

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: METALUX

Report Number: P197440

Luminaire Tested: **8WSL-LD2-120-UPL8-UNV-L850-CD2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197440
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28106)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 8WSL-LD2-120-UPL8-UNV-L850-CD2-U
Description: 8FT. Linear Wavestream System, 8% Uplight, L850
Light Source: (476) 5000K CCT, 80 CRI LEDS
EL236N0119D850
Ballast/Driver: OSRAM
OT50W

Summary

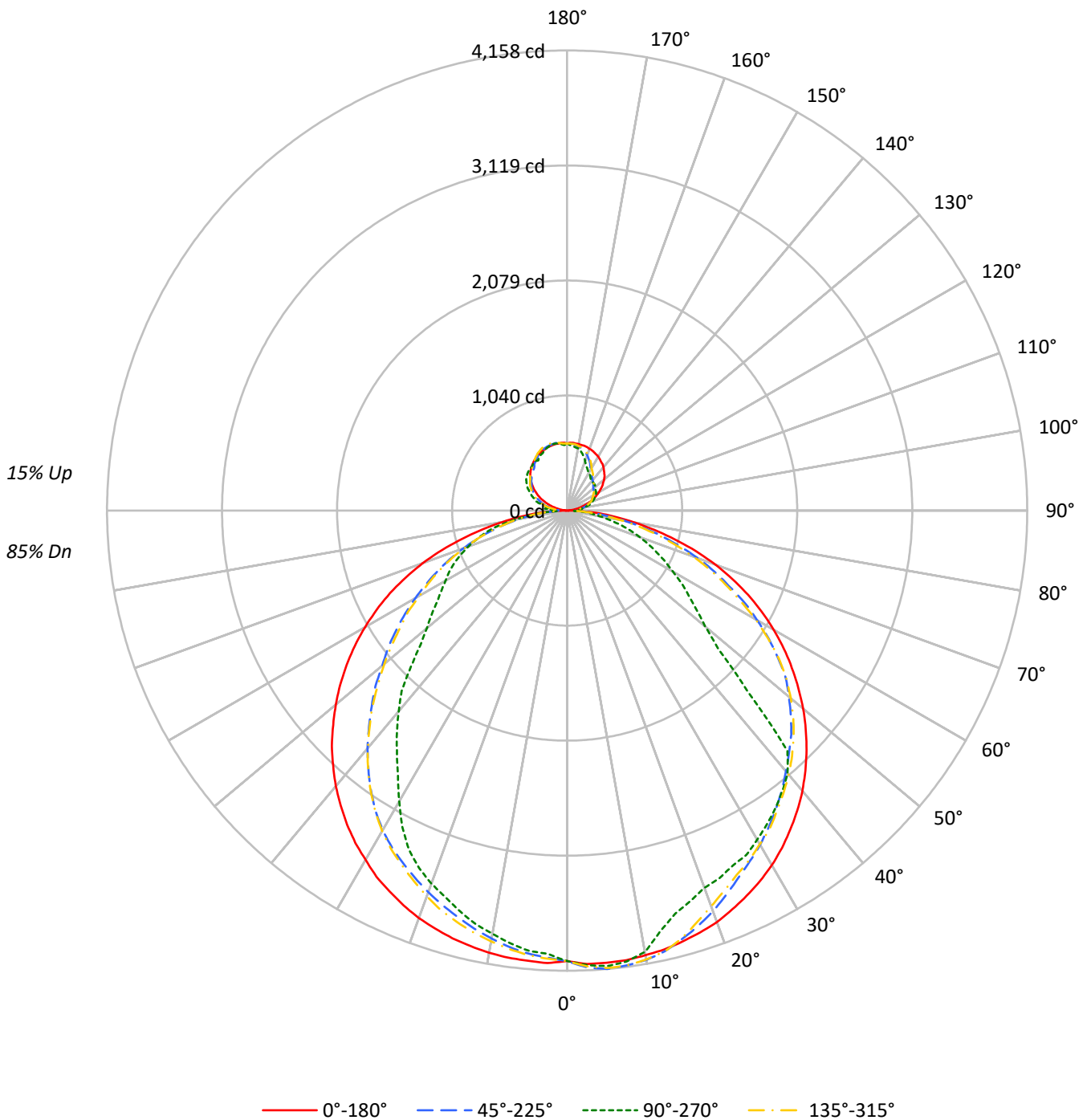
Lumens per Lamp: N/A
Luminaire Lumens: 13502.2 lumens
Efficiency: N/A
Efficacy: 119.0 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 113.5
Input Voltage (V): NR
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	115	115	115	115	111	111	111	111	103	103	103	95	95	95	88	88	88	85
1	105	101	96	92	101	97	93	90	90	87	84	83	81	79	78	76	74	71
2	96	88	81	75	92	84	78	73	78	73	69	73	69	65	68	65	62	59
3	87	77	69	62	83	74	67	61	69	63	58	64	59	55	60	56	52	50
4	80	68	59	53	76	66	58	52	61	55	49	57	52	47	53	49	45	42
5	73	61	52	45	70	59	51	44	55	48	43	51	45	41	48	43	39	37
6	68	55	46	40	65	53	45	39	50	43	37	47	40	36	44	38	34	32
7	63	49	41	35	60	48	40	34	45	38	33	42	36	32	40	35	31	28
8	58	45	37	31	56	44	36	30	41	34	29	39	33	28	37	31	27	25
9	54	41	33	28	52	40	33	27	38	31	26	36	30	26	34	29	25	23
10	51	38	30	25	49	37	30	25	35	28	24	33	27	23	31	26	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	11531	11531	11531	11531
5°	11661	11748	11612	11352
10°	11734	11646	11671	11170
15°	11823	11056	11733	10992
20°	11929	10931	11811	10812
25°	12001	11061	11864	10571
30°	12103	11233	11918	9922
35°	12162	11348	11982	9269
40°	12232	11458	12022	8751
45°	12256	9218	12047	7996
50°	12273	7164	12023	7298
55°	12247	6629	12010	7081
60°	12222	6247	11950	7185
65°	12094	5989	11831	7537
70°	11767	5775	11479	7869
75°	11019	5438	10685	8300
80°	10024	4977	9598	7892
85°	9773	5382	8782	7082



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	387.0	2.9
10°-20°	1098.9	8.1
20°-30°	1663.5	12.3
30°-40°	2008.7	14.9
40°-50°	2050.8	15.2
50°-60°	1793.0	13.3
60°-70°	1389.7	10.3
70°-80°	835.5	6.2
80°-90°	257.9	1.9
90°-100°	108.8	0.8
100°-110°	207.9	1.5
110°-120°	282.5	2.1
120°-130°	321.1	2.4
130°-140°	325.7	2.4
140°-150°	299.8	2.2
150°-160°	247.3	1.8
160°-170°	166.3	1.2
170°-180°	57.8	0.4
0°-30°	3149.4	23.3
0°-40°	5158.1	38.2
0°-60°	9001.8	66.7
0°-90°	11485.0	85.1
90°-120°	599.1	4.4
90°-150°	1545.7	11.4
90°-180°	2017.0	14.9
0°-180°	13502.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4071	4071	4071	4071	4071	
5°	4101	4132	4084	3992	4101	391
15°	4032	3770	4001	3748	4032	1140
25°	3840	3539	3796	3382	3840	1772
35°	3517	3282	3465	2680	3517	2202
45°	3060	2301	3007	1996	3060	2360
55°	2480	1342	2432	1434	2480	2217
65°	1804	894	1765	1124	1804	1780
75°	1007	497	976	758	1007	1068
85°	301	166	270	218	301	303
90°	4	92	4	105	4	20
95°	26	126	26	200	26	33
105°	140	214	135	270	140	149
115°	270	275	266	366	270	267
125°	388	314	379	449	388	344
135°	475	344	471	497	475	367
145°	536	366	532	527	536	337
155°	580	427	575	558	580	268
165°	606	532	602	606	606	171
175°	614	584	614	602	614	58
180°	606	606	606	606	606	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	4070.7	4070.7	4070.7	4070.7	4070.7	4070.7	4070.7	4070.7	4070.7	4070.7	4070.7
2.5°	4101.2	4079.4	4131.7	4140.4	4109.9	4118.6	4123.0	4075.1	4092.5	4027.1	4044.6
5°	4101.2	4096.9	4157.9	4149.2	4131.7	4136.1	4149.2	4092.5	4083.8	4005.3	4018.4
7.5°	4096.9	4105.6	4144.8	4136.1	4109.9	4123.0	4144.8	4101.2	4075.1	3983.5	3979.2
10°	4079.4	4092.5	4123.0	4096.9	4048.9	4070.7	4118.6	4092.5	4057.6	3948.7	3926.9
12.5°	4062.0	4070.7	4079.4	3970.5	3892.0	3944.3	4079.4	4070.7	4031.5	3909.4	3870.2
15°	4031.5	4044.6	4009.7	3852.8	3770.0	3822.3	4001.0	4035.8	4001.0	3852.8	3804.8
17.5°	3996.6	4009.7	3935.6	3761.3	3700.2	3726.4	3900.7	3992.3	3961.7	3800.5	3739.5
20°	3957.4	3970.5	3852.8	3665.4	3626.2	3647.9	3804.8	3944.3	3918.2	3739.5	3669.7
22.5°	3900.7	3922.5	3756.9	3600.0	3595.6	3595.6	3713.3	3887.7	3861.5	3665.4	3591.3
25°	3839.7	3861.5	3661.0	3539.0	3539.0	3539.0	3630.5	3813.6	3796.1	3586.9	3512.8
27.5°	3774.3	3796.1	3573.9	3495.4	3508.5	3486.7	3560.8	3730.8	3730.8	3508.5	3430.0
30°	3700.2	3722.0	3486.7	3425.7	3434.4	3425.7	3482.3	3643.6	3643.6	3417.0	3334.1
32.5°	3613.1	3634.9	3390.8	3342.9	3360.3	3351.6	3408.2	3556.4	3560.8	3321.1	3220.8
35°	3517.2	3543.3	3290.6	3264.4	3281.8	3268.8	3308.0	3464.9	3464.9	3216.5	3090.1
37.5°	3417.0	3443.1	3186.0	3177.2	3194.7	3181.6	3212.1	3369.0	3360.3	3107.5	2950.6
40°	3308.0	3338.5	3077.0	3077.0	3098.8	3090.1	3116.2	3268.8	3251.3	2998.6	2806.8
42.5°	3186.0	3225.2	2968.0	2972.4	2946.3	2981.1	3007.3	3164.2	3129.3	2876.5	2649.9
45°	3059.6	3107.5	2863.4	2785.0	2301.2	2754.5	2894.0	3059.6	3007.3	2754.5	2497.3
47.5°	2924.5	2985.5	2741.4	2453.8	1852.3	2414.5	2771.9	2928.8	2867.8	2623.7	2349.2
50°	2785.0	2854.7	2615.0	2170.5	1625.7	2126.9	2636.8	2798.1	2728.3	2488.6	2179.2
52.5°	2632.4	2710.9	2493.0	1922.0	1473.1	1882.8	2497.3	2671.7	2584.5	2344.8	2039.7
55°	2479.9	2562.7	2327.4	1708.5	1342.4	1673.6	2336.1	2510.4	2432.0	2196.6	1887.2
57.5°	2323.0	2405.8	2161.7	1521.1	1229.1	1486.2	2153.0	2362.2	2275.1	2044.1	1734.6
60°	2157.4	2240.2	1983.1	1351.1	1102.7	1324.9	1965.6	2196.6	2109.4	1887.2	1586.4
62.5°	1983.1	2065.9	1813.1	1194.2	998.1	1172.4	1760.8	2035.4	1939.5	1721.6	1433.9
65°	1804.4	1865.4	1612.6	1046.0	893.5	1028.6	1577.7	1834.9	1765.1	1547.2	1290.1
67.5°	1617.0	1678.0	1438.3	915.3	793.2	897.8	1399.0	1656.2	1577.7	1377.2	1146.2
70°	1420.8	1473.1	1255.2	788.9	697.3	775.8	1211.6	1455.7	1386.0	1198.5	993.7
72.5°	1220.3	1268.3	1059.1	671.2	597.1	662.5	1015.5	1255.2	1185.5	1011.1	854.2
75°	1006.8	1054.7	876.0	553.5	496.9	544.8	836.8	1041.6	976.3	832.4	710.4
77.5°	806.3	863.0	693.0	435.8	396.6	427.1	658.1	841.2	775.8	666.8	570.9
80°	614.5	662.5	514.3	331.2	305.1	326.9	479.4	640.7	588.4	514.3	444.6
82.5°	444.6	470.7	353.0	244.1	231.0	239.7	326.9	453.3	427.1	370.5	326.9
85°	300.7	296.4	217.9	170.0	165.6	170.0	196.1	274.6	270.2	248.4	209.2
87.5°	126.4	117.7	100.2	69.7	61.0	65.4	78.5	104.6	100.2	104.6	100.2
90°	4.4	43.6	69.7	87.2	91.5	87.2	69.7	43.6	4.4	47.9	78.5
92.5°	8.7	56.7	82.8	95.9	104.6	95.9	78.5	56.7	8.7	74.1	78.5
95°	26.2	78.5	95.9	117.7	126.4	117.7	95.9	74.1	26.2	65.4	117.7
97.5°	52.3	100.2	113.3	130.8	135.1	126.4	109.0	100.2	47.9	117.7	122.0
100°	78.5	126.4	148.2	148.2	152.5	148.2	143.8	122.0	74.1	130.8	148.2
102.5°	109.0	143.8	170.0	183.1	183.1	183.1	170.0	143.8	100.2	161.3	204.8
105°	139.5	156.9	187.4	204.8	213.6	204.8	187.4	161.3	135.1	187.4	217.9
107.5°	174.3	170.0	204.8	222.3	231.0	222.3	204.8	174.3	165.6	209.2	244.1
110°	209.2	187.4	222.3	239.7	244.1	239.7	222.3	187.4	200.5	235.4	270.2



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CATALOG NUMBER: 8WSL-LD2-120-UPL8-UNV-L850-CD2-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	239.7	200.5	239.7	257.1	261.5	257.1	239.7	204.8	231.0	252.8	296.4
115°	270.2	213.6	248.4	270.2	274.6	270.2	248.4	217.9	265.9	274.6	318.2
117.5°	300.7	231.0	257.1	283.3	287.7	283.3	261.5	235.4	296.4	300.7	340.0
120°	331.2	252.8	270.2	292.0	300.7	296.4	270.2	257.1	322.5	322.5	357.4
122.5°	357.4	270.2	283.3	300.7	309.4	300.7	283.3	278.9	353.0	344.3	379.2
125°	387.9	287.7	292.0	309.4	313.8	309.4	296.4	292.0	379.2	361.7	392.3
127.5°	409.7	309.4	300.7	318.2	322.5	318.2	305.1	313.8	405.3	396.6	405.3
130°	435.8	331.2	309.4	326.9	331.2	331.2	309.4	340.0	427.1	422.8	422.8
132.5°	457.6	353.0	318.2	335.6	340.0	340.0	322.5	357.4	448.9	444.6	435.8
135°	475.1	383.5	335.6	335.6	344.3	344.3	340.0	387.9	470.7	466.3	457.6
137.5°	492.5	409.7	348.7	340.0	344.3	344.3	357.4	414.0	488.1	488.1	470.7
140°	509.9	435.8	357.4	348.7	348.7	357.4	370.5	440.2	505.6	505.6	475.1
142.5°	527.4	457.6	370.5	361.7	353.0	370.5	383.5	466.3	518.6	523.0	488.1
145°	536.1	479.4	387.9	374.8	366.1	387.9	405.3	488.1	531.7	540.4	514.3
147.5°	549.2	501.2	409.7	383.5	383.5	396.6	422.8	505.6	544.8	553.5	527.4
150°	562.2	518.6	427.1	396.6	387.9	409.7	440.2	523.0	557.9	566.6	544.8
152.5°	570.9	536.1	453.3	414.0	405.3	431.5	470.7	536.1	566.6	575.3	562.2
155°	579.7	549.2	483.8	431.5	427.1	448.9	496.9	549.2	575.3	584.0	575.3
157.5°	588.4	562.2	505.6	457.6	440.2	475.1	518.6	566.6	584.0	592.7	588.4
160°	592.7	570.9	531.7	483.8	475.1	505.6	540.4	570.9	588.4	601.5	597.1
162.5°	601.5	579.7	549.2	514.3	505.6	531.7	557.9	584.0	597.1	605.8	605.8
165°	605.8	588.4	566.6	540.4	531.7	557.9	570.9	592.7	601.5	605.8	610.2
167.5°	605.8	597.1	579.7	557.9	553.5	575.3	588.4	601.5	605.8	605.8	614.5
170°	610.2	601.5	588.4	575.3	570.9	588.4	592.7	605.8	610.2	605.8	618.9
172.5°	610.2	605.8	597.1	584.0	575.3	597.1	601.5	605.8	610.2	605.8	614.5
175°	614.5	605.8	605.8	597.1	584.0	605.8	605.8	605.8	614.5	605.8	610.2
177.5°	614.5	605.8	605.8	601.5	592.7	605.8	605.8	605.8	614.5	605.8	610.2
180°	605.8	605.8	605.8	605.8	605.8	605.8	605.8	605.8	605.8	605.8	605.8



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4070.7	4070.7	4070.7	4070.7	4070.7	4070.7
2.5°	4040.2	4009.7	4018.4	4053.3	4040.2	4101.2
5°	4009.7	3992.3	3992.3	4031.5	4027.1	4101.2
7.5°	3961.7	3944.3	3953.0	3996.6	4005.3	4096.9
10°	3905.1	3883.3	3892.0	3953.0	3974.8	4079.4
12.5°	3844.1	3826.6	3835.4	3905.1	3935.6	4062.0
15°	3774.3	3748.2	3774.3	3848.4	3887.7	4031.5
17.5°	3695.9	3661.0	3691.5	3787.4	3835.4	3996.6
20°	3617.4	3586.9	3604.4	3709.0	3778.7	3957.4
22.5°	3539.0	3495.4	3512.8	3621.8	3709.0	3900.7
25°	3447.5	3382.1	3417.0	3534.6	3634.9	3839.7
27.5°	3325.4	3225.2	3299.3	3447.5	3547.7	3774.3
30°	3164.2	3033.4	3142.4	3342.9	3456.2	3700.2
32.5°	2985.5	2846.0	2968.0	3225.2	3360.3	3613.1
35°	2806.8	2680.4	2789.4	3094.4	3260.1	3517.2
37.5°	2636.8	2527.8	2628.1	2955.0	3155.5	3417.0
40°	2475.5	2366.6	2471.2	2802.4	3042.1	3308.0
42.5°	2314.3	2214.0	2314.3	2641.2	2924.5	3186.0
45°	2153.0	1996.1	2144.3	2484.3	2798.1	3059.6
47.5°	1978.7	1795.6	1965.6	2314.3	2663.0	2924.5
50°	1813.1	1656.2	1804.4	2157.4	2523.5	2785.0
52.5°	1669.3	1542.9	1660.5	1996.1	2379.7	2632.4
55°	1534.1	1433.9	1534.1	1839.2	2227.1	2479.9
57.5°	1412.1	1346.7	1416.5	1704.1	2070.2	2323.0
60°	1307.5	1268.3	1311.9	1538.5	1913.3	2157.4
62.5°	1207.3	1202.9	1211.6	1407.8	1747.7	1983.1
65°	1102.7	1124.5	1102.7	1268.3	1582.1	1804.4
67.5°	998.1	1041.6	1006.8	1128.8	1403.4	1617.0
70°	902.2	950.1	902.2	985.0	1224.7	1420.8
72.5°	793.2	854.2	793.2	849.9	1037.3	1220.3
75°	688.6	758.4	693.0	710.4	858.6	1006.8
77.5°	575.3	640.7	588.4	575.3	693.0	806.3
80°	457.6	483.8	457.6	453.3	536.1	614.5
82.5°	318.2	340.0	318.2	331.2	392.3	444.6
85°	209.2	217.9	209.2	213.6	261.5	300.7
87.5°	87.2	87.2	87.2	109.0	117.7	126.4
90°	95.9	104.6	95.9	78.5	47.9	4.4
92.5°	100.2	109.0	100.2	87.2	56.7	8.7
95°	178.7	200.5	170.0	109.0	91.5	26.2
97.5°	143.8	156.9	148.2	126.4	113.3	52.3
100°	170.0	183.1	170.0	178.7	139.5	78.5
102.5°	200.5	209.2	204.8	209.2	170.0	109.0
105°	261.5	270.2	261.5	226.6	196.1	139.5
107.5°	278.9	300.7	283.3	252.8	222.3	174.3
110°	300.7	318.2	305.1	278.9	244.1	209.2



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CATALOG NUMBER: 8WSL-LD2-120-UPL8-UNV-L850-CD2-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	322.5	344.3	331.2	309.4	261.5	239.7
115°	348.7	366.1	357.4	331.2	287.7	270.2
117.5°	374.8	387.9	379.2	348.7	313.8	300.7
120°	396.6	414.0	405.3	370.5	335.6	331.2
122.5°	414.0	431.5	422.8	392.3	357.4	357.4
125°	431.5	448.9	440.2	409.7	374.8	387.9
127.5°	444.6	466.3	457.6	422.8	414.0	409.7
130°	462.0	475.1	470.7	435.8	435.8	435.8
132.5°	470.7	488.1	479.4	453.3	462.0	457.6
135°	475.1	496.9	488.1	475.1	483.8	475.1
137.5°	483.8	501.2	496.9	488.1	505.6	492.5
140°	496.9	505.6	509.9	496.9	523.0	509.9
142.5°	509.9	514.3	523.0	509.9	540.4	527.4
145°	518.6	527.4	536.1	536.1	553.5	536.1
147.5°	518.6	531.7	531.7	544.8	570.9	549.2
150°	531.7	523.0	549.2	562.2	579.7	562.2
152.5°	549.2	544.8	566.6	579.7	588.4	570.9
155°	553.5	557.9	570.9	592.7	597.1	579.7
157.5°	570.9	566.6	588.4	605.8	605.8	588.4
160°	584.0	584.0	605.8	614.5	610.2	592.7
162.5°	597.1	597.1	618.9	618.9	614.5	601.5
165°	605.8	605.8	627.6	623.2	614.5	605.8
167.5°	610.2	614.5	632.0	627.6	614.5	605.8
170°	614.5	614.5	632.0	623.2	614.5	610.2
172.5°	614.5	610.2	627.6	618.9	610.2	610.2
175°	610.2	601.5	618.9	610.2	610.2	614.5
177.5°	605.8	592.7	605.8	605.8	610.2	614.5
180°	605.8	605.8	605.8	605.8	605.8	605.8

(END OF REPORT)