

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: P331594-830

Luminaire Tested: **S122DIW-S1005D710U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331594-830  
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-S1005D710U830-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6123.2 lumens  
Efficiency: N/A  
Efficacy: 102.4 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

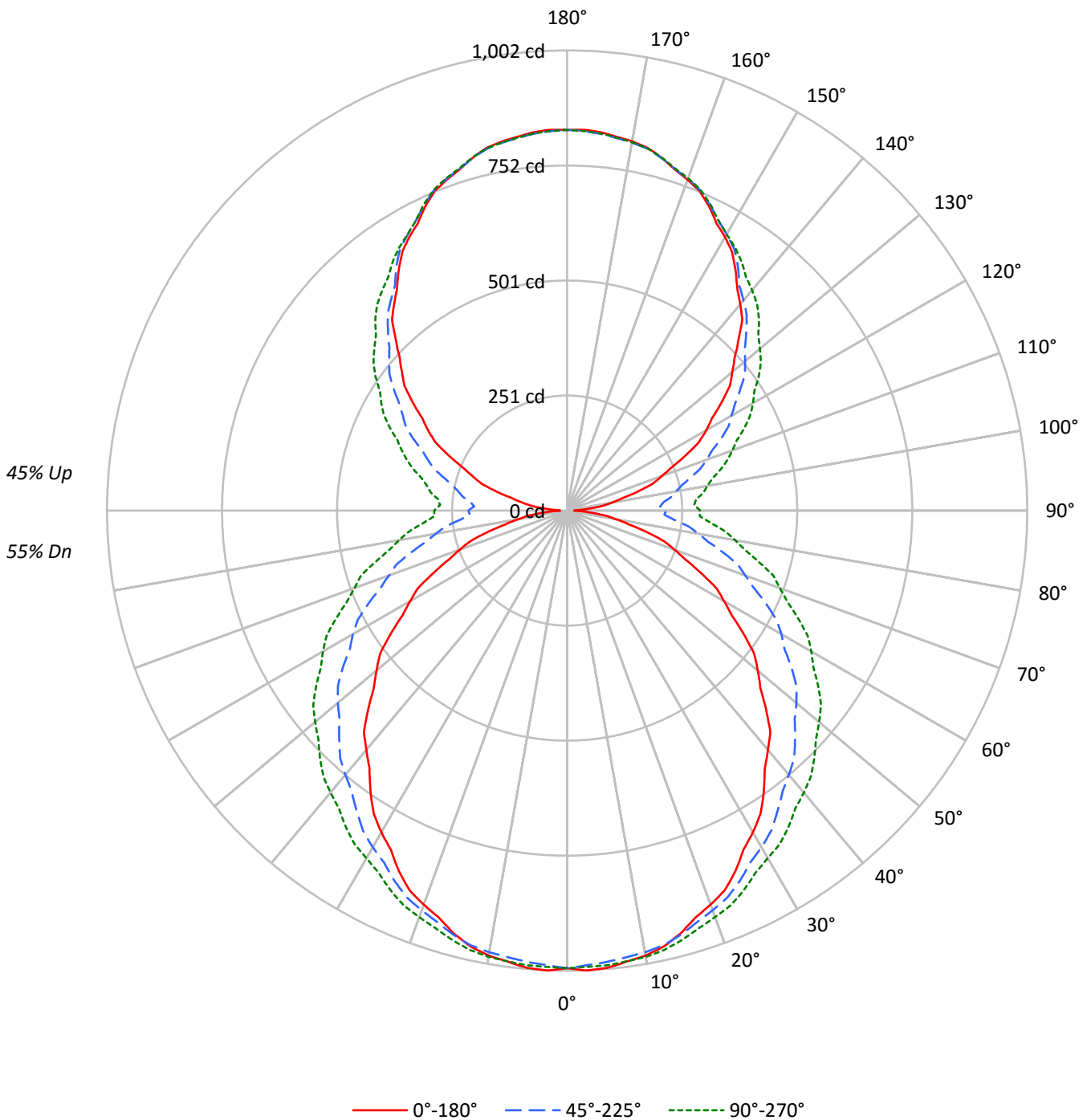
Input Watts (W): 59.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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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	101	101	101	101	86	86	86		73	73	73		61	61	61	55
1	97	92	88	84	90	86	82	78	73	70	67		62	60	57		51	50	48	43
2	88	80	73	67	81	74	68	63	63	59	55		53	50	47		44	42	39	35
3	80	69	61	55	74	64	57	52	55	50	45		47	42	39		39	35	33	29
4	73	61	53	46	67	57	49	43	49	43	38		41	37	33		34	31	28	24
5	67	54	46	39	61	50	43	37	43	37	32		37	32	28		31	27	24	21
6	61	49	40	34	57	45	37	32	39	33	28		33	28	24		28	24	21	18
7	57	44	35	29	52	41	33	28	35	29	25		30	25	21		25	21	18	16
8	53	40	32	26	48	37	30	25	32	26	22		27	23	19		23	19	16	14
9	49	36	28	23	45	34	27	22	29	24	19		25	20	17		21	17	15	13
10	46	33	26	21	42	31	24	20	27	21	17		23	19	15		20	16	13	11

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

	0°	45°	90°
0°	16091	16091	16091
5°	16172	15491	15432
10°	16069	15033	14865
15°	15848	14548	14266
20°	15567	14030	13691
25°	15292	13528	13167
30°	14902	13015	12643
35°	14508	12517	12274
40°	14092	12094	11903
45°	13700	11715	11587
50°	13277	11373	11276
55°	12834	11004	10959
60°	12292	10623	10624
65°	11728	10173	10227
70°	11096	9693	9797
75°	10286	9222	9401
80°	9006	8739	9001
85°	7780	8321	8687



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.4	1.5
10°-20°	270.8	4.4
20°-30°	410.4	6.7
30°-40°	499.9	8.2
40°-50°	537.8	8.8
50°-60°	522.2	8.5
60°-70°	456.0	7.4
70°-80°	351.0	5.7
80°-90°	238.9	3.9
90°-100°	214.8	3.5
100°-110°	281.6	4.6
110°-120°	357.1	5.8
120°-130°	410.3	6.7
130°-140°	429.9	7.0
140°-150°	406.7	6.6
150°-160°	338.4	5.5
160°-170°	224.5	3.7
170°-180°	78.5	1.3
0°-30°	775.7	12.7
0°-40°	1275.5	20.8
0°-60°	2335.5	38.1
0°-90°	3381.4	55.2
90°-120°	853.6	13.9
90°-150°	2100.4	34.3
90°-180°	2742.0	44.8
0°-180°	6123.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	997	997	997	997	997	
5°	1000	995	987	995	994	95
15°	953	956	956	968	968	268
25°	867	877	890	906	911	398
35°	747	772	799	829	841	467
45°	612	652	702	745	761	473
55°	470	523	596	647	667	420
65°	321	392	477	534	555	318
75°	178	259	351	411	432	188
85°	52	142	234	292	315	56
90°	15	108	215	269	290	12
95°	48	124	211	264	282	51
105°	158	203	278	328	346	167
115°	286	308	369	410	426	282
125°	410	418	460	496	510	367
135°	528	536	552	580	591	408
145°	639	644	648	657	662	400
155°	731	733	735	738	736	336
165°	795	795	795	799	796	224
175°	827	825	824	828	825	79
180°	829	829	829	829	829	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6
2.5°	1002.5	1001.7	1000.9	1000.1	999.4	998.1	996.3	994.5	992.7	990.9	992.2
5°	999.6	998.6	997.7	996.6	995.7	994.3	992.4	990.4	988.5	986.6	988.5
7.5°	990.6	990.0	989.3	988.7	988.1	987.0	985.5	984.0	982.6	981.1	983.4
10°	983.7	983.1	982.4	981.8	981.1	980.3	979.4	978.4	977.4	976.5	979.0
12.5°	972.1	972.2	972.4	972.5	972.6	972.3	971.7	970.9	970.3	969.5	972.1
15°	953.4	954.0	954.6	955.3	955.9	956.2	956.2	956.2	956.2	956.2	959.1
17.5°	929.1	930.5	931.8	933.1	934.4	935.7	936.7	937.7	938.8	939.8	942.8
20°	912.9	914.5	916.2	917.8	919.4	920.8	922.1	923.3	924.6	926.0	929.4
22.5°	895.6	897.4	899.3	901.2	903.1	904.8	906.6	908.4	910.2	912.0	915.6
25°	866.7	868.9	871.2	873.5	875.7	878.3	881.1	884.0	886.9	889.8	893.6
27.5°	832.0	835.7	839.3	843.0	846.7	850.2	853.6	857.0	860.4	863.8	868.6
30°	808.9	813.0	817.3	821.4	825.6	829.8	834.0	838.1	842.3	846.5	851.6
32.5°	783.4	788.2	792.9	797.6	802.2	807.0	812.0	816.9	821.9	826.8	832.7
35°	746.8	752.2	757.7	763.2	768.6	774.4	780.5	786.6	792.7	798.8	805.9
37.5°	706.9	713.2	719.5	725.8	732.1	739.1	747.1	755.0	762.9	770.8	778.6
40°	680.3	687.4	694.5	701.5	708.6	716.4	725.1	733.8	742.4	751.1	759.5
42.5°	655.0	661.9	669.0	676.1	683.2	691.6	701.6	711.6	721.5	731.5	740.6
45°	612.5	621.1	629.8	638.5	647.1	657.0	668.4	679.6	690.8	702.0	712.0
47.5°	570.6	580.0	589.5	598.9	608.3	619.6	632.8	645.9	659.1	672.2	682.7
50°	541.7	551.7	561.6	571.6	581.5	593.7	608.1	622.5	637.0	651.5	662.4
52.5°	514.0	524.4	534.9	545.4	555.8	568.6	583.8	599.1	614.3	629.5	640.6
55°	469.5	481.0	492.6	504.2	515.7	529.8	546.5	563.2	579.9	596.5	608.1
57.5°	425.6	438.6	451.6	464.7	477.7	492.7	509.7	526.7	543.8	560.7	573.2
60°	394.4	408.1	422.0	435.7	449.6	465.6	483.9	502.2	520.5	538.8	551.0
62.5°	366.6	380.9	395.2	409.5	423.9	440.2	458.5	476.7	495.1	513.4	526.3
65°	320.7	336.4	352.1	367.9	383.6	401.0	419.9	438.8	457.7	476.6	489.8
67.5°	278.5	294.9	311.3	327.8	344.2	362.1	381.5	401.0	420.3	439.7	453.0
70°	248.5	265.1	281.8	298.5	315.2	333.5	353.5	373.3	393.2	413.1	426.9
72.5°	220.7	237.9	255.1	272.3	289.5	308.2	328.4	348.6	368.7	388.9	402.4
75°	177.7	195.7	213.6	231.6	249.6	268.8	289.4	309.9	330.5	351.0	364.8
77.5°	136.1	154.9	173.7	192.5	211.3	231.1	252.0	272.9	293.7	314.6	328.4
80°	108.3	127.9	147.5	167.1	186.6	206.9	227.7	248.6	269.5	290.3	303.8
82.5°	85.2	104.5	123.9	143.2	162.5	182.8	203.9	225.0	246.1	267.2	280.7
85°	52.0	71.9	91.8	111.7	131.6	151.8	172.4	192.9	213.5	234.0	247.5
87.5°	28.5	48.0	67.5	87.0	106.5	126.9	148.1	169.3	190.5	211.8	224.8
90°	15.2	35.6	56.1	76.6	97.1	119.3	143.3	167.2	191.1	215.2	227.7
92.5°	25.7	44.4	63.2	81.8	100.6	120.2	140.7	161.4	181.9	202.6	215.2
95°	47.9	64.6	81.2	97.8	114.5	132.6	152.1	171.7	191.3	210.8	223.1
97.5°	76.5	91.3	106.1	120.9	135.7	152.6	171.7	190.8	209.9	228.9	240.8
100°	99.0	112.1	125.2	138.3	151.4	167.2	185.7	204.1	222.5	241.0	252.9
102.5°	121.3	133.1	145.0	156.8	168.6	183.6	201.7	219.7	237.8	255.8	267.6
105°	157.6	167.4	177.1	186.9	196.7	210.1	227.1	244.1	261.1	278.1	289.6
107.5°	195.7	203.8	211.9	220.0	228.2	240.3	256.2	272.2	288.1	304.2	315.1
110°	219.1	226.5	233.8	241.2	248.5	260.0	275.8	291.5	307.3	323.0	333.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	246.0	252.3	258.6	264.9	271.3	281.8	296.7	311.5	326.3	341.2	351.1
115°	285.6	290.0	294.5	299.0	303.4	312.7	326.9	340.9	355.1	369.2	378.7
117.5°	323.6	327.1	330.6	334.2	337.8	345.8	358.3	370.7	383.2	395.7	404.8
120°	349.9	352.4	354.9	357.4	360.0	367.0	378.6	390.2	401.8	413.4	422.4
122.5°	373.9	375.9	378.0	379.9	381.9	388.5	399.7	410.9	422.2	433.3	441.7
125°	409.9	411.3	412.7	414.2	415.6	421.1	430.9	440.7	450.5	460.3	468.5
127.5°	446.5	447.9	449.4	450.8	452.2	456.9	464.6	472.3	480.0	487.8	495.1
130°	469.4	471.1	472.8	474.5	476.2	480.2	486.7	493.1	499.5	506.0	513.4
132.5°	495.1	496.4	497.8	499.1	500.4	503.7	509.0	514.3	519.5	524.8	531.6
135°	528.1	529.8	531.5	533.2	535.0	537.5	541.1	544.6	548.1	551.7	558.3
137.5°	564.3	565.7	567.0	568.4	569.7	571.3	573.1	574.9	576.7	578.5	584.3
140°	586.2	587.2	588.3	589.4	590.5	591.7	593.1	594.6	596.0	597.4	602.6
142.5°	608.5	609.6	610.7	611.8	612.8	613.7	614.3	615.0	615.7	616.3	620.6
145°	639.2	640.4	641.4	642.5	643.7	644.6	645.5	646.5	647.4	648.4	650.4
147.5°	668.0	669.2	670.5	671.8	673.2	674.1	674.8	675.3	676.0	676.7	677.2
150°	687.5	688.4	689.4	690.3	691.3	692.0	692.7	693.2	693.9	694.6	695.0
152.5°	704.8	705.8	706.7	707.7	708.6	709.5	710.2	711.0	711.7	712.5	713.0
155°	730.8	731.3	731.8	732.3	732.7	733.2	733.7	734.1	734.6	735.1	735.8
157.5°	753.1	753.5	753.8	754.0	754.4	754.7	755.0	755.3	755.5	755.8	756.9
160°	766.6	766.9	767.1	767.5	767.8	768.1	768.2	768.4	768.5	768.6	769.6
162.5°	778.8	778.9	779.0	779.0	779.1	779.2	779.4	779.6	779.7	779.9	780.9
165°	795.2	795.0	794.9	794.8	794.7	794.6	794.6	794.6	794.6	794.6	795.6
167.5°	809.0	808.5	808.0	807.6	807.1	806.8	806.8	806.7	806.7	806.7	807.8
170°	816.2	815.8	815.3	814.8	814.4	814.1	813.9	813.7	813.6	813.4	814.5
172.5°	821.2	820.8	820.3	819.8	819.4	819.1	818.9	818.8	818.6	818.4	819.5
175°	827.4	827.0	826.5	826.0	825.6	825.2	824.8	824.5	824.3	823.9	825.0
177.5°	829.9	829.5	829.2	828.8	828.4	828.1	827.8	827.6	827.4	827.1	827.8
180°	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6
2.5°	993.4	994.8	996.1	996.5	995.9	995.4	994.9	994.4
5°	990.4	992.4	994.3	995.0	994.8	994.5	994.1	993.8
7.5°	985.7	988.1	990.3	991.4	991.0	990.7	990.3	990.0
10°	981.6	984.2	986.7	987.9	987.5	987.2	986.9	986.6
12.5°	974.7	977.2	979.8	980.9	980.6	980.2	980.0	979.7
15°	962.1	964.9	967.8	969.1	968.7	968.5	968.1	967.8
17.5°	945.8	948.9	951.9	953.4	953.4	953.4	953.4	953.4
20°	932.9	936.5	940.0	941.8	941.8	941.8	941.8	941.8
22.5°	919.1	922.7	926.1	928.2	928.7	929.3	929.7	930.3
25°	897.5	901.4	905.2	907.6	908.6	909.6	910.5	911.4
27.5°	873.5	878.4	883.4	886.1	886.8	887.5	888.3	888.9
30°	856.8	861.9	867.0	870.1	871.0	871.9	873.0	873.9
32.5°	838.7	844.5	850.5	854.2	856.0	857.7	859.5	861.2
35°	812.9	820.0	827.1	831.7	834.0	836.2	838.5	840.7
37.5°	786.5	794.3	802.1	807.2	809.5	812.0	814.4	816.7
40°	767.8	776.2	784.5	790.1	793.1	795.9	798.8	801.7
42.5°	749.7	758.8	768.0	773.9	776.8	779.8	782.6	785.5
45°	721.9	731.9	741.8	748.4	751.6	754.8	758.0	761.2
47.5°	693.1	703.4	713.9	720.9	724.3	727.9	731.4	735.0
50°	673.3	684.2	695.1	702.4	705.9	709.4	712.9	716.4
52.5°	651.9	663.0	674.2	681.6	685.4	689.3	693.1	696.8
55°	619.7	631.2	642.8	650.6	654.8	659.0	663.2	667.3
57.5°	585.7	598.1	610.6	618.9	623.1	627.4	631.6	635.8
60°	563.2	575.4	587.6	596.0	600.4	604.9	609.4	613.9
62.5°	539.3	552.2	565.2	573.8	578.1	582.3	586.5	590.8
65°	503.0	516.1	529.3	538.0	542.2	546.3	550.5	554.7
67.5°	466.3	479.6	492.9	501.7	506.1	510.4	514.8	519.2
70°	440.7	454.5	468.3	477.1	481.0	484.8	488.7	492.6
72.5°	415.9	429.5	443.0	452.1	456.8	461.4	466.0	470.6
75°	378.6	392.4	406.2	415.2	419.3	423.6	427.7	431.9
77.5°	342.0	355.8	369.6	378.7	383.1	387.7	392.2	396.6
80°	317.3	330.8	344.3	353.3	357.8	362.2	366.7	371.3
82.5°	294.2	307.6	321.1	330.0	334.2	338.5	342.7	346.9
85°	261.0	274.5	287.9	296.9	301.4	305.9	310.4	314.9
87.5°	237.8	250.8	263.9	272.5	276.6	280.8	284.9	289.0
90°	240.3	252.7	265.2	273.5	277.6	281.5	285.6	289.5
92.5°	227.8	240.4	253.1	261.4	265.2	269.1	273.0	276.9
95°	235.3	247.5	259.7	267.5	271.1	274.7	278.1	281.7
97.5°	252.7	264.6	276.4	284.3	288.0	291.8	295.6	299.3
100°	264.8	276.6	288.5	296.1	299.4	302.8	306.2	309.6
102.5°	279.3	291.1	302.8	310.4	313.8	317.1	320.5	323.9
105°	301.1	312.7	324.2	331.8	335.4	338.8	342.4	345.9
107.5°	326.0	336.9	347.8	354.7	357.5	360.3	363.1	365.9
110°	343.5	353.7	364.0	370.7	373.8	376.8	379.9	383.0





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CATALOG NUMBER: S122DIW-S1005D710U830-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	361.0	370.9	380.8	387.3	390.5	393.7	396.9	400.1
115°	388.1	397.7	407.1	413.4	416.5	419.5	422.6	425.7
117.5°	414.0	423.1	432.3	438.2	441.0	443.8	446.6	449.4
120°	431.4	440.4	449.3	455.3	458.5	461.5	464.6	467.6
122.5°	450.1	458.4	466.7	472.3	474.9	477.6	480.3	483.0
125°	476.7	484.9	493.1	498.6	501.3	504.1	506.8	509.5
127.5°	502.6	509.9	517.4	522.2	524.5	526.9	529.1	531.5
130°	520.8	528.2	535.6	540.3	542.2	544.1	546.0	548.0
132.5°	538.3	545.1	551.9	556.3	558.4	560.4	562.5	564.6
135°	564.8	571.4	578.0	582.3	584.5	586.5	588.6	590.7
137.5°	590.0	595.9	601.6	605.3	606.9	608.4	610.0	611.5
140°	607.7	612.8	617.9	621.1	622.5	623.8	625.1	626.4
142.5°	624.8	629.1	633.3	635.9	637.0	638.0	639.0	640.1
145°	652.5	654.6	656.7	658.2	659.2	660.2	661.2	662.1
147.5°	677.8	678.4	679.0	679.4	679.6	679.8	680.0	680.1
150°	695.4	695.9	696.4	696.4	695.9	695.4	695.0	694.6
152.5°	713.6	714.2	714.8	714.8	714.2	713.6	713.0	712.5
155°	736.6	737.4	738.2	738.4	737.9	737.4	737.0	736.5
157.5°	757.9	758.9	760.0	760.2	759.4	758.7	757.9	757.1
160°	770.5	771.5	772.4	772.5	771.9	771.3	770.7	770.1
162.5°	781.9	783.1	784.1	784.2	783.4	782.8	782.0	781.3
165°	796.7	797.8	798.9	799.1	798.2	797.5	796.7	796.0
167.5°	808.9	809.9	811.1	811.2	810.4	809.5	808.8	807.9
170°	815.6	816.7	817.7	817.8	816.9	816.0	815.0	814.1
172.5°	820.7	821.7	822.8	822.8	822.0	821.0	820.1	819.2
175°	826.0	827.2	828.3	828.3	827.4	826.5	825.6	824.6
177.5°	828.6	829.3	830.1	830.1	829.3	828.6	827.8	827.1
180°	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8

(END OF REPORT)