1	787.6	788.4
157.5°	806.9	807.3	807.6	807.9	808.3	808.6	808.9	809.2	809.5	809.8	810.9
160°	821.3	821.6	821.9	822.3	822.6	822.9	823.0	823.2	823.3	823.5	824.6
162.5°	834.5	834.6	834.7	834.7	834.8	834.9	835.1	835.3	835.4	835.6	836.7
165°	852.0	851.8	851.7	851.5	851.4	851.3	851.3	851.3	851.3	851.3	852.4
167.5°	866.8	866.3	865.8	865.3	864.7	864.4	864.4	864.3	864.3	864.3	865.5
170°	874.5	874.0	873.5	873.0	872.5	872.2	872.0	871.8	871.7	871.5	872.7
172.5°	879.9	879.4	878.9	878.4	877.9	877.6	877.4	877.3	877.1	876.9	878.1
175°	886.5	886.1	885.6	885.0	884.5	884.1	883.7	883.4	883.1	882.7	883.9
177.5°	889.2	888.8	888.4	888.0	887.6	887.3	887.0	886.8	886.5	886.2	887.0
180°	888.0	888.0	888.0	888.0	888.0	888.0	888.0	888.0	888.0	888.0	888.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3
2.5°	829.4	830.8	832.1	832.6	832.4	832.1	831.8	831.6
5°	822.8	824.4	825.9	826.4	825.9	825.4	824.9	824.4
7.5°	809.5	809.9	810.4	810.2	809.3	808.4	807.6	806.7
10°	796.2	795.7	795.2	794.5	793.5	792.4	791.4	790.4
12.5°	780.9	780.0	779.1	777.8	776.1	774.5	772.7	771.1
15°	752.3	749.2	746.0	743.6	741.8	740.2	738.5	736.9
17.5°	720.0	716.3	712.5	709.1	706.3	703.4	700.5	697.6
20°	697.5	693.4	689.1	685.2	681.6	677.8	674.2	670.4
22.5°	672.8	667.4	662.1	657.9	655.2	652.5	649.7	646.9
25°	631.9	625.0	618.1	613.4	610.9	608.3	605.9	603.4
27.5°	592.8	584.7	576.7	570.8	566.7	562.8	558.8	554.8
30°	565.1	556.6	548.1	541.5	536.9	532.5	528.0	523.4
32.5°	537.3	527.7	517.9	510.9	506.6	502.4	498.1	493.8
35°	494.0	483.4	472.9	465.7	462.1	458.4	454.7	451.0
37.5°	451.7	440.1	428.5	420.5	416.4	412.1	407.9	403.6
40°	423.4	411.5	399.6	391.5	387.2	382.8	378.4	374.1
42.5°	394.9	382.5	370.3	362.0	357.8	353.6	349.3	345.1
45°	353.3	341.4	329.5	321.5	317.5	313.5	309.4	305.5
47.5°	312.9	301.0	289.2	281.4	277.8	274.2	270.4	266.8
50°	286.8	275.3	263.7	256.2	252.7	249.1	245.6	242.1
52.5°	262.3	251.2	239.9	232.8	229.5	226.3	223.0	219.7
55°	225.0	214.9	204.9	198.2	195.1	191.9	188.7	185.5
57.5°	191.1	181.9	172.7	166.7	164.0	161.4	158.6	155.9
60°	167.6	159.2	150.6	145.0	142.3	139.6	136.9	134.2
62.5°	147.3	139.3	131.1	126.2	124.6	123.0	121.4	119.8
65°	119.9	114.1	108.5	105.3	104.8	104.3	103.8	103.3
67.5°	96.7	94.1	91.5	90.0	89.4	88.9	88.4	87.8
70°	84.1	82.5	80.8	79.6	79.0	78.3	77.6	77.0
72.5°	73.2	71.8	70.4	69.5	69.1	68.7	68.3	67.9
75°	58.0	56.9	55.6	54.9	54.8	54.6	54.4	54.3
77.5°	43.9	43.2	42.6	42.1	41.8	41.6	41.3	41.0
80°	34.8	34.2	33.5	33.2	33.2	33.2	33.2	33.2
82.5°	26.4	26.0	25.5	25.3	25.3	25.3	25.3	25.3
85°	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
87.5°	9.7	9.5	9.3	9.2	9.2	9.3	9.3	9.3
90°	25.5	25.2	24.9	24.8	24.9	25.1	25.3	25.4
92.5°	23.9	24.0	24.1	24.1	24.1	24.2	24.2	24.2
95°	48.0	48.0	48.0	47.8	47.5	47.2	46.8	46.5
97.5°	80.6	80.6	80.6	80.6	80.6	80.6	80.5	80.5
100°	103.4	103.4	103.4	103.3	103.2	103.0	102.8	102.7
102.5°	128.3	128.4	128.6	128.6	128.4	128.2	128.1	127.8
105°	165.5	165.8	166.2	166.3	166.3	166.3	166.3	166.3
107.5°	205.7	205.9	206.0	205.7	204.9	204.2	203.4	202.7
110°	233.1	233.1	233.1	232.8	232.3	231.8	231.3	230.9





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CATALOG NUMBER: S122RDIW-S485D710U840-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	260.4	260.0	259.6	259.2	258.9	258.5	258.1	257.8
115°	302.5	302.3	302.1	301.7	301.2	300.7	300.2	299.7
117.5°	343.1	342.6	342.2	341.7	341.2	340.7	340.2	339.7
120°	370.2	370.2	370.2	369.9	369.4	368.9	368.4	367.9
122.5°	398.2	397.8	397.4	397.0	396.6	396.3	395.9	395.6
125°	439.6	439.1	438.6	438.3	438.2	438.0	437.8	437.7
127.5°	479.9	479.3	478.7	478.2	477.6	477.1	476.6	476.1
130°	507.5	507.1	506.8	506.2	505.5	504.9	504.2	503.6
132.5°	534.2	533.4	532.7	532.1	531.6	531.0	530.5	530.0
135°	573.7	573.5	573.4	573.0	572.5	572.0	571.5	571.0
137.5°	611.5	611.4	611.3	610.9	610.2	609.6	608.8	608.1
140°	636.9	636.9	636.9	636.6	636.0	635.3	634.6	634.0
142.5°	660.0	660.1	660.2	660.0	659.3	658.6	658.0	657.3
145°	695.0	695.2	695.3	695.1	694.4	693.8	693.1	692.5
147.5°	725.7	726.0	726.4	726.3	725.7	725.0	724.4	723.8
150°	745.1	745.6	746.1	746.1	745.6	745.1	744.7	744.2
152.5°	764.6	765.2	765.9	765.9	765.2	764.6	764.0	763.4
155°	789.2	790.1	790.9	791.1	790.6	790.1	789.6	789.1
157.5°	812.0	813.1	814.3	814.5	813.6	812.8	812.0	811.2
160°	825.6	826.6	827.6	827.7	827.1	826.4	825.8	825.1
162.5°	837.8	839.0	840.1	840.2	839.4	838.7	837.9	837.1
165°	853.6	854.7	856.0	856.2	855.3	854.4	853.6	852.8
167.5°	866.7	867.8	869.0	869.1	868.3	867.4	866.6	865.7
170°	873.8	875.0	876.2	876.3	875.3	874.2	873.2	872.2
172.5°	879.3	880.4	881.6	881.6	880.7	879.7	878.7	877.7
175°	885.0	886.3	887.5	887.5	886.5	885.6	884.5	883.5
177.5°	887.8	888.6	889.4	889.4	888.6	887.8	887.0	886.2
180°	888.0	888.0	888.0	888.0	888.0	888.0	888.0	888.0

(END OF REPORT)