

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: P880544

Luminaire Tested: **LD4C10D010 EU4109035 4LBDWNH**

Issue Date: 10/4/2024

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: P880544
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251940)
Test Lab: INNOVATION CENTER
Issue Date: 10/4/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C10D010 EU4109035 4LBDWNH
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

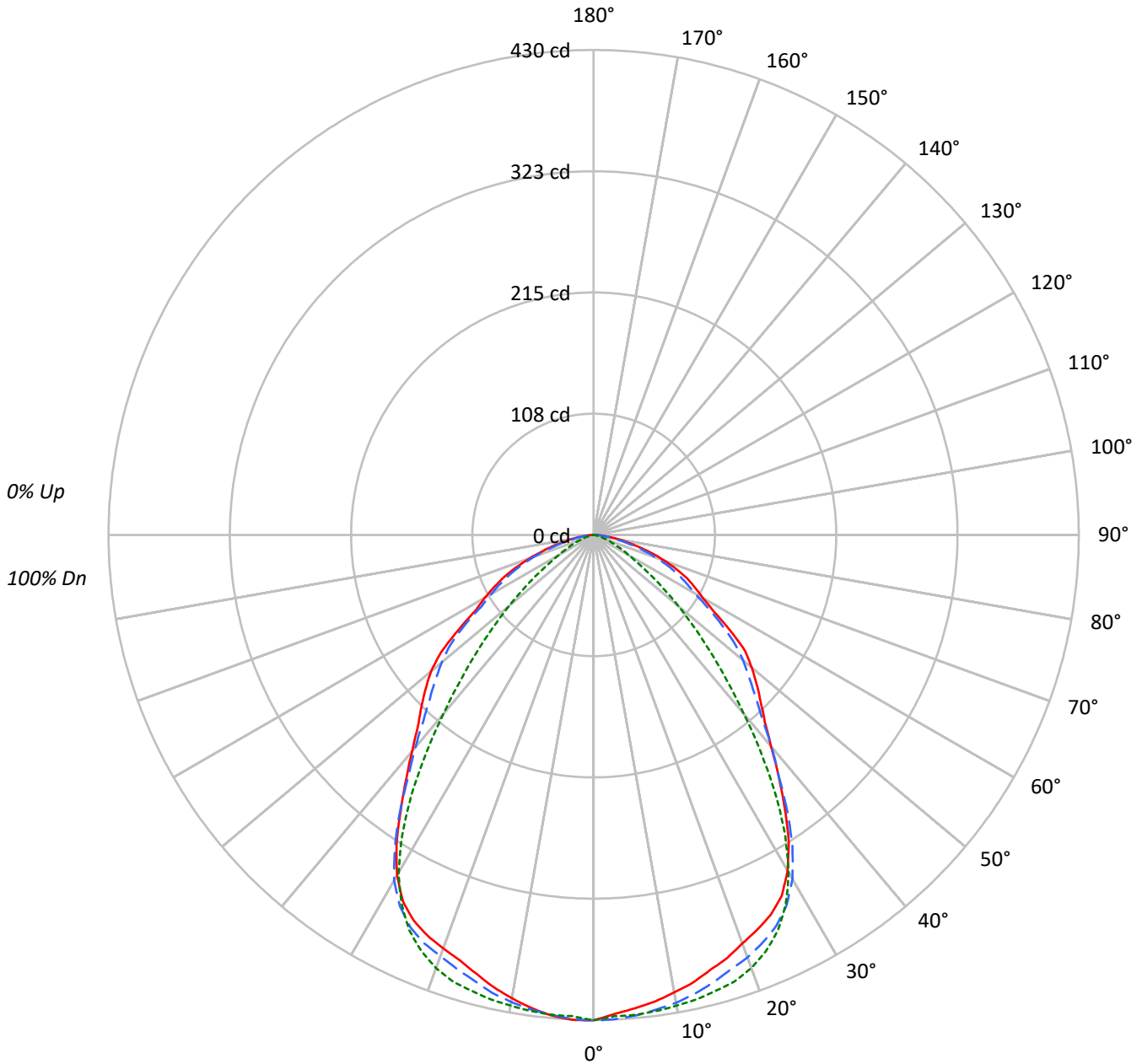
Lumens per Lamp: N/A
Luminaire Lumens: 876.0 lumens
Efficiency: N/A
Efficacy: 89.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.75
Input Voltage (V): NR
Input Current (A_{in}): 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

TEST NUMBER: P880544

CATALOG NUMBER: LD4C10D010 EU4109035 4LBDWNH

Luminous Intensity Polar Plot





TEST NUMBER: P880544

CATALOG NUMBER: LD4C10D010 EU4109035 4LBDWNH

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	50	30	10	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100				
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88				88				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				76				
3	94	85	78	72	92	84	77	72	81	75	70	78	73	69	76	72	68	66				66				
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58				58				
5	81	69	61	55	79	68	61	55	66	60	54	64	58	54	63	57	53	51				51				
6	75	63	55	49	73	62	55	49	60	54	49	59	53	48	57	52	48	46				46				
7	70	58	50	44	68	57	49	44	56	49	44	54	48	43	53	47	43	41				41				
8	66	53	45	40	64	52	45	40	51	44	40	50	44	39	49	43	39	37				37				
9	62	49	41	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34				34				
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31				31				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	52876	52876	52876
5°	51944	52671	52757
10°	51384	52868	52045
15°	50786	53228	51206
20°	50386	53420	50988
25°	50358	52419	51158
30°	48757	49041	49409
35°	44288	42218	44693
40°	39195	33245	40142
45°	36347	25314	37511
50°	34938	18730	35951
55°	31636	12916	31207
60°	27495	8796	27347
65°	26570	6366	25203
70°	24030	4274	21408
75°	19794	2801	16993
80°	15918	1839	12664
85°	13109	987	8317



TEST NUMBER: P880544

CATALOG NUMBER: LD4C10D010 EU4109035 4LBDWNH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.6	4.6
10°-20°	116.2	13.3
20°-30°	175.5	20.0
30°-40°	183.7	21.0
40°-50°	148.8	17.0
50°-60°	108.2	12.4
60°-70°	66.7	7.6
70°-80°	30.2	3.4
80°-90°	6.1	0.7
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°	332.3	37.9
0°-40°	516.0	58.9
0°-60°	773.0	88.2
0°-90°	876.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	876.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	430	430	430	430	430	
5°	421	428	427	427	428	40
15°	399	411	418	409	403	113
25°	372	383	387	384	377	170
35°	295	299	282	299	298	184
45°	209	203	146	205	216	163
55°	148	138	60	140	146	132
65°	91	82	22	81	87	89
75°	42	36	6	31	36	45
85°	9	7	1	5	6	11
90°	0	0	0	0	0	



TEST NUMBER: P880544

CATALOG NUMBER: LD4C10D010 EU4109035 4LBDWNH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4
2.5°	425.1	425.1	429.1	433.7	429.8	425.8	428.4	427.1	431.8	431.8	429.8
5°	421.2	422.5	425.8	429.8	426.5	422.5	425.8	424.5	429.1	429.1	427.8
7.5°	417.2	417.8	421.8	426.5	423.1	419.2	421.8	421.2	425.1	425.8	424.5
10°	411.9	412.5	416.5	421.2	417.8	414.5	417.2	416.5	421.8	421.8	421.2
12.5°	406.6	407.3	411.2	415.2	411.9	408.6	411.2	411.2	416.5	417.2	416.5
15°	399.3	400.6	404.0	407.9	405.9	402.0	404.6	404.6	409.2	410.6	410.6
17.5°	393.4	394.0	397.3	401.3	398.7	395.3	398.0	398.0	402.6	404.0	404.0
20°	385.4	386.7	390.0	394.0	392.0	389.4	391.4	391.4	396.7	398.0	398.7
22.5°	378.8	380.1	382.7	388.1	384.7	382.7	385.4	384.7	390.7	391.4	391.4
25°	371.5	372.8	376.1	379.4	377.4	375.5	377.4	377.4	382.1	382.7	382.7
27.5°	360.9	361.6	364.9	368.2	366.2	363.6	366.2	365.5	370.2	370.8	370.2
30°	343.7	345.0	346.3	351.0	349.0	347.0	349.6	348.3	353.0	353.0	352.3
32.5°	321.8	321.8	324.5	327.8	325.2	323.8	325.8	326.5	329.8	329.8	327.8
35°	295.3	296.7	298.6	300.6	298.6	297.3	299.3	298.6	302.6	301.3	299.3
37.5°	268.9	269.5	271.5	274.2	271.5	269.5	270.2	269.5	272.8	272.8	269.5
40°	244.4	245.7	247.0	249.6	247.0	245.7	246.3	244.4	248.3	247.0	245.0
42.5°	224.5	225.1	227.1	228.5	225.8	225.1	225.8	224.5	226.5	225.1	221.2
45°	209.2	209.2	209.9	211.9	209.2	208.6	208.6	207.3	209.2	206.6	202.6
47.5°	196.0	196.7	197.4	198.7	196.7	194.7	195.4	192.7	194.0	192.0	186.7
50°	182.8	184.1	184.8	186.1	184.1	182.8	183.4	180.8	180.8	177.5	172.8
52.5°	169.5	170.2	169.5	170.8	169.5	167.5	168.2	165.5	165.5	161.6	157.0
55°	147.7	148.3	149.0	150.3	149.0	147.0	148.3	146.4	146.4	143.7	138.4
57.5°	125.8	126.5	127.1	127.8	127.8	126.5	127.1	125.8	125.1	123.2	119.2
60°	111.9	111.9	111.9	112.6	111.9	111.3	111.3	109.9	109.9	107.3	103.3
62.5°	101.3	102.0	102.0	102.6	102.0	101.3	100.7	99.3	98.7	96.0	92.7
65°	91.4	91.4	90.7	92.0	91.4	90.7	90.7	89.4	88.1	85.4	82.1
67.5°	79.5	80.1	79.5	80.1	80.1	79.5	78.8	77.5	76.8	74.8	70.9
70°	66.9	66.9	66.9	67.6	66.9	66.9	67.6	65.6	64.9	62.2	58.9
72.5°	54.3	55.0	55.0	54.3	55.0	53.6	53.6	53.6	53.0	50.3	47.0
75°	41.7	42.4	42.4	43.0	42.4	41.7	41.7	41.1	40.4	38.4	35.8
77.5°	31.1	31.1	31.8	31.8	31.8	31.1	31.1	29.8	29.8	28.5	25.8
80°	22.5	22.5	21.9	22.5	22.5	21.9	21.9	21.2	21.2	19.9	17.9
82.5°	14.6	15.2	15.2	15.2	15.2	14.6	14.6	14.6	13.9	13.2	11.9
85°	9.3	9.3	9.3	9.3	9.9	9.3	9.9	9.3	9.3	7.9	7.3
87.5°	4.0	4.0	4.0	4.6	4.6	4.0	4.0	4.0	4.0	4.0	3.3
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: P880544

CATALOG NUMBER: LD4C10D010 EU4109035 4LBDWNH

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4
2.5°	429.8	430.4	428.4	431.1	429.1	429.8	430.4	429.8	427.1	427.1	434.4
5°	427.1	428.4	426.5	429.8	428.4	428.4	429.8	429.1	426.5	427.1	433.7
7.5°	424.5	426.5	425.1	428.4	426.5	426.5	427.8	427.8	425.1	425.8	431.8
10°	420.5	423.1	422.5	425.8	423.8	423.8	425.8	425.8	423.1	423.8	429.8
12.5°	417.2	419.8	419.2	422.5	421.2	421.8	422.5	423.8	420.5	421.8	427.1
15°	411.9	414.5	414.5	417.8	416.5	417.8	419.2	421.2	418.5	418.5	423.8
17.5°	405.9	409.2	409.2	411.9	411.9	412.5	415.2	417.2	414.5	415.2	419.8
20°	399.3	403.3	403.3	406.6	405.9	407.3	409.2	411.2	408.6	408.6	413.9
22.5°	392.7	396.0	396.7	398.7	398.7	399.3	401.3	402.6	399.3	399.3	404.6
25°	383.4	386.7	387.4	388.7	387.4	387.4	388.7	390.0	386.7	386.7	391.4
27.5°	370.8	374.1	374.1	373.5	372.1	372.8	372.1	372.8	369.5	368.8	373.5
30°	352.3	354.3	354.3	353.6	351.6	351.6	349.6	350.3	345.7	345.7	349.6
32.5°	327.1	329.1	327.8	326.5	323.8	322.5	321.2	320.5	315.9	315.9	320.5
35°	297.3	298.6	296.7	294.0	290.7	288.7	286.7	284.1	280.8	281.5	284.1
37.5°	266.9	266.9	264.2	258.9	256.3	252.9	249.6	249.6	244.4	243.7	245.7
40°	241.1	238.4	233.8	226.5	221.8	218.5	213.9	211.2	207.3	207.3	210.6
42.5°	217.9	212.6	206.6	196.7	192.0	188.1	182.1	179.5	174.8	174.1	176.1
45°	197.4	192.0	183.4	172.8	166.9	162.2	153.6	150.3	146.4	145.7	147.0
47.5°	180.8	174.8	164.2	150.3	144.4	138.4	129.8	125.1	121.8	119.9	121.8
50°	166.2	158.3	147.0	132.4	124.5	119.2	108.6	104.0	99.3	98.0	98.7
52.5°	150.3	142.4	130.4	115.2	107.9	100.0	90.0	83.4	79.5	77.5	79.5
55°	133.1	125.1	113.3	98.0	90.0	82.8	72.2	66.9	62.2	60.3	62.2
57.5°	114.6	107.3	96.7	81.5	74.2	67.6	57.6	52.3	47.7	46.3	47.7
60°	98.7	92.7	82.1	67.6	61.6	54.3	45.7	40.4	36.4	35.8	36.4
62.5°	88.1	81.5	71.5	57.6	51.6	45.7	37.8	32.5	29.1	28.5	29.1
65°	77.5	70.2	60.9	49.0	43.0	38.4	30.5	25.8	22.5	21.9	22.5
67.5°	65.6	58.9	51.0	40.4	35.8	31.1	24.5	19.9	17.2	16.6	17.2
70°	54.3	48.3	40.4	32.5	27.8	24.5	18.5	15.2	12.6	11.9	12.6
72.5°	43.0	37.8	31.1	24.5	21.9	18.5	14.6	11.2	9.3	8.6	9.3
75°	33.1	29.1	23.8	17.9	15.9	13.9	9.9	7.9	6.6	5.9	6.6
77.5°	23.2	20.5	16.6	13.2	11.2	9.9	7.3	5.3	4.6	4.0	4.6
80°	15.9	13.9	11.2	8.6	7.3	5.9	4.6	3.3	2.6	2.6	2.6
82.5°	10.6	8.6	6.6	5.3	4.6	4.0	2.6	2.0	2.0	1.3	1.3
85°	5.9	5.3	4.0	3.3	2.6	2.0	1.3	1.3	0.7	0.7	0.7
87.5°	2.6	2.0	1.3	1.3	0.7	0.7	0.7	0.7	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: P880544

CATALOG NUMBER: LD4C10D010 EU4109035 4LBDWNH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4
2.5°	432.4	430.4	433.1	430.4	429.1	430.4	429.1	433.1	429.8	427.1	429.8
5°	431.8	429.1	431.8	429.8	427.8	428.4	427.1	431.1	427.1	425.1	426.5
7.5°	430.4	428.4	429.8	427.8	425.8	426.5	425.1	428.4	424.5	422.5	423.8
10°	428.4	426.5	427.1	425.8	423.8	423.8	422.5	425.1	420.5	417.8	419.2
12.5°	425.8	423.1	424.5	422.5	419.8	419.8	418.5	420.5	415.8	413.2	413.9
15°	422.5	419.8	419.8	417.8	415.2	415.2	412.5	414.5	409.2	406.6	406.6
17.5°	418.5	415.2	415.2	413.2	409.9	409.2	407.3	409.2	403.3	400.6	400.6
20°	412.5	409.9	409.2	407.9	404.6	404.0	401.3	402.0	397.3	395.3	394.7
22.5°	404.6	402.0	402.6	400.6	398.0	397.3	394.7	396.7	392.0	390.0	390.7
25°	390.7	389.4	390.7	390.0	388.1	388.1	386.7	388.1	384.1	382.7	383.4
27.5°	374.8	374.1	374.8	374.8	373.5	373.5	373.5	375.5	371.5	370.8	370.8
30°	351.6	351.6	352.3	353.0	353.0	354.3	353.6	356.3	353.6	352.3	353.6
32.5°	321.2	323.8	325.8	325.8	325.8	327.1	328.4	330.4	327.8	328.4	328.4
35°	286.7	288.7	290.0	293.3	291.4	296.0	297.3	300.0	299.3	300.6	300.0
37.5°	248.3	251.0	253.6	258.3	257.6	262.9	265.5	270.8	269.5	272.2	273.5
40°	212.6	216.5	220.5	223.8	226.5	231.8	237.1	243.7	245.7	247.7	248.3
42.5°	178.1	182.1	188.7	193.4	197.4	205.9	213.2	221.2	223.2	227.1	228.5
45°	150.3	153.6	161.6	167.5	170.8	183.4	192.0	202.0	205.3	209.9	211.9
47.5°	124.5	130.4	138.4	145.7	150.3	163.6	174.8	185.4	190.1	195.4	198.0
50°	102.0	108.6	119.2	125.8	132.4	147.0	159.6	170.8	175.5	181.4	184.1
52.5°	83.4	90.7	100.7	107.9	115.2	130.4	143.7	154.3	160.3	164.2	168.2
55°	65.6	73.5	83.4	91.4	97.3	113.9	125.1	135.7	139.7	143.0	145.0
57.5°	51.0	56.9	66.9	73.5	80.8	95.3	106.6	114.6	117.9	121.8	123.2
60°	39.7	45.7	55.0	61.6	68.2	82.1	93.4	101.3	104.6	107.9	109.9
62.5°	31.8	37.8	46.3	52.3	58.3	70.9	80.8	88.7	92.7	96.0	98.0
65°	25.2	30.5	37.8	43.7	48.3	59.6	69.5	76.8	80.8	84.1	86.1
67.5°	19.9	24.5	31.1	35.1	39.7	49.0	57.6	64.2	67.6	71.5	73.5
70°	15.2	18.5	24.5	27.8	31.1	39.1	45.7	52.3	55.6	58.3	59.6
72.5°	11.2	13.9	18.5	21.2	23.2	29.8	35.1	39.7	42.4	45.0	46.3
75°	7.9	9.9	13.2	15.2	16.6	21.2	25.8	29.1	31.1	33.1	35.1
77.5°	5.3	6.6	8.6	9.9	11.2	14.6	17.2	19.9	21.9	23.8	24.5
80°	3.3	4.6	5.9	6.6	7.3	9.3	11.9	13.2	14.6	15.9	16.6
82.5°	2.0	2.6	3.3	4.0	4.6	5.9	7.3	8.6	9.3	10.6	11.2
85°	0.7	1.3	1.3	2.0	2.0	3.3	4.0	4.6	5.3	5.9	6.6
87.5°	0.0	0.0	0.7	0.7	0.7	0.7	1.3	1.3	1.3	1.3	1.3
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: P880544

CATALOG NUMBER: LD4C10D010 EU4109035 4LBDWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4
2.5°	432.4	430.4	429.1	428.4	433.1	427.1	429.8	430.4
5°	429.8	427.8	426.5	425.8	429.8	424.5	426.5	427.8
7.5°	425.8	424.5	422.5	421.8	425.8	419.8	422.5	423.1
10°	421.2	419.2	417.8	417.2	420.5	414.5	417.2	417.2
12.5°	415.2	413.9	411.2	411.2	413.9	408.6	410.6	410.6
15°	407.3	405.9	403.3	403.3	405.9	400.6	402.6	402.6
17.5°	400.6	399.3	397.3	396.7	399.3	394.0	396.0	395.3
20°	395.3	394.0	391.4	391.4	393.4	388.1	390.0	390.0
22.5°	390.7	390.0	387.4	387.4	390.0	384.7	386.1	384.7
25°	383.4	382.7	380.1	380.8	382.1	376.8	378.8	377.4
27.5°	371.5	371.5	368.8	368.2	370.2	365.5	366.9	366.2
30°	353.0	353.6	350.3	350.3	351.0	347.0	349.0	348.3
32.5°	327.8	328.4	325.8	325.2	327.1	323.8	325.2	325.2
35°	300.0	300.6	298.6	298.6	300.6	298.6	298.6	298.0
37.5°	272.2	273.5	272.2	272.8	274.2	272.2	273.5	272.8
40°	249.6	251.0	249.0	250.3	251.6	249.6	251.6	250.3
42.5°	229.1	231.1	229.8	231.1	232.4	231.1	232.4	230.5
45°	213.9	215.2	214.5	215.2	216.5	215.9	216.5	215.9
47.5°	199.3	202.0	200.7	202.0	204.0	202.6	204.0	202.0
50°	186.1	188.1	187.4	188.7	189.4	188.7	190.1	188.1
52.5°	168.8	170.8	170.2	170.2	171.5	170.2	171.5	170.2
55°	146.4	147.0	147.0	147.7	147.0	146.4	147.0	145.7
57.5°	124.5	125.8	123.8	125.8	125.1	124.5	124.5	123.2
60°	110.6	112.6	111.3	112.6	111.9	111.9	111.9	111.3
62.5°	99.3	100.7	99.3	100.0	100.0	100.0	99.3	98.7
65°	86.7	88.7	87.4	88.1	87.4	86.7	87.4	86.7
67.5°	74.2	74.8	74.8	74.2	74.2	74.2	74.2	72.9
70°	60.3	60.9	60.3	61.6	60.9	60.3	60.9	59.6
72.5°	47.0	47.7	47.0	47.7	47.0	47.0	47.0	47.0
75°	35.1	35.8	35.8	35.8	35.8	35.8	34.5	35.8
77.5°	25.2	25.2	25.2	25.8	25.2	25.2	25.2	25.2
80°	17.2	17.2	17.2	17.9	17.2	17.9	17.2	17.9
82.5°	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
85°	5.9	6.6	6.6	5.9	5.9	5.9	5.9	5.9
87.5°	1.3	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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)