

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: LUMARK

Report Number: P184291

Luminaire Tested: **LDWP-FC-4B-ED**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P184291
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDWP-FC-4B-ED
Description: LUMARK WALPAK CUTOFF
Light Source: (4) 5000K COB LEDS
Ballast/Driver: [1] ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2278.8 lumens
Efficiency: N/A
Efficacy: 71.4 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.75' x L: 1.08' x H: 0.1')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

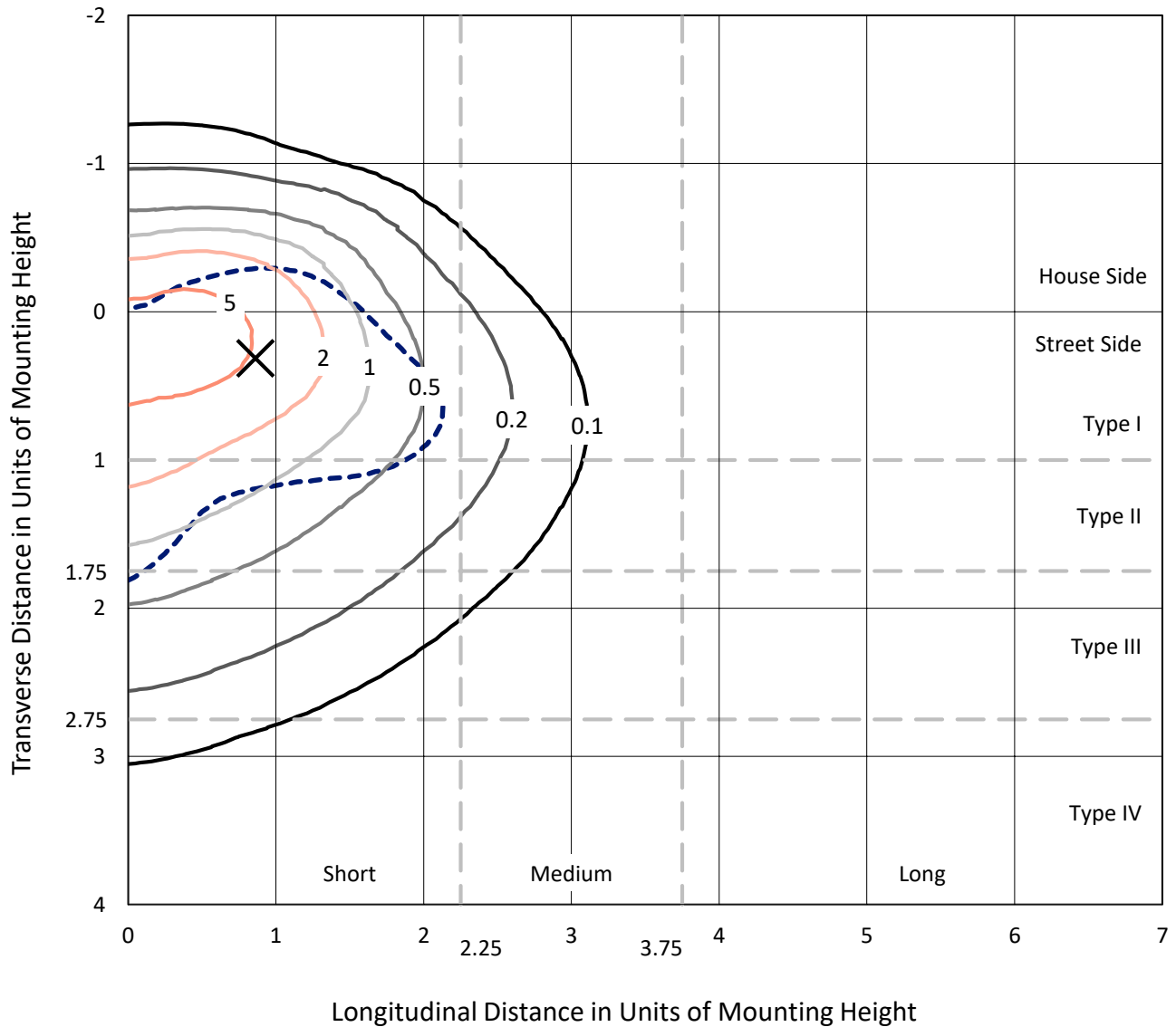
Input Watts (W): 31.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P184291
 CATALOG NUMBER: LDWP-FC-4B-ED

Iso-Footcandle Lines of Horizontal Illumination

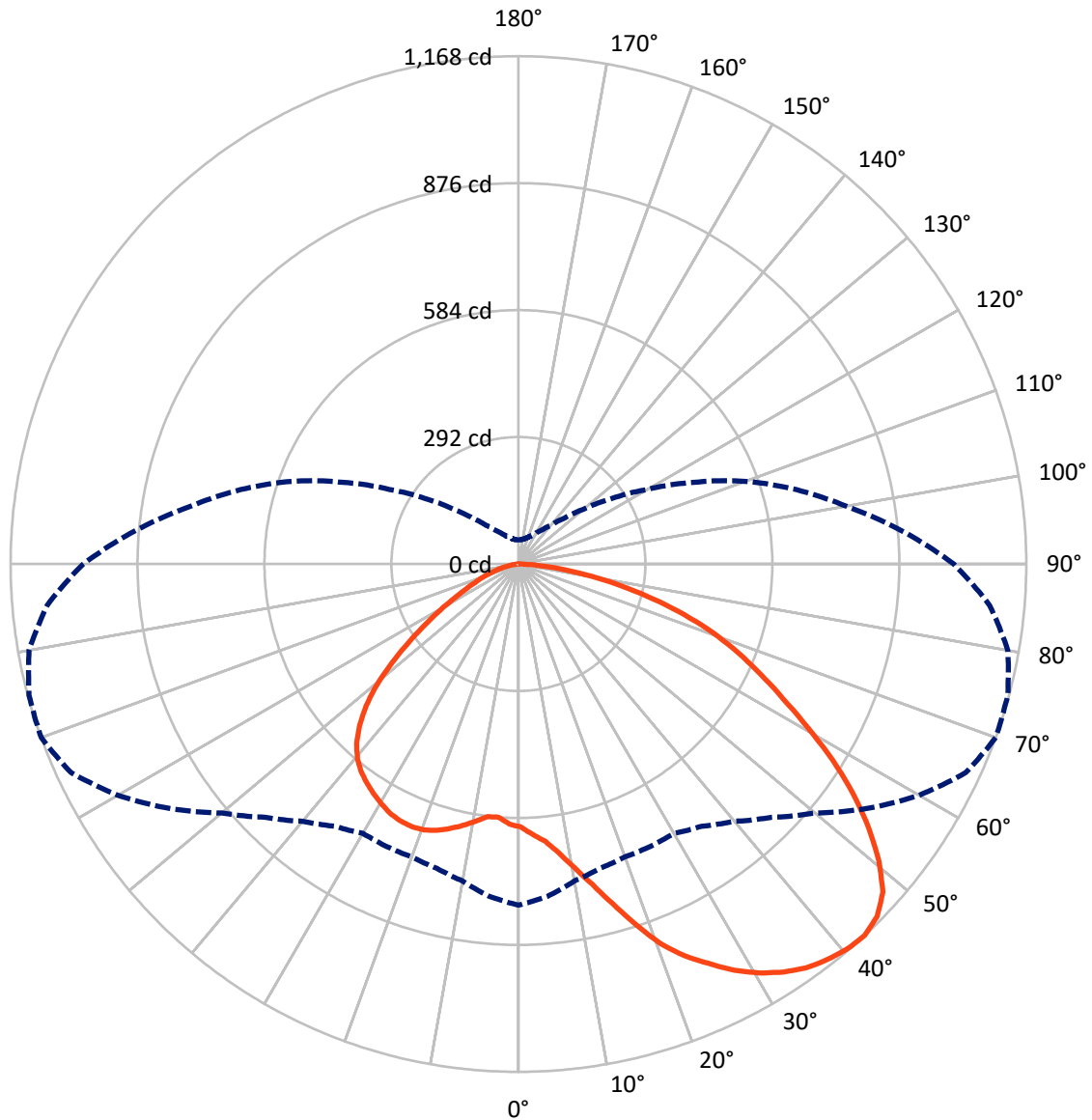
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.7 fc
 Type III - Short - Full Cutoff

REPORT NUMBER: P184291
CATALOG NUMBER: LDWP-FC-4B-ED

Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 42.5-Deg Vertical

REPORT NUMBER: P184291

CATALOG NUMBER: LDWP-FC-4B-ED

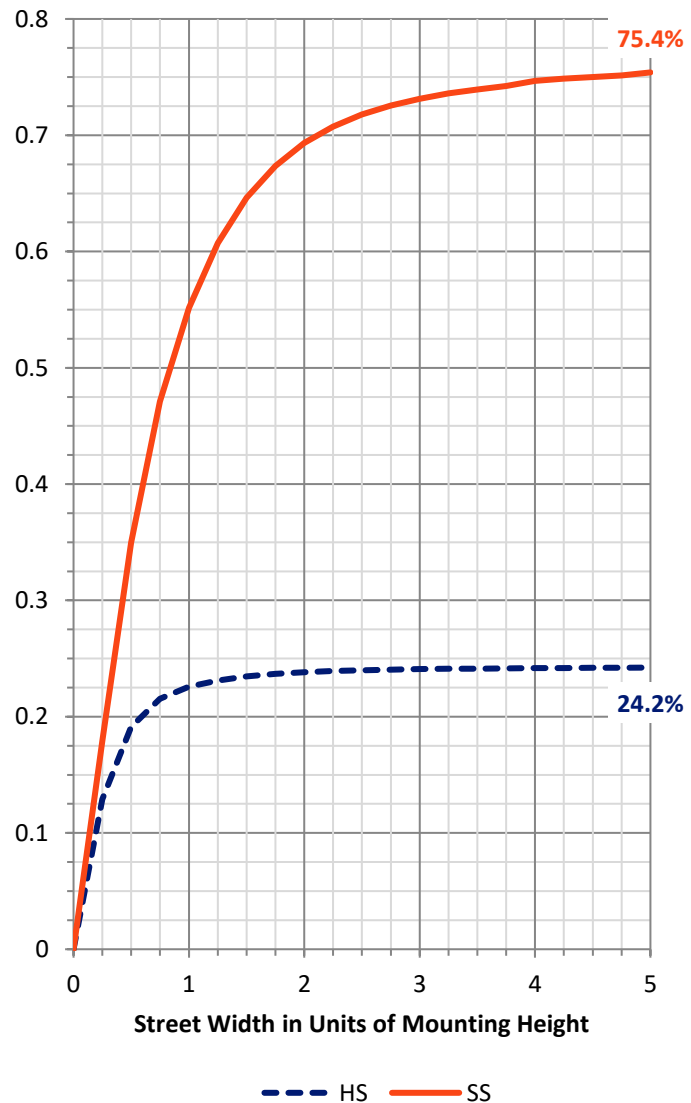
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	557.0	0.0	557.0
	% Fixture	24.4	0.0	24.4
Street Side	Lumens	1721.8	0.0	1721.8
	% Fixture	75.6	0.0	75.6
Total	Lumens	2278.8	0.0	2278.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.6	2.5
10°-20°	180.7	7.9
20°-30°	314.5	13.8
30°-40°	409.9	18.0
40°-50°	444.2	19.5
50°-60°	396.0	17.4
60°-70°	289.0	12.7
70°-80°	156.0	6.8
80°-90°	31.0	1.4
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°-90°	2278.8	100.0
0°-180°	2278.8	100.0



REPORT NUMBER: P184291

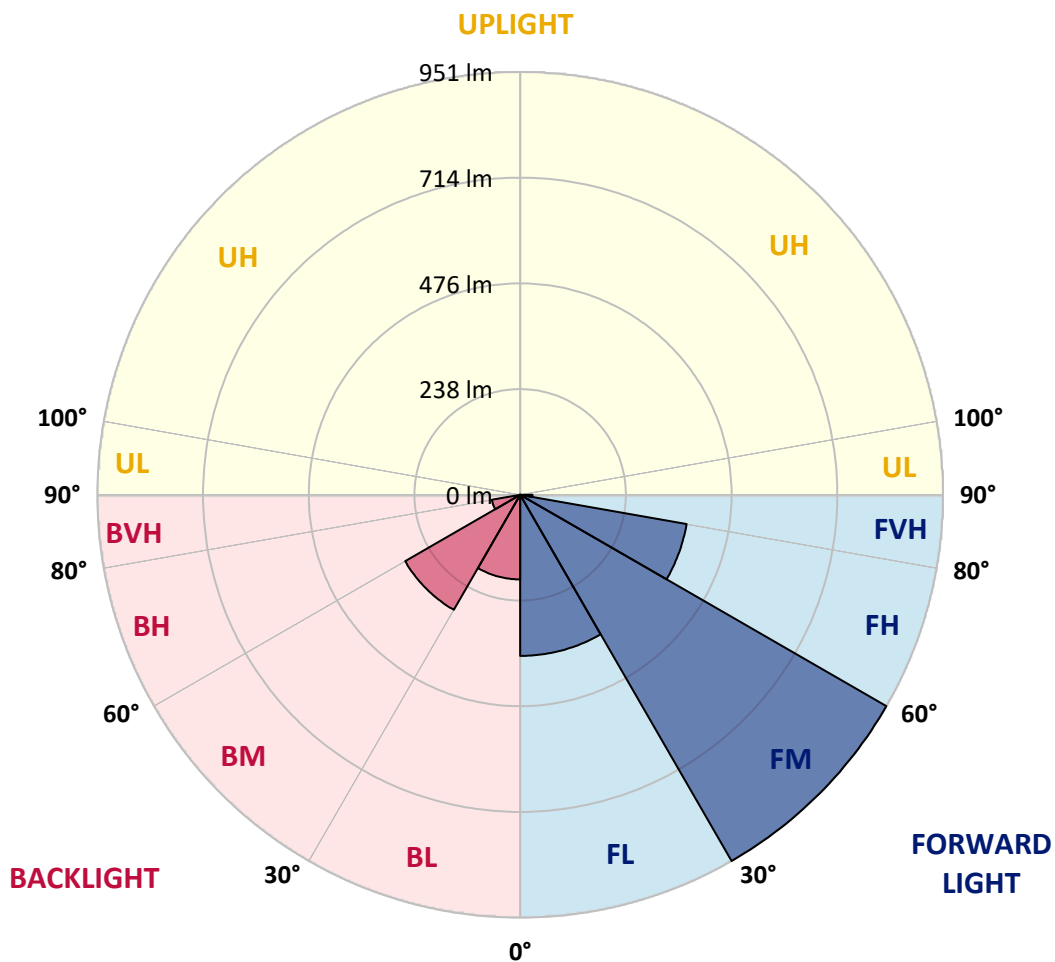
CATALOG NUMBER: LDWP-FC-4B-ED

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	362.4	15.9			
FM	(30°-60°)	951.4	41.7			
FH	(60°-80°)	380.3	16.7			G0/660
FVH	(80°-90°)	27.7	1.2			G1/100
BL	(0°-30°)	190.3	8.4	B1/500		
BM	(30°-60°)	298.7	13.1	B1/1000		
BH	(60°-80°)	64.7	2.8	B0/110		G0/110
BVH	(80°-90°)	3.3	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Short





REPORT NUMBER: P184291

CATALOG NUMBER: LDWP-FC-4B-ED

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	604.6	604.6	604.6	604.6	604.6	604.6	604.6	604.6	604.6	604.6	604.6
2.5°	641.0	638.8	640.3	638.1	638.1	638.1	639.6	640.3	637.4	636.0	634.6
5°	671.0	669.5	672.4	669.5	670.3	666.7	666.7	667.4	663.8	659.5	657.4
7.5°	693.1	693.1	696.0	693.1	691.0	688.1	689.5	692.4	691.0	687.4	686.7
10°	715.9	712.4	714.5	713.1	711.7	715.9	717.4	720.2	720.2	718.8	720.9
12.5°	733.1	731.6	733.1	736.6	740.9	745.9	748.8	750.9	752.3	753.8	758.8
15°	755.9	753.8	756.6	768.0	778.0	785.9	790.9	791.6	793.7	797.3	800.9
17.5°	773.8	774.5	784.5	798.0	810.9	824.4	838.7	845.8	847.3	849.4	853.0
20°	790.9	791.6	804.4	818.7	834.4	857.3	878.0	890.1	898.0	903.7	909.4
22.5°	808.7	807.3	816.6	831.6	848.7	875.1	901.5	922.9	939.4	951.5	958.6
25°	823.7	820.9	821.6	831.6	853.0	879.4	915.8	947.2	968.6	982.9	994.3
27.5°	832.3	827.3	823.0	826.6	840.1	873.0	912.9	955.8	990.7	1008.6	1020.7
30°	830.9	825.9	819.4	815.2	823.0	850.1	890.1	942.2	990.0	1019.3	1040.0
32.5°	823.0	816.6	805.9	800.2	805.9	824.4	859.4	904.4	956.5	1004.3	1045.7
35°	811.6	803.0	790.2	783.0	783.7	798.0	823.0	858.0	904.4	964.3	1027.2
37.5°	800.2	788.0	773.0	760.2	761.6	770.2	786.6	813.0	853.7	915.8	990.7
40°	792.3	778.0	758.1	740.2	739.5	743.1	750.9	775.2	810.9	868.0	942.9
42.5°	784.5	767.3	740.2	724.5	716.7	716.7	715.2	735.9	772.3	823.7	890.8
45°	773.0	753.8	725.2	708.1	696.0	686.0	681.0	698.8	733.1	783.0	844.4
47.5°	755.2	736.6	705.2	687.4	672.4	658.1	651.0	666.0	699.5	742.3	798.7
50°	737.4	714.5	683.8	662.4	643.8	631.0	626.0	636.0	664.5	706.7	756.6
52.5°	711.7	688.1	658.1	634.6	617.4	606.7	605.3	612.4	631.7	666.0	713.8
55°	683.8	658.1	630.3	604.6	585.3	576.7	581.0	589.6	601.7	629.6	671.0
57.5°	647.4	623.1	596.0	571.0	553.9	548.9	554.6	562.5	573.9	594.6	629.6
60°	603.9	581.7	556.8	534.6	521.1	516.8	523.2	531.1	541.1	557.5	586.7
62.5°	555.3	536.1	512.5	493.2	482.5	480.4	487.5	493.9	503.9	520.4	543.2
65°	499.7	483.2	464.0	445.4	438.3	436.1	441.1	450.4	460.4	476.1	494.7
67.5°	441.8	426.8	411.1	393.3	387.6	385.4	389.0	397.6	408.3	424.0	441.1
70°	379.0	366.9	352.6	335.5	334.1	334.1	337.6	344.8	352.6	368.3	384.7
72.5°	313.4	303.4	289.8	278.4	278.4	282.7	284.1	292.7	301.2	311.9	326.2
75°	248.4	239.8	229.8	222.0	222.7	227.7	230.6	237.0	245.5	254.8	267.0
77.5°	185.6	178.4	172.0	169.2	168.5	173.5	175.6	182.0	189.2	197.0	206.3
80°	127.1	122.1	117.8	117.1	117.1	122.1	123.5	128.5	134.2	140.6	147.0
82.5°	75.7	72.8	70.0	70.7	71.4	74.9	76.4	79.9	83.5	88.5	92.1
85°	34.3	32.1	32.8	32.1	32.8	35.7	37.1	38.5	41.4	44.3	46.4
87.5°	6.4	5.0	6.4	6.4	7.1	8.6	8.6	10.0	11.4	12.8	13.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P184291

CATALOG NUMBER: LDWP-FC-4B-ED

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	604.6	604.6	604.6	604.6	604.6	604.6	604.6	604.6	604.6	604.6	604.6
2.5°	633.8	632.4	626.7	622.4	624.6	623.9	621.0	616.0	611.7	608.2	603.9
5°	656.7	653.8	645.3	640.3	639.6	636.0	629.6	621.0	610.3	603.2	594.6
7.5°	688.1	685.2	676.0	670.3	670.3	666.0	656.0	644.6	628.9	618.1	604.6
10°	723.1	720.9	715.9	710.9	708.8	703.8	693.1	678.1	660.3	643.8	624.6
12.5°	762.3	763.0	759.5	755.9	752.3	750.2	734.5	715.2	694.5	673.1	645.3
15°	807.3	813.0	812.3	810.2	805.9	800.2	778.0	755.2	728.8	699.5	667.4
17.5°	860.1	868.7	871.5	870.8	868.7	860.1	831.6	803.7	769.5	730.2	688.8
20°	918.7	928.6	930.8	931.5	926.5	915.8	883.0	847.3	806.6	761.6	707.4
22.5°	966.5	970.8	977.2	978.6	975.0	959.3	926.5	885.1	835.1	783.0	718.1
25°	1002.9	1010.0	1014.3	1017.9	1015.0	1001.5	967.2	917.9	863.0	799.5	725.9
27.5°	1032.1	1047.9	1053.6	1057.8	1052.8	1039.3	996.5	942.9	881.5	806.6	725.9
30°	1061.4	1075.0	1082.8	1091.4	1086.4	1066.4	1023.6	967.2	893.7	812.3	723.8
32.5°	1076.4	1095.7	1111.4	1118.5	1113.5	1092.1	1046.4	985.0	905.1	810.9	716.7
35°	1080.7	1107.1	1129.9	1140.6	1137.1	1111.4	1065.0	999.3	912.2	805.2	707.4
37.5°	1062.8	1113.5	1143.5	1154.2	1150.6	1127.8	1079.3	1005.7	908.7	798.7	696.7
40°	1025.7	1097.8	1145.6	1164.2	1163.5	1142.8	1089.3	1007.2	901.5	785.9	682.4
42.5°	980.0	1063.6	1134.9	1167.8	1164.9	1142.8	1087.8	1000.7	883.7	765.2	661.0
45°	923.7	1020.7	1104.2	1156.3	1157.8	1130.7	1076.4	980.0	859.4	737.4	633.8
47.5°	868.0	968.6	1059.3	1127.8	1137.8	1104.2	1042.9	945.1	818.0	701.7	595.3
50°	823.0	910.8	1007.2	1074.3	1085.0	1043.6	977.2	882.3	759.5	644.6	543.9
52.5°	774.5	848.7	942.2	1008.6	1016.4	976.5	901.5	803.7	682.4	577.5	480.4
55°	725.9	792.3	872.3	934.4	932.2	883.7	803.7	705.2	592.4	496.1	411.1
57.5°	678.8	735.2	799.5	853.0	832.3	769.5	687.4	598.2	491.1	414.0	340.5
60°	631.0	679.5	728.8	764.5	739.5	672.4	590.3	498.2	403.3	329.8	272.0
62.5°	583.9	623.9	661.0	683.1	663.1	599.6	518.9	430.4	337.6	271.2	215.6
65°	531.1	566.8	596.0	612.4	598.9	539.6	457.5	371.2	284.8	222.7	174.2
67.5°	474.7	506.8	529.6	545.3	534.6	481.1	401.2	319.8	241.3	183.4	141.3
70°	408.3	439.7	460.4	476.1	465.4	419.0	348.3	269.1	197.0	148.5	114.2
72.5°	347.6	369.0	385.4	399.0	391.9	354.0	292.7	221.3	159.9	117.1	89.9
75°	279.8	297.7	309.1	319.1	313.4	285.5	234.8	174.9	124.2	89.2	69.2
77.5°	214.9	228.4	234.8	242.0	235.6	215.6	177.0	131.3	92.1	65.7	50.0
80°	155.6	161.3	167.0	168.5	162.7	148.5	122.1	90.7	62.1	43.5	33.5
82.5°	95.6	100.6	103.5	104.2	99.2	90.7	74.2	54.2	37.1	25.7	19.3
85°	47.8	50.0	51.4	51.4	47.8	43.5	35.7	25.7	17.8	10.7	7.9
87.5°	15.7	15.0	15.0	15.0	13.6	12.1	10.0	7.1	4.3	1.4	1.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P184291

CATALOG NUMBER: LDWP-FC-4B-ED

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	604.6	604.6	604.6	604.6	604.6	604.6	604.6	604.6	604.6	604.6	604.6
2.5°	598.2	591.7	587.5	582.5	575.3	573.9	568.9	566.0	563.2	559.6	556.8
5°	583.9	571.0	561.0	552.5	541.8	536.8	527.5	521.1	517.5	511.8	508.2
7.5°	585.3	568.9	551.0	535.3	516.8	504.7	488.9	479.0	469.7	461.8	459.7
10°	599.6	574.6	549.6	524.6	499.7	479.0	457.5	441.1	426.8	412.6	409.0
12.5°	614.6	581.0	547.5	515.4	483.2	456.8	429.7	409.7	389.0	372.6	364.7
15°	628.1	587.5	546.1	507.5	466.8	435.4	406.1	381.2	357.6	338.3	325.5
17.5°	640.3	591.0	541.8	497.5	454.0	419.0	385.4	355.5	331.2	309.1	293.4
20°	648.8	591.0	534.6	484.0	440.4	400.4	364.0	332.6	303.4	280.5	259.1
22.5°	651.7	587.5	526.1	471.1	424.0	379.7	340.5	305.5	274.8	248.4	227.7
25°	650.3	578.9	513.9	456.8	404.7	357.6	312.6	276.2	244.8	217.0	195.6
27.5°	645.3	568.2	503.2	440.4	382.6	330.5	284.1	245.5	214.9	188.4	168.5
30°	636.0	556.0	486.8	419.0	356.2	301.2	254.1	217.7	186.3	159.9	142.0
32.5°	625.3	541.1	466.1	393.3	326.2	270.5	224.1	187.0	157.0	134.2	118.5
35°	613.1	526.1	441.1	361.9	294.1	237.7	192.0	157.0	131.3	112.1	99.9
37.5°	599.6	504.7	411.1	330.5	261.2	205.6	162.0	132.1	110.6	95.6	85.7
40°	581.7	478.2	377.6	296.2	229.1	174.9	137.0	112.1	94.9	82.8	74.2
42.5°	556.0	444.0	343.3	262.7	197.0	149.2	116.3	96.4	82.8	72.1	65.7
45°	521.1	405.4	306.2	229.1	168.5	127.1	100.6	84.2	72.1	65.0	59.2
47.5°	479.0	361.2	269.1	196.3	142.8	108.5	87.1	73.5	65.7	59.2	55.0
50°	428.3	315.5	230.6	167.0	120.6	93.5	75.7	66.4	60.0	55.0	51.4
52.5°	369.0	273.4	195.6	140.6	102.8	80.7	67.8	60.7	55.7	51.4	47.8
55°	309.1	227.7	164.9	117.1	87.1	70.0	61.4	55.7	51.4	47.8	44.3
57.5°	254.8	188.4	137.8	97.1	74.2	62.1	55.0	50.7	47.1	44.3	41.4
60°	207.7	153.5	112.1	81.4	63.5	55.0	50.0	45.7	42.8	40.0	37.8
62.5°	165.6	125.6	91.4	67.8	55.0	48.5	44.3	41.4	38.5	36.4	34.3
65°	133.5	102.8	74.2	57.1	47.1	42.1	39.3	36.4	34.3	32.1	30.0
67.5°	107.8	83.5	61.4	47.8	40.7	36.4	34.3	31.4	29.3	27.1	25.7
70°	87.1	67.1	50.0	40.0	34.3	30.7	27.8	25.7	24.3	22.8	21.4
72.5°	68.5	52.8	40.0	32.1	27.1	24.3	22.1	20.7	20.0	18.6	17.1
75°	52.1	40.0	30.0	24.3	20.7	18.6	17.1	15.7	15.0	14.3	13.6
77.5°	37.8	28.6	20.7	17.1	14.3	12.8	12.1	11.4	10.7	10.0	9.3
80°	25.0	17.1	12.8	10.7	9.3	8.6	7.9	7.1	7.1	6.4	6.4
82.5°	12.8	8.6	7.1	5.7	5.0	4.3	4.3	3.6	3.6	3.6	3.6
85°	5.0	2.9	2.1	2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4
87.5°	0.7	0.7	0.7	0.7	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



REPORT NUMBER: P184291
 CATALOG NUMBER: LDWP-FC-4B-ED

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	604.6	604.6	604.6	604.6
2.5°	555.3	557.5	556.0	553.9
5°	506.1	506.8	503.9	501.8
7.5°	454.0	453.3	451.1	449.0
10°	401.2	399.7	398.3	396.2
12.5°	356.9	354.0	351.9	350.5
15°	317.6	312.6	309.8	309.1
17.5°	280.5	274.8	271.2	270.5
20°	245.5	236.3	232.7	231.3
22.5°	209.9	200.6	196.3	193.4
25°	179.9	169.9	164.9	163.5
27.5°	152.8	143.5	139.2	136.3
30°	127.8	119.9	116.3	114.2
32.5°	107.1	100.6	97.8	96.4
35°	90.7	85.7	82.8	82.1
37.5°	77.8	73.5	71.4	71.4
40°	67.8	64.2	62.1	61.4
42.5°	60.7	57.8	55.7	55.7
45°	55.7	52.8	51.4	50.7
47.5°	51.4	49.3	47.1	47.1
50°	47.8	45.7	44.3	43.5
52.5°	45.0	42.8	41.4	40.7
55°	42.1	40.0	38.5	37.8
57.5°	39.3	37.1	35.7	35.0
60°	35.7	34.3	32.8	32.1
62.5°	32.1	30.7	29.3	29.3
65°	28.6	26.4	26.4	25.7
67.5°	24.3	22.8	22.1	22.1
70°	20.7	19.3	18.6	18.6
72.5°	16.4	15.7	15.0	15.0
75°	12.8	12.1	12.1	11.4
77.5°	9.3	8.6	8.6	8.6
80°	5.7	5.7	5.7	5.7
82.5°	3.6	2.9	2.9	2.9
85°	1.4	0.7	0.7	0.7
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)