

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: **LD4C08D010 EX4C089050 4LBSQLWWLI**

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: LD4C08D010 EX4C089050 4LBSQLWWLI
Description: 4 INCH 800 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

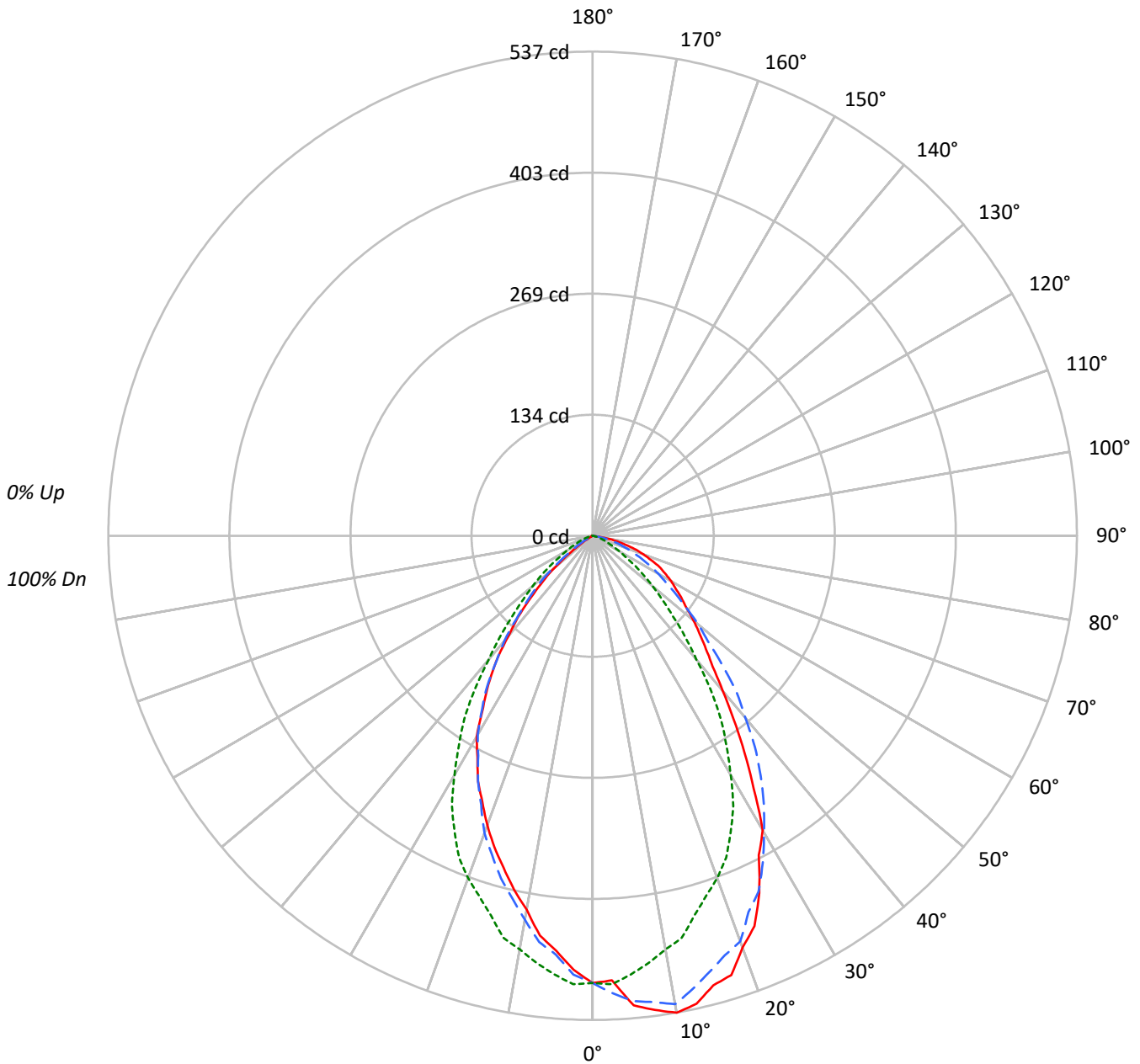
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 711.0 lumens
Efficiency: N/A
Efficacy: 71.8 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): 9.9
Input Voltage (V):
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: P#
CATALOG NUMBER: LD4C08D010 EX4C089050 4LBSQLWWLI

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C08D010 EX4C089050 4LBSQLWWLI

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	47858	47858	47858
5°	50637	47296	44758
10°	52624	45628	41258
15°	51565	43543	38079
20°	49893	41463	35055
25°	46546	38561	31982
30°	42015	34127	28623
35°	34607	29212	23747
40°	28240	22546	18276
45°	24262	17125	13141
50°	21961	13030	8301
55°	20204	9404	2994
60°	19394	6426	463
65°	18744	4338	137
70°	16786	3019	169
75°	13756	1566	0
80°	8613	667	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C08D010 EX4C089050 4LBSQLWWLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.5	6.5
10°-20°	125.2	17.6
20°-30°	167.2	23.5
30°-40°	158.7	22.3
40°-50°	109.7	15.4
50°-60°	60.6	8.5
60°-70°	30.1	4.2
70°-80°	11.9	1.7
80°-90°	1.1	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°	338.9	47.7
0°-40°	497.6	70.0
0°-60°	667.9	93.9
0°-90°	711.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	711.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	496	496	496	496	496	
5°	523	518	488	466	462	50
15°	516	501	436	393	381	146
25°	437	435	362	300	300	199
35°	294	325	248	204	202	184
45°	178	204	126	103	96	139
55°	120	113	56	28	18	108
65°	82	60	19	1	1	80
75°	37	23	4	0	0	39
85°	0	1	0	0	0	3
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C08D010 EX4C089050 4LBSQLWWLI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0
2.5°	493.6	507.3	508.5	507.3	509.1	508.5	511.5	508.5	512.1	506.7	507.9
5°	522.8	517.4	528.7	522.8	522.8	522.2	520.4	519.8	522.2	514.5	518.0
7.5°	530.5	538.3	548.4	535.9	536.5	536.5	532.9	531.7	531.7	517.4	521.6
10°	537.1	532.3	537.6	532.9	537.1	536.5	538.8	531.1	536.5	528.1	527.5
12.5°	531.7	529.9	537.1	529.3	527.0	527.5	524.6	522.8	524.6	515.0	514.5
15°	516.2	518.0	528.7	520.4	519.2	518.0	514.5	508.5	513.3	500.2	500.8
17.5°	510.9	507.9	509.7	502.6	504.4	503.2	502.6	497.2	496.0	487.7	487.7
20°	485.9	492.4	492.4	487.7	487.7	487.1	479.4	484.1	478.8	476.4	478.8
22.5°	468.7	469.3	469.3	465.1	465.7	463.3	459.1	456.2	459.1	456.2	451.4
25°	437.2	438.3	445.5	437.7	436.5	438.9	435.4	433.6	433.0	425.9	435.4
27.5°	399.1	411.0	410.4	407.4	411.0	406.2	404.4	405.0	406.8	406.2	408.6
30°	377.1	378.9	380.6	378.3	378.9	377.1	377.1	377.7	382.4	380.6	380.0
32.5°	332.5	338.4	343.2	343.2	343.8	345.6	344.9	357.4	360.4	354.5	353.3
35°	293.8	298.0	302.1	302.7	310.5	311.0	311.7	315.2	323.5	325.3	324.7
37.5°	256.9	261.1	262.3	267.6	271.8	276.0	280.7	285.5	292.6	298.6	295.6
40°	224.2	226.0	229.0	231.4	239.7	239.7	242.1	251.6	259.3	264.1	263.5
42.5°	196.9	197.5	199.8	204.0	211.7	209.9	211.7	218.3	229.6	230.2	236.7
45°	177.8	177.2	179.0	179.6	184.4	186.8	187.9	192.7	202.2	203.4	204.0
47.5°	160.6	160.0	163.0	164.2	165.9	168.3	168.3	168.9	172.5	175.5	173.1
50°	146.3	146.3	146.3	147.5	150.5	149.9	150.5	152.9	154.6	153.4	152.9
52.5°	130.8	133.2	135.0	135.6	136.2	136.2	136.8	135.6	135.0	133.2	129.6
55°	120.1	122.5	122.5	122.5	122.5	124.9	121.9	122.5	122.5	117.8	113.0
57.5°	109.4	111.8	113.6	111.2	113.6	111.2	110.0	109.4	108.2	103.5	96.3
60°	100.5	101.7	101.1	100.5	101.7	99.9	98.7	96.3	95.2	88.6	83.9
62.5°	90.4	91.0	91.6	90.4	89.2	88.6	86.2	82.7	80.3	74.9	70.8
65°	82.1	80.3	79.7	79.1	77.9	76.1	74.4	70.2	68.4	63.6	59.5
67.5°	69.6	69.0	70.2	68.4	65.4	65.4	63.6	60.1	55.9	52.9	48.8
70°	59.5	58.9	57.7	55.9	55.3	52.9	52.9	48.8	47.6	42.2	38.7
72.5°	48.8	48.8	47.0	45.2	43.4	42.2	41.6	38.7	36.9	33.9	30.9
75°	36.9	36.9	36.3	34.5	33.3	32.1	31.5	29.1	27.4	24.4	22.6
77.5°	26.2	26.2	23.8	22.6	23.2	22.0	20.8	20.2	19.6	17.8	15.5
80°	15.5	14.9	13.1	13.7	13.1	13.1	12.5	11.9	10.7	9.5	8.3
82.5°	4.2	4.8	4.8	4.8	5.4	4.2	4.2	4.2	4.8	4.8	3.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6
87.5°	0.6	1.2	2.4	2.4	2.4	2.4	2.4	1.8	1.8	1.8	1.2
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: LD4C08D010 EX4C089050 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0
2.5°	502.0	501.4	502.0	497.8	507.3	500.2	499.0	497.8	502.0	497.8	491.9
5°	512.7	506.7	504.9	503.2	508.5	500.2	498.4	499.0	496.0	488.3	488.9
7.5°	516.2	510.9	505.5	494.2	499.0	497.2	492.4	488.9	484.1	477.6	476.4
10°	517.4	511.5	503.7	500.2	493.1	490.7	488.9	482.9	477.0	465.7	462.7
12.5°	513.9	506.7	497.2	494.2	488.9	481.1	477.0	471.0	465.7	456.8	450.2
15°	498.4	492.4	489.5	479.4	477.0	472.2	463.9	455.6	447.8	435.9	432.4
17.5°	480.6	478.2	475.2	467.5	466.9	462.1	454.4	447.2	437.2	418.7	412.8
20°	462.1	462.1	452.6	449.6	455.6	446.1	440.1	433.6	412.8	403.8	393.1
22.5°	448.5	441.9	436.5	431.8	432.4	426.4	418.1	405.0	397.3	386.6	374.1
25°	421.7	424.1	412.2	410.4	412.2	398.5	394.3	383.6	372.3	362.2	352.7
27.5°	405.0	398.5	390.8	384.2	384.2	378.9	367.0	364.6	347.3	337.8	325.9
30°	380.0	375.3	368.7	359.2	358.0	353.9	344.4	338.4	320.6	306.3	299.7
32.5°	348.5	346.7	341.4	330.7	327.1	322.3	310.5	300.4	292.0	276.0	268.2
35°	325.9	319.4	308.1	299.2	296.2	287.9	278.3	271.2	262.3	248.0	237.9
37.5°	292.0	285.5	274.8	264.1	264.1	255.8	242.7	235.5	223.0	214.7	206.4
40°	262.3	254.0	243.3	230.8	229.0	217.1	211.7	199.8	192.1	179.0	177.8
42.5°	229.0	221.2	211.7	202.2	195.1	189.1	175.5	166.5	158.2	151.7	149.9
45°	198.6	188.5	180.2	168.3	161.2	154.0	145.1	139.2	132.6	125.5	121.3
47.5°	172.5	164.2	152.2	141.6	134.4	130.8	120.7	114.2	108.8	104.1	101.1
50°	145.7	135.6	129.1	117.2	116.0	107.7	99.3	94.0	91.0	86.8	82.7
52.5°	125.5	116.0	107.0	98.1	93.4	90.4	82.7	77.3	73.2	70.2	67.8
55°	105.9	97.5	90.4	81.5	78.5	74.4	65.4	64.2	60.1	55.9	52.9
57.5°	91.0	83.3	74.9	69.0	63.6	60.7	53.5	48.8	46.4	42.8	39.8
60°	77.3	69.0	62.4	55.3	52.9	48.8	43.4	39.3	36.3	33.3	30.3
62.5°	64.8	57.7	50.6	44.6	41.0	38.7	34.5	30.9	28.0	25.6	23.2
65°	53.5	47.0	41.0	35.1	33.3	30.3	27.4	24.4	22.0	19.0	16.7
67.5°	44.0	38.1	32.1	28.0	26.2	25.0	21.4	18.4	16.7	14.9	12.5
70°	34.5	30.3	25.6	22.0	20.2	18.4	16.1	14.3	11.9	10.7	8.9
72.5°	26.8	23.2	19.0	16.1	14.9	13.7	11.3	9.5	8.3	7.1	5.9
75°	19.0	16.1	13.7	10.7	10.1	9.5	7.7	6.5	5.4	4.2	3.6
77.5°	13.1	10.7	8.3	7.1	6.5	5.4	4.8	3.6	3.0	2.4	1.8
80°	7.1	5.4	4.2	3.6	3.0	2.4	2.4	1.8	1.2	1.2	0.6
82.5°	2.4	1.8	1.2	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.6
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°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	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#

CATALOG NUMBER: LD4C08D010 EX4C089050 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0
2.5°	495.4	488.9	490.7	490.7	489.5	489.5	488.3	486.5	487.1	483.5	475.8
5°	490.1	481.7	480.6	481.7	477.0	475.8	473.4	477.0	466.3	470.4	465.7
7.5°	474.6	466.9	465.1	469.3	463.3	459.7	459.1	463.9	454.4	449.6	444.3
10°	457.4	454.4	449.0	446.1	444.3	444.9	440.1	434.2	432.4	431.2	426.4
12.5°	441.9	435.4	430.6	427.0	425.9	425.9	418.1	416.9	411.6	410.4	403.2
15°	423.5	415.7	412.8	408.0	403.8	406.2	397.3	394.9	393.1	385.4	386.6
17.5°	407.4	399.1	391.9	389.0	385.4	381.8	373.5	375.3	371.1	371.1	360.4
20°	386.6	377.7	372.3	366.4	366.4	361.6	355.7	356.3	350.9	345.6	336.0
22.5°	364.6	355.1	348.5	346.1	340.2	339.0	331.9	330.1	323.0	323.5	315.2
25°	341.4	331.9	323.0	323.5	318.2	315.8	311.7	303.3	300.4	296.8	294.4
27.5°	314.0	307.5	299.7	299.2	289.0	289.6	284.3	281.9	274.8	276.6	271.2
30°	289.0	279.5	272.4	270.6	266.4	265.3	256.9	253.4	254.6	249.8	246.8
32.5°	263.5	249.2	246.2	242.7	240.3	237.3	231.4	233.7	228.4	229.6	224.8
35°	229.6	223.6	215.9	215.9	213.5	211.1	207.0	209.4	204.0	201.6	196.9
37.5°	201.0	195.7	187.9	190.3	186.2	182.6	179.0	179.6	174.9	174.3	169.5
40°	170.1	167.1	161.8	161.8	158.8	158.8	157.0	155.2	152.2	148.7	143.3
42.5°	140.9	138.6	136.2	136.8	132.6	136.2	131.4	134.4	124.9	124.3	120.7
45°	119.5	114.2	114.8	112.4	110.0	111.2	107.0	108.2	102.9	101.7	98.1
47.5°	97.0	95.2	91.6	90.4	90.4	88.6	86.8	86.2	83.9	80.9	76.1
50°	79.7	73.2	72.0	70.2	69.0	69.0	66.6	63.1	63.6	60.7	55.9
52.5°	62.4	57.1	54.7	54.1	51.8	50.6	47.6	45.2	43.4	42.2	39.3
55°	48.2	43.4	40.5	40.5	36.9	36.9	32.7	30.9	28.5	26.2	24.4
57.5°	36.3	33.9	30.9	28.5	27.4	24.4	22.0	19.0	17.2	13.7	11.3
60°	27.4	25.0	22.0	20.2	19.0	16.1	13.1	10.7	6.5	5.4	4.8
62.5°	20.2	17.8	14.9	13.7	12.5	10.1	7.1	3.6	1.8	1.8	1.8
65°	14.9	11.9	9.5	8.3	7.1	5.4	2.4	1.2	0.6	0.6	0.6
67.5°	10.1	7.7	5.4	4.8	3.6	1.8	0.6	0.6	0.6	0.6	0.6
70°	6.5	4.8	2.4	1.8	1.2	0.6	0.6	0.6	0.6	0.6	0.6
72.5°	4.2	2.4	1.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	2.4	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	1.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.6	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	0.6	0.6	0.6
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: LD4C08D010 EX4C089050 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0
2.5°	484.1	480.0	482.3	477.0	479.4	483.5	480.6	481.7
5°	467.5	465.1	462.1	454.4	460.3	465.1	462.7	462.1
7.5°	449.6	441.3	445.5	443.1	441.9	446.7	441.3	447.2
10°	431.2	425.2	424.7	420.5	420.5	424.1	424.7	421.1
12.5°	403.8	400.9	400.9	400.3	399.7	403.2	403.8	402.1
15°	384.2	383.0	380.0	379.5	375.9	381.2	381.8	381.2
17.5°	360.4	361.0	358.0	358.0	360.4	362.2	357.4	362.2
20°	344.4	341.4	340.2	334.8	337.8	340.8	340.8	341.4
22.5°	321.2	316.4	318.2	315.2	313.4	317.6	317.6	319.4
25°	295.0	295.0	296.2	294.4	295.6	298.0	296.2	300.4
27.5°	270.0	272.4	272.4	270.0	271.2	278.3	281.3	276.6
30°	246.8	247.4	249.2	248.0	251.6	254.0	253.4	256.9
32.5°	220.7	223.6	224.8	223.0	224.2	229.6	226.6	226.0
35°	200.4	195.1	194.5	195.1	197.5	198.6	197.5	201.6
37.5°	171.3	169.5	167.1	167.7	169.5	171.9	173.1	176.0
40°	143.3	140.9	140.9	140.4	138.6	145.1	145.1	145.1
42.5°	119.0	118.3	115.4	115.4	117.8	119.5	118.3	122.5
45°	97.5	95.2	93.4	93.4	95.2	95.2	97.0	96.3
47.5°	76.7	74.4	74.9	73.2	74.9	77.3	74.4	74.9
50°	57.7	57.7	56.5	57.7	57.1	57.7	56.5	55.3
52.5°	39.3	44.6	45.2	42.8	37.5	32.7	29.7	32.1
55°	22.6	20.2	20.2	19.6	18.4	17.8	16.1	17.8
57.5°	11.3	10.1	10.1	10.1	9.5	8.9	7.7	7.7
60°	4.8	4.2	4.2	3.6	3.0	2.4	1.8	2.4
62.5°	1.8	1.2	1.2	1.2	1.2	1.2	1.2	1.2
65°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
67.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
70°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)