

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: PORTFOLIO

Report Number: P#

Luminaire Tested: **LD4C20D010 EX4C209027 4LBSQLWWH**

Issue Date: 2/18/2022

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C20D010 EX4C209027 4LBSQLWWH
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

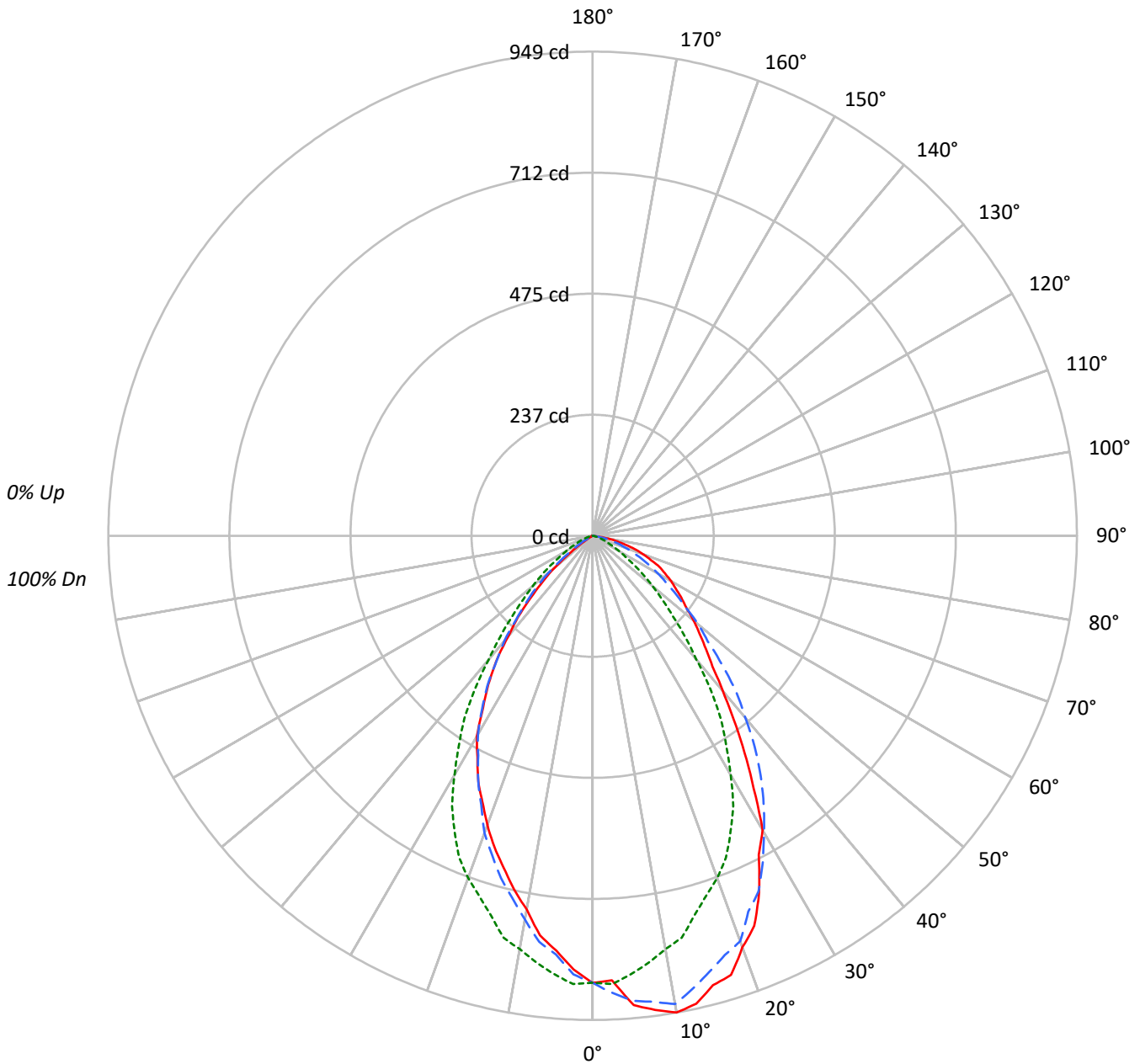
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1256.0 lumens
Efficiency: N/A
Efficacy: 57.6 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 21.8
Input Voltage (V):
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									
RC	80									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	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72																			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58																			
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53																			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48																			
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44																			
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41																			
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	84544	84544	84544
5°	89448	83549	79074
10°	92951	80606	72876
15°	91092	76927	67278
20°	88142	73253	61927
25°	82211	68115	56490
30°	74214	60287	50572
35°	61134	51604	41957
40°	49892	39828	32295
45°	42861	30252	23225
50°	38803	23027	14666
55°	35697	16604	5299
60°	34273	11347	811
65°	33105	7671	251
70°	29622	5332	310
75°	24307	2759	0
80°	15169	1167	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.1	6.5
10°-20°	221.2	17.6
20°-30°	295.3	23.5
30°-40°	280.4	22.3
40°-50°	193.8	15.4
50°-60°	107.1	8.5
60°-70°	53.2	4.2
70°-80°	21.0	1.7
80°-90°	2.0	0.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	598.6	47.7
0°-40°	879.0	70.0
0°-60°	1179.9	93.9
0°-90°	1256.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1256.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	876	876	876	876	876	
5°	924	915	863	824	816	88
15°	912	885	770	694	674	258
25°	772	769	640	531	531	352
35°	519	574	438	360	356	325
45°	314	360	222	182	170	245
55°	212	200	99	50	32	191
65°	145	105	34	1	1	141
75°	65	40	7	0	0	69
85°	0	1	0	0	0	6
90°	0	0	0	0	0	



TEST NUMBER: P#

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	876.2	876.2	876.2	876.2	876.2	876.2	876.2	876.2	876.2	876.2	876.2
2.5°	872.0	896.2	898.3	896.2	899.3	898.3	903.5	898.3	904.6	895.1	897.2
5°	923.5	914.0	934.0	923.5	923.5	922.5	919.3	918.2	922.5	908.8	915.1
7.5°	937.2	950.8	968.7	946.6	947.7	947.7	941.4	939.3	939.3	914.0	921.4
10°	948.7	940.3	949.8	941.4	948.7	947.7	951.9	938.2	947.7	933.0	931.9
12.5°	939.3	936.1	948.7	935.1	930.9	931.9	926.7	923.5	926.7	909.8	908.8
15°	911.9	915.1	934.0	919.3	917.2	915.1	908.8	898.3	906.7	883.6	884.7
17.5°	902.5	897.2	900.4	887.8	891.0	888.9	887.8	878.4	876.2	861.5	861.5
20°	858.4	869.9	869.9	861.5	861.5	860.5	846.8	855.2	845.8	841.6	845.8
22.5°	827.9	829.0	829.0	821.6	822.7	818.5	811.1	805.8	811.1	805.8	797.4
25°	772.2	774.3	786.9	773.3	771.2	775.4	769.1	765.9	764.9	752.3	769.1
27.5°	705.0	726.0	724.9	719.7	726.0	717.6	714.4	715.5	718.6	717.6	721.8
30°	666.1	669.3	672.4	668.2	669.3	666.1	666.1	667.2	675.5	672.4	671.4
32.5°	587.3	597.8	606.2	606.2	607.3	610.4	609.4	631.4	636.7	626.2	624.1
35°	519.0	526.4	533.7	534.8	548.4	549.5	550.5	556.8	571.5	574.7	573.6
37.5°	453.9	461.2	463.3	472.8	480.2	487.5	495.9	504.3	516.9	527.4	522.2
40°	396.1	399.2	404.5	408.7	423.4	423.4	427.6	444.4	458.1	466.5	465.4
42.5°	347.8	348.8	353.0	360.4	374.0	370.9	374.0	385.6	405.5	406.6	418.2
45°	314.1	313.1	316.2	317.3	325.7	329.9	332.0	340.4	357.2	359.3	360.4
47.5°	283.7	282.6	287.9	290.0	293.1	297.3	297.3	298.4	304.7	309.9	305.8
50°	258.5	258.5	258.5	260.6	265.8	264.8	265.8	270.0	273.2	271.1	270.0
52.5°	231.1	235.3	238.5	239.6	240.6	240.6	241.7	239.6	238.5	235.3	229.0
55°	212.2	216.4	216.4	216.4	216.4	220.6	215.4	216.4	216.4	208.0	199.6
57.5°	193.3	197.5	200.7	196.5	200.7	196.5	194.4	193.3	191.2	182.8	170.2
60°	177.6	179.7	178.6	177.6	179.7	176.5	174.4	170.2	168.1	156.5	148.1
62.5°	159.7	160.7	161.8	159.7	157.6	156.5	152.3	146.0	141.8	132.4	125.0
65°	145.0	141.8	140.8	139.7	137.6	134.5	131.3	124.0	120.8	112.4	105.0
67.5°	122.9	121.9	124.0	120.8	115.6	115.6	112.4	106.1	98.7	93.5	86.2
70°	105.0	104.0	101.9	98.7	97.7	93.5	93.5	86.2	84.1	74.6	68.3
72.5°	86.2	86.2	83.0	79.9	76.7	74.6	73.6	68.3	65.2	59.9	54.6
75°	65.2	65.2	64.1	60.9	58.8	56.7	55.7	51.5	48.3	43.1	39.9
77.5°	46.2	46.2	42.0	39.9	41.0	38.9	36.8	35.7	34.7	31.5	27.3
80°	27.3	26.3	23.1	24.2	23.1	23.1	22.1	21.0	18.9	16.8	14.7
82.5°	7.4	8.4	8.4	8.4	9.5	7.4	7.4	7.4	8.4	8.4	5.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1
87.5°	1.1	2.1	4.2	4.2	4.2	4.2	4.2	3.2	3.2	3.2	2.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	876.2	876.2	876.2	876.2	876.2	876.2	876.2	876.2	876.2	876.2	876.2
2.5°	886.8	885.7	886.8	879.4	896.2	883.6	881.5	879.4	886.8	879.4	868.9
5°	905.6	895.1	892.0	888.9	898.3	883.6	880.5	881.5	876.2	862.6	863.6
7.5°	911.9	902.5	893.0	873.1	881.5	878.4	869.9	863.6	855.2	843.7	841.6
10°	914.0	903.5	889.9	883.6	871.0	866.8	863.6	853.1	842.6	822.7	817.4
12.5°	907.7	895.1	878.4	873.1	863.6	850.0	842.6	832.1	822.7	806.9	795.3
15°	880.5	869.9	864.7	846.8	842.6	834.2	819.5	804.8	791.1	770.1	763.8
17.5°	848.9	844.7	839.5	825.8	824.8	816.4	802.7	790.1	772.2	739.6	729.1
20°	816.4	816.4	799.5	794.3	804.8	788.0	777.5	765.9	729.1	713.4	694.5
22.5°	792.2	780.6	771.2	762.8	763.8	753.3	738.6	715.5	701.8	682.9	660.9
25°	744.9	749.1	728.1	724.9	728.1	703.9	696.6	677.6	657.7	639.8	623.0
27.5°	715.5	703.9	690.3	678.7	678.7	669.3	648.3	644.1	613.6	596.8	575.7
30°	671.4	663.0	651.4	634.6	632.5	625.1	608.3	597.8	566.3	541.1	529.5
32.5°	615.7	612.5	603.1	584.2	577.9	569.4	548.4	530.6	515.9	487.5	473.9
35°	575.7	564.2	544.2	528.5	523.2	508.5	491.7	479.1	463.3	438.1	420.3
37.5°	515.9	504.3	485.4	466.5	466.5	451.8	428.7	416.1	394.0	379.3	364.6
40°	463.3	448.6	429.7	407.7	404.5	383.5	374.0	353.0	339.3	316.2	314.1
42.5°	404.5	390.8	374.0	357.2	344.6	334.1	309.9	294.2	279.5	267.9	264.8
45°	350.9	333.0	318.3	297.3	284.7	272.1	256.4	245.9	234.3	221.7	214.3
47.5°	304.7	290.0	269.0	250.1	237.5	231.1	213.3	201.7	192.3	183.9	178.6
50°	257.4	239.6	228.0	207.0	204.9	190.2	175.5	166.0	160.7	153.4	146.0
52.5°	221.7	204.9	189.1	173.4	164.9	159.7	146.0	136.6	129.2	124.0	119.8
55°	187.0	172.3	159.7	143.9	138.7	131.3	115.6	113.5	106.1	98.7	93.5
57.5°	160.7	147.1	132.4	121.9	112.4	107.2	94.5	86.2	82.0	75.7	70.4
60°	136.6	121.9	110.3	97.7	93.5	86.2	76.7	69.4	64.1	58.8	53.6
62.5°	114.5	101.9	89.3	78.8	72.5	68.3	60.9	54.6	49.4	45.2	41.0
65°	94.5	83.0	72.5	62.0	58.8	53.6	48.3	43.1	38.9	33.6	29.4
67.5°	77.8	67.3	56.7	49.4	46.2	44.1	37.8	32.6	29.4	26.3	22.1
70°	60.9	53.6	45.2	38.9	35.7	32.6	28.4	25.2	21.0	18.9	15.8
72.5°	47.3	41.0	33.6	28.4	26.3	24.2	20.0	16.8	14.7	12.6	10.5
75°	33.6	28.4	24.2	18.9	17.9	16.8	13.7	11.6	9.5	7.4	6.3
77.5°	23.1	18.9	14.7	12.6	11.6	9.5	8.4	6.3	5.3	4.2	3.2
80°	12.6	9.5	7.4	6.3	5.3	4.2	4.2	3.2	2.1	2.1	1.1
82.5°	4.2	3.2	2.1	1.1	1.1	1.1	1.1	1.1	1.1	0.0	1.1
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	876.2	876.2	876.2	876.2	876.2	876.2	876.2	876.2	876.2	876.2	876.2
2.5°	875.2	863.6	866.8	866.8	864.7	864.7	862.6	859.4	860.5	854.2	840.5
5°	865.7	851.0	848.9	851.0	842.6	840.5	836.3	842.6	823.7	831.1	822.7
7.5°	838.4	824.8	821.6	829.0	818.5	812.1	811.1	819.5	802.7	794.3	784.8
10°	807.9	802.7	793.2	788.0	784.8	785.9	777.5	767.0	763.8	761.7	753.3
12.5°	780.6	769.1	760.7	754.4	752.3	752.3	738.6	736.5	727.0	724.9	712.3
15°	748.0	734.4	729.1	720.7	713.4	717.6	701.8	697.6	694.5	680.8	682.9
17.5°	719.7	705.0	692.4	687.1	680.8	674.5	659.8	663.0	655.6	655.6	636.7
20°	682.9	667.2	657.7	647.2	647.2	638.8	628.3	629.3	619.9	610.4	593.6
22.5°	644.1	627.2	615.7	611.5	601.0	598.9	586.3	583.1	570.5	571.5	556.8
25°	603.1	586.3	570.5	571.5	562.1	557.9	550.5	535.8	530.6	524.3	520.1
27.5°	554.7	543.2	529.5	528.5	510.6	511.6	502.2	498.0	485.4	488.6	479.1
30°	510.6	493.8	481.2	478.1	470.7	468.6	453.9	447.6	449.7	441.3	436.0
32.5°	465.4	440.2	435.0	428.7	424.5	419.2	408.7	412.9	403.4	405.5	397.1
35°	405.5	395.0	381.4	381.4	377.2	373.0	365.6	369.8	360.4	356.2	347.8
37.5°	355.1	345.7	332.0	336.2	328.8	322.5	316.2	317.3	308.9	307.9	299.4
40°	300.5	295.2	285.8	285.8	280.5	280.5	277.3	274.2	269.0	262.7	253.2
42.5°	249.0	244.8	240.6	241.7	234.3	240.6	232.2	237.5	220.6	219.6	213.3
45°	211.2	201.7	202.8	198.6	194.4	196.5	189.1	191.2	181.8	179.7	173.4
47.5°	171.3	168.1	161.8	159.7	159.7	156.5	153.4	152.3	148.1	142.9	134.5
50°	140.8	129.2	127.1	124.0	121.9	121.9	117.7	111.4	112.4	107.2	98.7
52.5°	110.3	100.8	96.6	95.6	91.4	89.3	84.1	79.9	76.7	74.6	69.4
55°	85.1	76.7	71.5	71.5	65.2	65.2	57.8	54.6	50.4	46.2	43.1
57.5°	64.1	59.9	54.6	50.4	48.3	43.1	38.9	33.6	30.5	24.2	20.0
60°	48.3	44.1	38.9	35.7	33.6	28.4	23.1	18.9	11.6	9.5	8.4
62.5°	35.7	31.5	26.3	24.2	22.1	17.9	12.6	6.3	3.2	3.2	3.2
65°	26.3	21.0	16.8	14.7	12.6	9.5	4.2	2.1	1.1	1.1	1.1
67.5°	17.9	13.7	9.5	8.4	6.3	3.2	1.1	1.1	1.1	1.1	1.1
70°	11.6	8.4	4.2	3.2	2.1	1.1	1.1	1.1	1.1	1.1	1.1
72.5°	7.4	4.2	2.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	4.2	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	2.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: LD4C20D010 EX4C209027 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	876.2	876.2	876.2	876.2	876.2	876.2	876.2	876.2
2.5°	855.2	847.9	852.1	842.6	846.8	854.2	848.9	851.0
5°	825.8	821.6	816.4	802.7	813.2	821.6	817.4	816.4
7.5°	794.3	779.6	786.9	782.7	780.6	789.0	779.6	790.1
10°	761.7	751.2	750.2	742.8	742.8	749.1	750.2	743.8
12.5°	713.4	708.2	708.2	707.1	706.0	712.3	713.4	710.2
15°	678.7	676.6	671.4	670.3	664.0	673.5	674.5	673.5
17.5°	636.7	637.7	632.5	632.5	636.7	639.8	631.4	639.8
20°	608.3	603.1	601.0	591.5	596.8	602.0	602.0	603.1
22.5°	567.3	558.9	562.1	556.8	553.7	561.0	561.0	564.2
25°	521.1	521.1	523.2	520.1	522.2	526.4	523.2	530.6
27.5°	477.0	481.2	481.2	477.0	479.1	491.7	496.9	488.6
30°	436.0	437.1	440.2	438.1	444.4	448.6	447.6	453.9
32.5°	389.8	395.0	397.1	394.0	396.1	405.5	400.3	399.2
35°	354.1	344.6	343.6	344.6	348.8	350.9	348.8	356.2
37.5°	302.6	299.4	295.2	296.3	299.4	303.7	305.8	311.0
40°	253.2	249.0	249.0	248.0	244.8	256.4	256.4	256.4
42.5°	210.1	209.1	203.8	203.8	208.0	211.2	209.1	216.4
45°	172.3	168.1	164.9	164.9	168.1	168.1	171.3	170.2
47.5°	135.5	131.3	132.4	129.2	132.4	136.6	131.3	132.4
50°	101.9	101.9	99.8	101.9	100.8	101.9	99.8	97.7
52.5°	69.4	78.8	79.9	75.7	66.2	57.8	52.5	56.7
55°	39.9	35.7	35.7	34.7	32.6	31.5	28.4	31.5
57.5°	20.0	17.9	17.9	17.9	16.8	15.8	13.7	13.7
60°	8.4	7.4	7.4	6.3	5.3	4.2	3.2	4.2
62.5°	3.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1
65°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
67.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
70°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)