

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: P333408-935

Luminaire Tested: **S125DIW-S850D770U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333408-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-7,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIW-S850D770U935-4F0-1E-UDD-D  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 770 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5469.6 lumens  
Efficiency: N/A  
Efficacy: 121.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

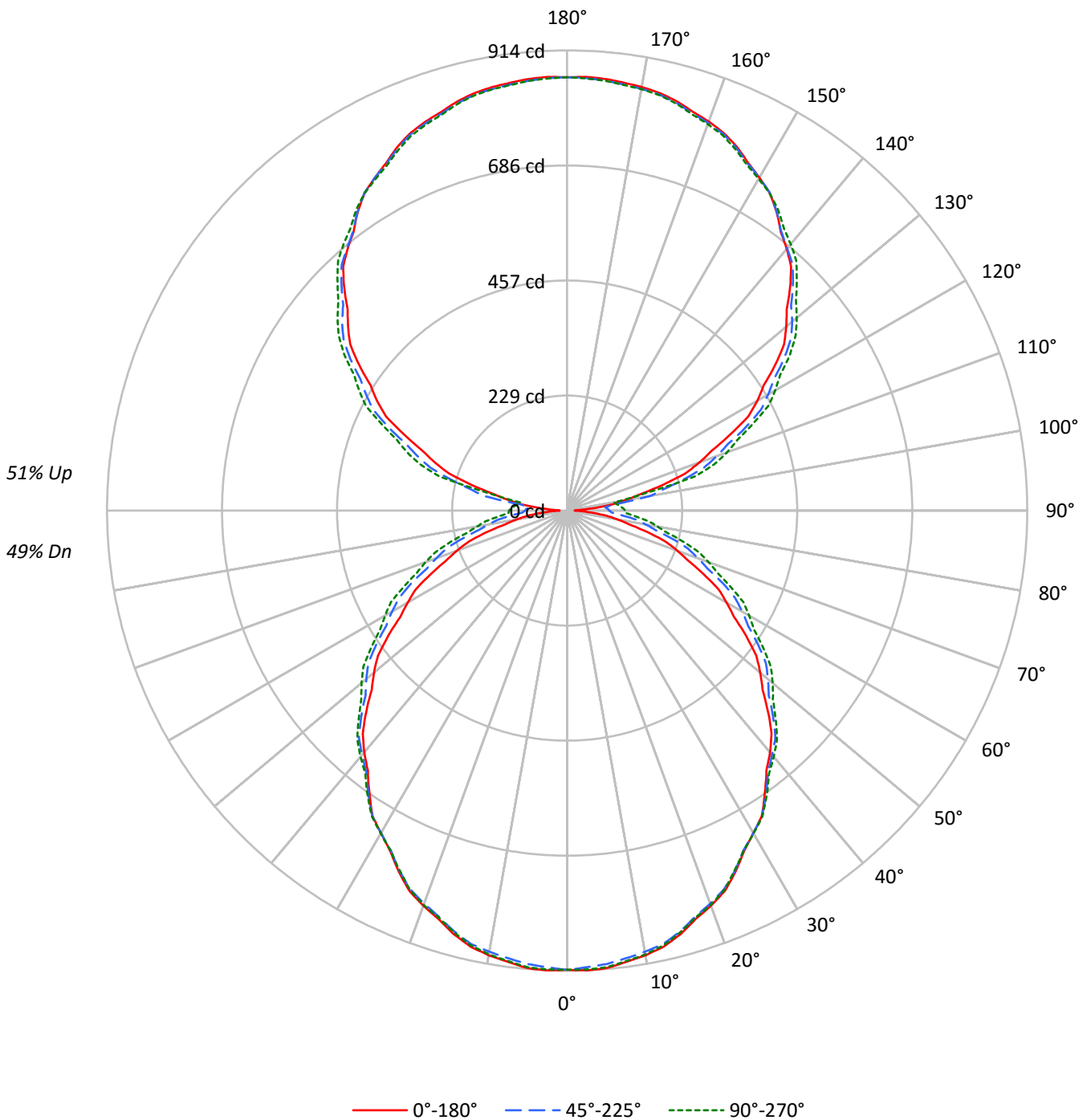
Input Watts (W): 45  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20				20				20				20				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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	47	46	45	39
2	88	80	74	68	80	74	68	63	62	58	54	51	48	46	41	39	37	32
3	80	70	62	56	73	65	58	53	54	49	45	45	41	38	36	34	31	27
4	73	62	54	48	67	57	50	44	48	43	38	40	36	33	32	29	27	23
5	67	55	47	41	61	51	43	38	43	37	33	36	31	28	29	26	23	20
6	62	49	41	35	56	46	38	33	39	33	29	32	28	24	26	23	20	17
7	57	44	36	31	52	41	34	29	35	29	25	29	25	22	24	21	18	15
8	53	40	32	27	48	37	30	25	32	26	22	27	22	19	22	19	16	14
9	49	37	29	24	45	34	27	23	29	24	20	25	20	17	20	17	15	12
10	46	34	26	21	42	31	25	20	27	22	18	23	18	16	19	16	13	11

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

	0°	45°	90°
0°	5891	5891	5891
5°	5902	5782	5800
10°	5860	5679	5670
15°	5791	5555	5505
20°	5697	5402	5339
25°	5585	5239	5135
30°	5449	5059	4950
35°	5322	4893	4780
40°	5194	4719	4609
45°	5048	4570	4458
50°	4910	4408	4325
55°	4742	4256	4166
60°	4560	4082	4006
65°	4369	3900	3826
70°	4153	3651	3640
75°	3809	3412	3412
80°	3363	3122	3163
85°	2945	2924	3085



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.2	1.6
10°-20°	244.8	4.5
20°-30°	364.1	6.7
30°-40°	431.3	7.9
40°-50°	445.9	8.2
50°-60°	410.8	7.5
60°-70°	332.0	6.1
70°-80°	222.4	4.1
80°-90°	117.1	2.1
90°-100°	96.0	1.8
100°-110°	240.5	4.4
110°-120°	381.5	7.0
120°-130°	466.8	8.5
130°-140°	490.5	9.0
140°-150°	454.5	8.3
150°-160°	366.4	6.7
160°-170°	237.0	4.3
170°-180°	81.7	1.5
0°-30°	695.2	12.7
0°-40°	1126.5	20.6
0°-60°	1983.2	36.3
0°-90°	2654.7	48.5
90°-120°	718.0	13.1
90°-150°	2129.8	38.9
90°-180°	2815.0	51.5
0°-180°	5469.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	912	912	912	912	912	
5°	912	910	904	911	910	86
15°	871	872	866	870	867	245
25°	791	794	789	792	788	364
35°	685	691	688	691	691	428
45°	564	574	578	584	586	435
55°	434	448	462	472	476	388
65°	299	319	341	354	358	296
75°	164	188	216	234	239	175
85°	49	79	110	129	137	52
90°	15	49	84	106	116	11
95°	48	68	76	97	105	55
105°	196	213	239	256	263	207
115°	358	368	391	404	406	354
125°	504	509	526	537	540	450
135°	626	629	634	644	645	483
145°	725	725	725	730	730	453
155°	798	794	795	796	792	367
165°	842	838	838	842	837	238
175°	861	857	858	862	857	82
180°	861	861	861	861	861	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	912.1	912.1	912.1	912.1	912.1	912.1	912.1	912.1	912.1	912.1	912.1
2.5°	914.2	914.0	913.6	913.3	912.9	912.2	911.1	910.0	908.9	907.8	908.9
5°	912.1	911.7	911.3	910.9	910.5	909.6	908.2	906.8	905.4	904.0	905.6
7.5°	904.0	903.9	903.7	903.5	903.4	902.6	901.2	899.7	898.3	896.9	898.3
10°	896.9	896.9	896.9	896.9	896.9	896.1	894.5	892.9	891.3	889.8	891.1
12.5°	886.8	887.0	887.2	887.3	887.5	886.9	885.7	884.4	883.1	881.8	883.0
15°	871.0	871.2	871.3	871.5	871.8	871.2	869.8	868.4	866.9	865.6	866.8
17.5°	850.2	850.6	851.0	851.4	851.8	851.3	849.9	848.5	847.1	845.8	846.6
20°	835.2	835.6	835.9	836.4	836.8	836.3	834.9	833.5	832.1	830.7	831.3
22.5°	818.0	818.7	819.4	820.2	820.9	820.4	818.9	817.3	815.8	814.2	815.0
25°	791.3	791.9	792.6	793.2	793.8	793.4	792.3	791.1	789.9	788.7	789.5
27.5°	761.6	762.6	763.4	764.3	765.2	764.9	763.6	762.2	760.9	759.6	760.1
30°	739.5	740.7	741.9	743.0	744.2	744.2	743.0	741.9	740.7	739.5	739.9
32.5°	719.5	720.5	721.5	722.6	723.6	723.7	722.8	721.9	721.1	720.2	720.6
35°	684.9	686.4	687.8	689.1	690.5	691.0	690.3	689.7	689.1	688.5	689.1
37.5°	650.4	651.7	653.0	654.3	655.6	656.1	655.8	655.7	655.5	655.3	656.1
40°	626.8	628.4	630.0	631.6	633.2	633.9	633.7	633.5	633.3	633.1	633.9
42.5°	601.1	603.1	605.2	607.3	609.3	610.6	611.1	611.5	611.9	612.3	613.3
45°	564.2	566.5	568.6	570.8	573.0	574.5	575.6	576.5	577.6	578.5	580.0
47.5°	526.5	528.6	530.5	532.6	534.6	536.5	538.2	539.9	541.6	543.3	545.4
50°	500.8	502.9	505.1	507.3	509.5	511.7	513.8	516.1	518.2	520.4	522.6
52.5°	473.6	476.2	478.9	481.6	484.2	486.9	489.6	492.2	494.9	497.6	499.9
55°	433.7	436.9	440.1	443.2	446.4	449.6	452.8	456.0	459.1	462.3	464.5
57.5°	392.9	396.7	400.5	404.3	408.2	411.9	415.6	419.2	422.8	426.5	429.0
60°	365.8	369.7	373.7	377.6	381.6	385.6	389.6	393.6	397.5	401.5	404.5
62.5°	339.2	343.2	347.2	351.2	355.2	359.3	363.6	367.9	372.1	376.4	379.8
65°	298.7	303.2	307.8	312.4	316.9	321.6	326.4	331.1	336.0	340.7	343.7
67.5°	260.4	264.8	269.2	273.6	278.0	282.7	287.5	292.4	297.2	302.0	305.7
70°	232.5	237.0	241.6	246.2	250.8	255.6	260.8	266.0	271.1	276.3	280.1
72.5°	205.3	210.0	214.7	219.5	224.2	229.4	235.1	240.7	246.3	252.0	256.1
75°	164.5	169.7	174.9	180.0	185.2	191.0	197.3	203.7	210.0	216.4	220.3
77.5°	125.4	131.3	137.3	143.3	149.2	155.2	161.4	167.5	173.6	179.8	184.1
80°	101.1	107.0	113.0	118.9	124.9	131.2	138.0	144.7	151.5	158.3	162.6
82.5°	78.9	85.2	91.4	97.7	104.0	110.6	117.5	124.4	131.3	138.3	142.5
85°	49.2	55.7	62.3	68.9	75.4	82.1	89.1	96.1	103.1	109.9	114.3
87.5°	28.1	34.6	41.2	47.8	54.3	61.1	68.1	75.1	82.0	88.9	93.7
90°	15.0	22.5	30.0	37.5	44.9	52.5	60.3	68.0	75.8	83.5	88.8
92.5°	22.7	27.8	32.9	38.0	43.0	49.5	57.3	65.1	72.8	80.7	85.8
95°	48.0	52.7	57.4	62.3	67.0	70.0	71.4	72.8	74.1	75.5	80.6
97.5°	86.4	91.9	97.3	102.7	108.1	108.7	104.6	100.5	96.3	92.2	92.4
100°	116.4	121.0	125.5	130.2	134.7	140.5	147.5	154.4	161.4	168.2	151.3
102.5°	146.8	151.2	155.6	160.0	164.4	169.9	176.4	182.9	189.4	196.0	196.0
105°	195.6	199.3	203.1	206.8	210.6	215.4	221.4	227.4	233.3	239.3	243.2
107.5°	246.3	249.0	251.8	254.4	257.2	261.5	267.5	273.5	279.6	285.5	289.5
110°	279.3	281.7	284.0	286.5	288.9	293.0	298.9	304.6	310.5	316.3	319.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	311.0	313.2	315.5	317.7	319.9	323.8	329.4	335.0	340.6	346.1	349.2
115°	357.5	359.6	361.7	363.9	365.9	369.6	375.0	380.2	385.6	390.9	393.9
117.5°	405.8	406.7	407.5	408.4	409.3	412.4	417.8	423.3	428.7	434.2	436.8
120°	436.4	436.9	437.3	437.7	438.2	440.9	445.9	450.9	455.9	460.9	464.0
122.5°	462.7	463.6	464.3	465.2	466.0	468.7	473.3	477.9	482.5	487.2	490.1
125°	504.4	505.1	506.0	506.8	507.6	510.0	513.9	517.9	521.9	525.8	528.5
127.5°	543.5	543.9	544.4	544.9	545.4	547.3	550.5	553.6	556.8	560.0	562.7
130°	567.9	568.4	568.9	569.5	570.0	571.7	574.6	577.6	580.5	583.4	585.7
132.5°	591.7	592.5	593.2	594.1	594.9	596.2	598.0	599.8	601.7	603.5	606.1
135°	626.4	627.0	627.7	628.4	629.0	629.8	630.9	632.1	633.2	634.3	636.5
137.5°	658.2	658.8	659.4	660.0	660.6	661.0	661.4	661.9	662.3	662.7	665.1
140°	678.4	678.7	679.0	679.2	679.6	679.8	679.8	679.8	679.9	679.9	682.4
142.5°	697.3	697.3	697.3	697.3	697.3	697.5	697.7	697.9	698.2	698.4	700.3
145°	725.0	725.0	725.1	725.2	725.3	725.4	725.4	725.4	725.4	725.4	726.5
147.5°	748.4	748.3	748.2	748.2	748.1	748.2	748.4	748.5	748.6	748.8	749.3
150°	763.6	763.4	763.1	762.8	762.5	762.5	762.8	763.1	763.4	763.6	764.0
152.5°	778.4	777.8	777.2	776.6	775.9	775.8	776.1	776.4	776.6	776.9	777.2
155°	797.5	796.6	795.7	794.9	794.1	793.8	794.1	794.4	794.6	794.9	795.3
157.5°	812.1	811.7	811.1	810.6	810.1	809.9	809.9	809.9	809.9	809.9	810.5
160°	822.3	821.5	820.6	819.8	819.0	818.6	818.7	818.9	819.0	819.2	819.8
162.5°	830.5	829.7	828.8	827.9	827.1	826.7	826.9	827.1	827.2	827.3	828.1
165°	841.5	840.6	839.8	839.0	838.1	837.8	837.8	838.0	838.2	838.3	839.1
167.5°	849.6	848.8	847.9	847.1	846.1	845.8	845.9	846.0	846.2	846.4	847.3
170°	854.3	853.3	852.2	851.3	850.2	849.8	850.0	850.2	850.2	850.4	851.5
172.5°	857.3	856.4	855.3	854.3	853.3	853.0	853.3	853.5	853.8	854.0	855.0
175°	860.7	859.8	858.9	858.1	857.2	856.9	857.0	857.1	857.3	857.5	858.6
177.5°	862.1	861.4	860.8	860.1	859.5	859.1	859.3	859.4	859.5	859.6	860.4
180°	860.7	860.7	860.7	860.7	860.7	860.7	860.7	860.7	860.7	860.7	860.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	912.1	912.1	912.1	912.1	912.1	912.1	912.1	912.1
2.5°	910.0	911.1	912.2	912.7	912.6	912.4	912.2	912.1
5°	907.2	908.8	910.4	911.1	910.9	910.7	910.5	910.3
7.5°	899.7	901.0	902.4	903.0	902.8	902.7	902.4	902.2
10°	892.5	893.9	895.3	895.9	895.7	895.5	895.3	895.1
12.5°	884.0	885.1	886.1	886.4	885.9	885.4	884.8	884.3
15°	868.0	869.2	870.4	870.6	869.8	868.9	868.1	867.4
17.5°	847.6	848.5	849.4	849.6	849.1	848.7	848.2	847.7
20°	831.9	832.5	833.1	833.4	833.4	833.4	833.4	833.4
22.5°	815.8	816.5	817.3	817.4	816.9	816.5	816.0	815.5
25°	790.3	791.1	791.9	791.8	790.7	789.8	788.8	787.8
27.5°	760.6	761.2	761.7	761.9	761.5	761.1	760.8	760.4
30°	740.3	740.7	741.1	741.2	741.0	740.8	740.6	740.4
32.5°	721.0	721.3	721.8	721.9	721.7	721.5	721.3	721.1
35°	689.7	690.3	691.0	691.2	691.2	691.2	691.2	691.2
37.5°	656.9	657.6	658.4	658.8	658.8	658.7	658.6	658.5
40°	634.6	635.5	636.3	636.9	637.2	637.7	638.1	638.4
42.5°	614.2	615.2	616.1	616.6	616.7	616.8	616.9	617.0
45°	581.3	582.7	584.1	584.9	585.1	585.3	585.5	585.7
47.5°	547.3	549.4	551.4	552.7	553.1	553.5	554.0	554.4
50°	524.8	527.0	529.2	530.5	531.2	531.8	532.4	533.0
52.5°	502.2	504.5	506.9	508.3	508.8	509.2	509.6	510.1
55°	466.7	468.9	471.1	472.5	473.3	474.2	474.9	475.7
57.5°	431.5	434.0	436.5	438.1	438.7	439.3	439.9	440.5
60°	407.4	410.4	413.5	415.2	415.8	416.4	417.0	417.6
62.5°	383.1	386.3	389.7	391.7	392.4	393.2	393.9	394.7
65°	346.6	349.7	352.6	354.5	355.3	356.1	356.9	357.7
67.5°	309.3	312.9	316.5	318.8	319.9	320.9	321.9	323.0
70°	283.9	287.7	291.4	293.9	295.1	296.3	297.5	298.7
72.5°	260.2	264.2	268.4	270.9	271.7	272.6	273.5	274.3
75°	224.4	228.3	232.3	234.8	235.7	236.8	237.7	238.8
77.5°	188.5	192.9	197.3	199.8	200.6	201.4	202.2	203.0
80°	167.0	171.4	175.7	178.3	179.2	179.9	180.7	181.5
82.5°	146.6	150.8	155.1	157.9	159.4	160.7	162.2	163.7
85°	118.7	123.1	127.5	130.4	132.1	133.6	135.3	136.8
87.5°	98.4	103.1	107.8	110.9	112.4	113.8	115.3	116.8
90°	94.1	99.4	104.6	108.2	110.0	111.8	113.7	115.5
92.5°	90.9	96.0	101.2	104.5	106.1	107.7	109.3	110.9
95°	85.7	90.7	95.8	99.0	100.4	101.9	103.2	104.6
97.5°	92.6	92.7	92.9	93.7	95.0	96.3	97.7	99.1
100°	134.3	117.4	100.4	92.3	92.9	93.5	94.1	94.8
102.5°	196.0	196.0	196.0	191.8	183.4	175.0	166.5	158.1
105°	247.3	251.2	255.2	257.8	259.1	260.3	261.6	262.8
107.5°	293.4	297.4	301.4	303.8	304.5	305.4	306.2	307.0
110°	323.0	326.4	329.8	332.2	333.7	335.3	336.8	338.3





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CATALOG NUMBER: S125DIW-S850D770U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	352.3	355.4	358.4	360.6	361.8	363.0	364.2	365.4
115°	396.9	399.8	402.9	404.6	404.9	405.3	405.6	406.0
117.5°	439.5	442.1	444.7	446.5	447.5	448.5	449.4	450.5
120°	467.1	470.2	473.3	475.1	475.5	476.0	476.5	477.0
122.5°	493.0	495.9	498.9	500.5	500.9	501.3	501.6	502.0
125°	531.1	533.6	536.3	537.9	538.5	539.0	539.6	540.2
127.5°	565.2	567.9	570.5	571.9	572.0	572.1	572.2	572.3
130°	588.1	590.5	592.8	594.1	594.4	594.7	595.0	595.3
132.5°	608.9	611.6	614.2	615.7	615.8	616.0	616.0	616.2
135°	638.9	641.2	643.5	644.7	644.8	645.0	645.1	645.2
137.5°	667.5	669.9	672.3	673.6	673.6	673.6	673.7	673.7
140°	684.9	687.3	689.8	691.0	691.0	691.0	690.9	690.8
142.5°	702.2	704.2	706.1	707.1	707.0	707.0	706.9	706.8
145°	727.6	728.8	730.0	730.5	730.4	730.3	730.3	730.2
147.5°	749.8	750.3	750.8	750.7	750.0	749.4	748.7	748.0
150°	764.2	764.5	764.8	764.5	763.5	762.6	761.6	760.7
152.5°	777.5	777.7	778.1	777.7	776.7	775.8	774.7	773.8
155°	795.7	796.2	796.6	796.3	795.1	794.0	792.9	791.7
157.5°	810.9	811.3	811.8	811.4	810.3	809.2	808.0	806.9
160°	820.3	820.9	821.4	821.1	820.0	818.9	817.8	816.6
162.5°	828.9	829.7	830.5	830.3	829.1	827.8	826.6	825.3
165°	840.0	840.9	841.7	841.5	840.4	839.3	838.2	837.0
167.5°	848.3	849.4	850.4	850.3	849.0	847.7	846.4	845.2
170°	852.6	853.9	855.0	854.9	853.6	852.3	851.0	849.8
172.5°	856.0	857.0	858.1	857.9	856.7	855.4	854.1	852.8
175°	859.7	860.8	861.9	861.9	860.7	859.4	858.1	856.8
177.5°	861.2	861.9	862.8	862.7	861.8	860.9	860.0	859.1
180°	860.7	860.7	860.7	860.7	860.7	860.7	860.7	860.7

(END OF REPORT)