

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: McGRAW-EDISON

Report Number: P237508

Luminaire Tested: **CTN-10-8-D-E1-T4-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P237508
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-27)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: CTN-10-8-D-E1-T4-7030-HSS
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 3000K LEDS AND TYPE IV OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 68836 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B4 - U0 - G5

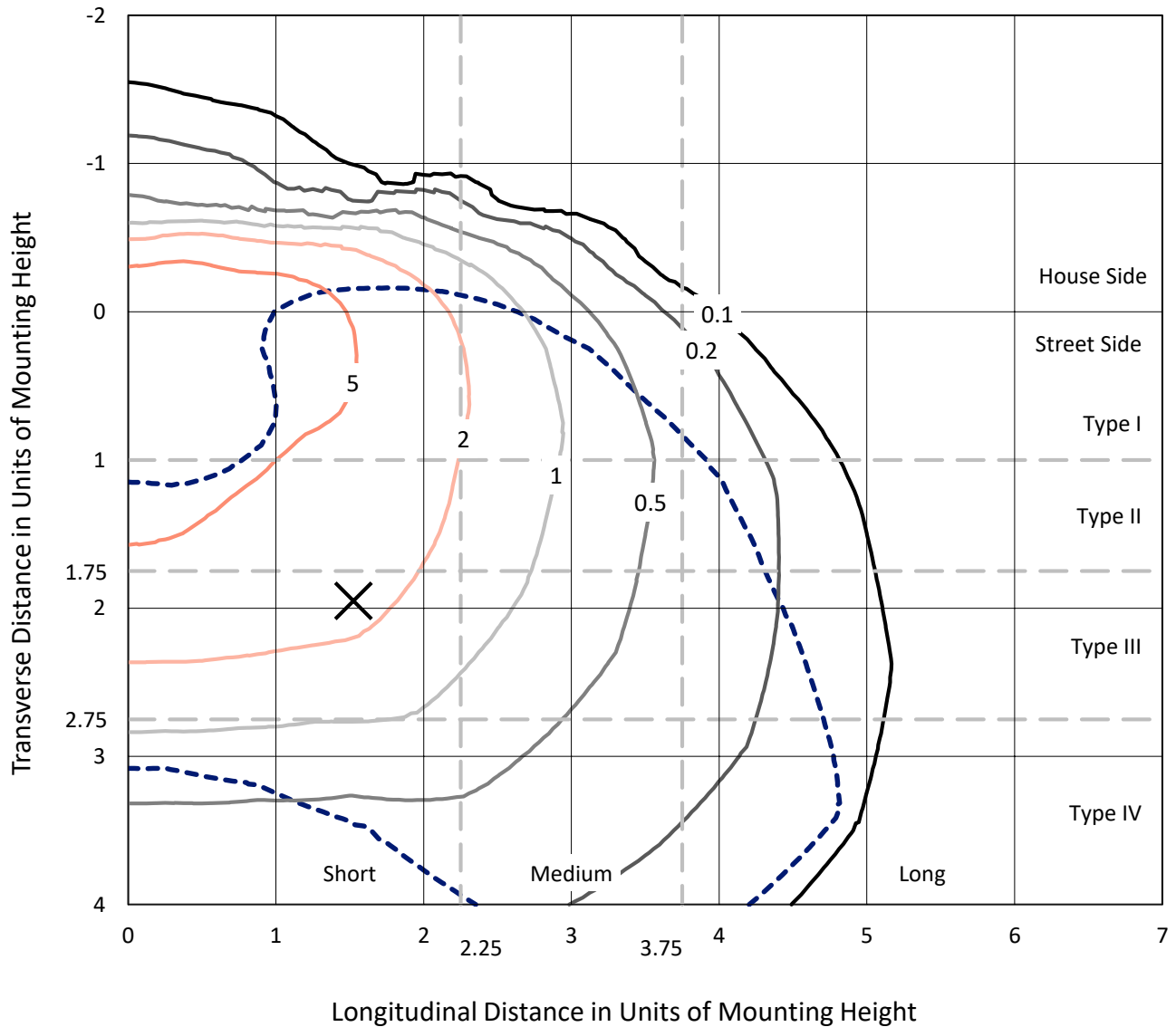
Input Watts (W): 631
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

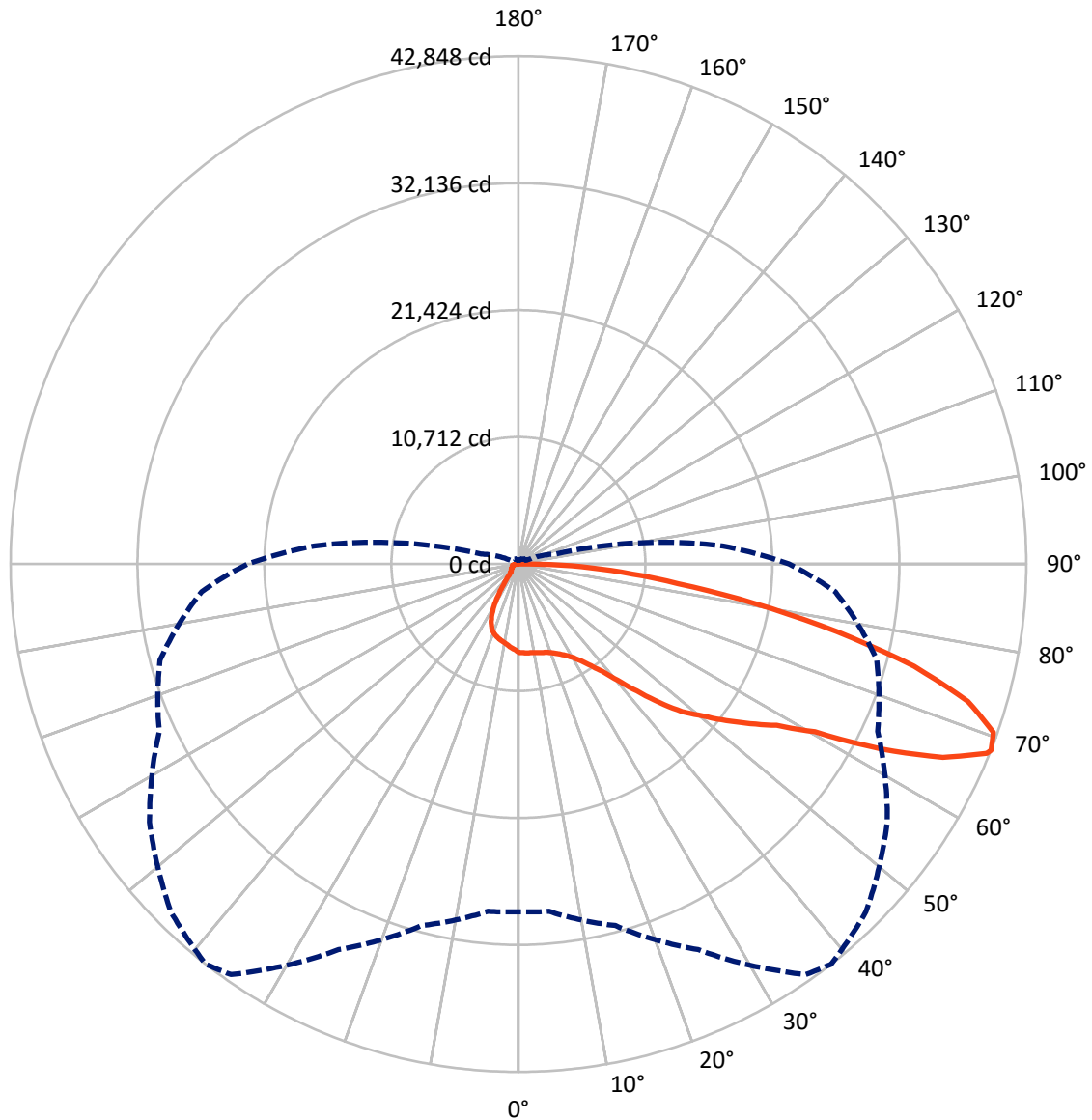
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.4 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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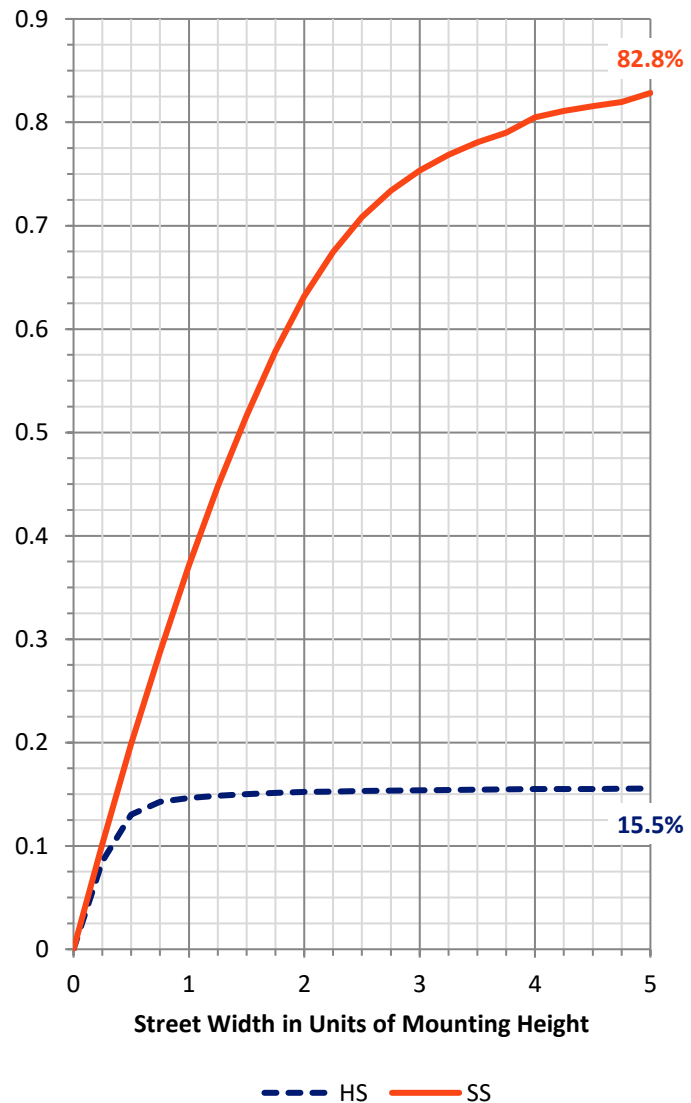
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10857.4	0.0	10857.4
	% Fixture	15.8	0.0	15.8
Street Side	Lumens	57978.5	0.0	57978.5
	% Fixture	84.2	0.0	84.2
Total	Lumens	68836.0	0.0	68836.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	704.8	1.0
10°-20°	2093.2	3.0
20°-30°	3493.3	5.1
30°-40°	5358.2	7.8
40°-50°	9224.9	13.4
50°-60°	13709.5	19.9
60°-70°	18136.5	26.3
70°-80°	13319.6	19.3
80°-90°	2795.9	4.1
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°	68836.0	100.0
0°-180°	68836.0	100.0

Coefficient of Utilization



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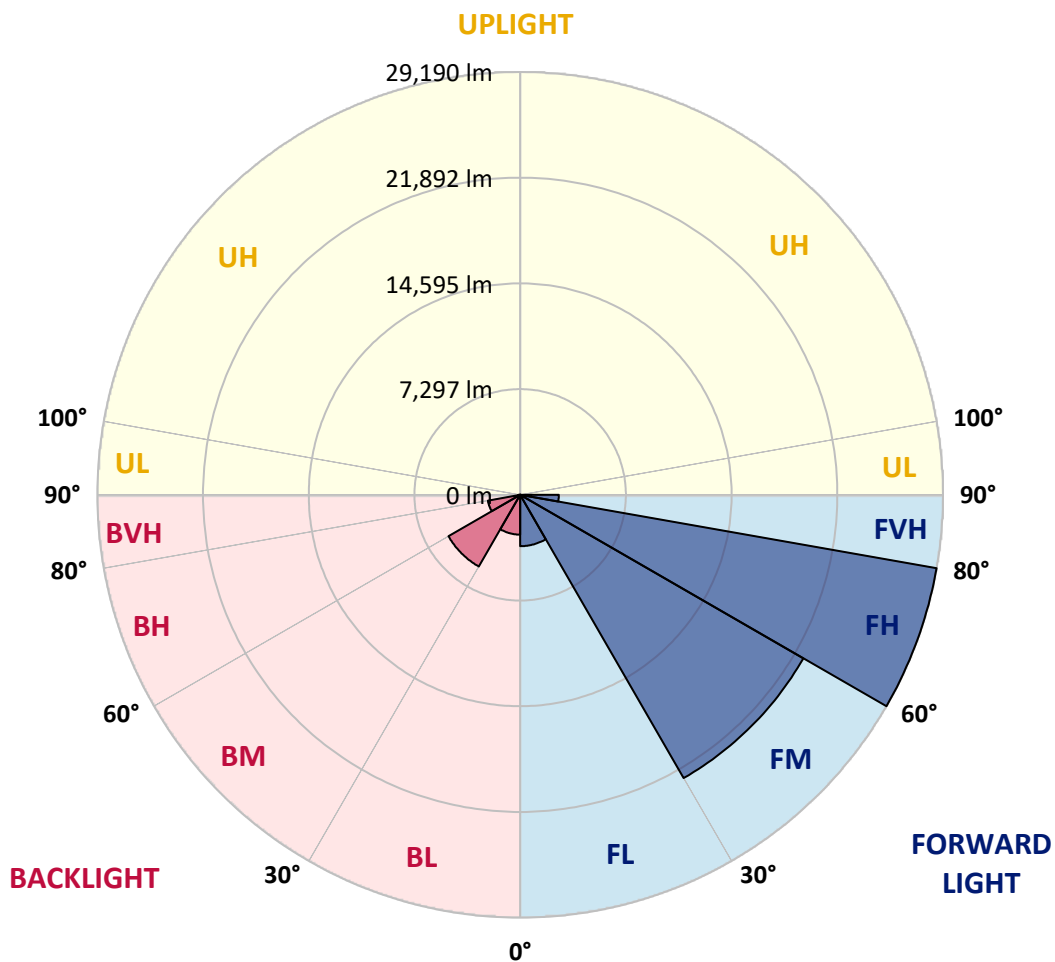
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3544.2	5.1			
FM	(30°-60°)	22577.1	32.8			
FH	(60°-80°)	29189.9	42.4			G5
FVH	(80°-90°)	2667.3	3.9			G5
BL	(0°-30°)	2747.1	4.0	B4/5000		
BM	(30°-60°)	5715.6	8.3	B4/8500		
BH	(60°-80°)	2266.2	3.3	B3/2500		G3/2500
BVH	(80°-90°)	128.6	0.2			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	7475.6	7475.6	7475.6	7475.6	7475.6	7475.6	7475.6	7475.6	7475.6	7475.6	7475.6
2.5°	7634.1	7581.3	7591.4	7624.1	7490.7	7480.6	7523.4	7475.6	7538.5	7508.3	7510.8
5°	7654.3	7603.9	7624.1	7674.4	7548.6	7546.1	7593.9	7533.5	7581.3	7543.6	7533.5
7.5°	7636.6	7591.4	7606.5	7654.3	7546.1	7553.6	7616.5	7596.4	7666.8	7629.1	7601.4
10°	7629.1	7598.9	7601.4	7666.8	7581.3	7601.4	7681.9	7694.5	7807.8	7775.0	7762.5
12.5°	7561.2	7538.5	7561.2	7664.3	7636.6	7676.9	7785.1	7850.5	7983.9	7971.3	7996.5
15°	7520.9	7510.8	7528.5	7649.2	7681.9	7747.4	7890.8	8019.1	8180.1	8202.8	8260.7
17.5°	7568.7	7583.8	7616.5	7714.7	7759.9	7827.9	7988.9	8165.1	8394.0	8492.2	8560.1
20°	7770.0	7787.6	7817.8	7880.7	7931.0	7988.9	8132.3	8333.6	8638.1	8791.6	8899.8
22.5°	8061.9	8031.7	8074.5	8127.3	8142.4	8192.7	8338.7	8540.0	8884.7	9116.2	9267.1
25°	8288.3	8268.2	8311.0	8401.6	8399.1	8444.3	8587.8	8794.1	9166.5	9498.6	9765.4
27.5°	8524.9	8512.3	8529.9	8650.7	8698.5	8753.8	8879.6	9111.1	9531.3	9949.0	10369.2
30°	8867.1	8894.7	8864.6	9002.9	9106.1	9169.0	9297.3	9581.7	10032.1	10603.2	11134.2
32.5°	9398.0	9410.6	9360.2	9513.7	9662.2	9757.8	9881.1	10253.5	10746.7	11443.7	12128.1
35°	10530.3	10532.8	10326.5	10303.8	10386.9	10525.2	10706.4	11260.0	11994.7	13069.1	13844.1
37.5°	12246.3	12163.3	11967.0	11584.6	11461.3	11486.4	11745.6	12515.6	13630.2	15613.0	16355.3
40°	14214.0	14118.4	13773.6	13267.9	12905.6	12882.9	12971.0	13894.4	15524.9	18473.9	18848.8
42.5°	16337.7	16272.2	15713.6	15190.3	14727.3	14654.3	14455.5	15381.5	17613.4	21027.8	21025.3
45°	18297.8	18285.2	17603.3	17344.1	16853.5	16662.2	16425.7	17145.3	19759.7	23040.8	22799.2
47.5°	20137.1	20099.4	19374.7	19077.8	18702.9	18599.7	18320.4	18823.7	21594.0	24920.4	24319.0
50°	22089.7	21973.9	20897.0	20597.6	20227.7	20147.2	20001.2	20580.0	23591.8	26563.5	25567.1
52.5°	24359.3	24183.1	22713.7	22157.6	21893.4	21946.2	21853.1	22371.5	25826.2	27937.3	26588.6
55°	27044.1	26515.7	25111.6	24102.6	23516.4	23760.4	23579.3	24225.9	27970.0	29006.7	27333.4
57.5°	29014.2	29011.7	28440.5	27006.3	25677.8	25690.3	25325.5	26062.7	29703.7	30071.0	27768.7
60°	31268.7	31402.1	31598.4	30961.8	29394.2	28737.5	27454.2	27881.9	31097.6	30843.5	27962.5
62.5°	33228.9	33306.9	34175.0	34419.0	34539.8	34378.8	31525.4	29977.9	32237.5	31273.8	28017.8
65°	33158.4	33150.9	35027.9	36663.5	39204.8	39348.2	38525.5	33090.5	33120.7	31329.1	27731.0
67.5°	29922.6	30076.1	32587.2	36092.3	42153.8	42606.7	41471.9	37609.6	33447.8	31304.0	27046.6
68°	29343.9	29409.3	31580.8	35891.0	42279.6	42848.3	41476.9	37987.0	33437.7	31306.5	26835.2
70°	25657.6	25755.8	28287.1	33452.8	42314.8	42511.1	40855.4	38193.3	33105.6	31072.5	25310.4
72.5°	20255.4	20368.6	22675.9	28226.7	39677.9	39670.3	38070.0	36464.7	31980.8	29361.5	21470.7
75°	14674.4	15044.3	17062.3	22170.2	33966.1	34484.4	34278.1	33958.6	28780.2	24812.2	15152.5
77.5°	10288.7	10477.4	12377.2	16674.8	26691.8	27484.4	28875.8	29288.5	23991.9	18426.1	6823.9
80°	6489.3	6844.0	8416.7	11841.2	19445.2	20177.4	21863.2	22557.7	17709.0	9038.2	1195.2
82.5°	3781.8	3993.2	5150.6	7669.4	13074.1	13584.9	14689.5	13836.6	7178.7	1202.7	664.3
85°	1831.8	2025.5	2765.3	4363.1	8162.5	8678.4	9274.7	6033.8	1187.6	473.0	447.9
87.5°	742.3	762.4	1132.3	1937.5	4068.7	4511.5	4365.6	1980.2	309.5	171.1	140.9
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	7475.6	7475.6	7475.6	7475.6	7475.6	7475.6	7475.6	7475.6	7475.6	7475.6	7475.6
2.5°	7523.4	7485.7	7440.4	7425.3	7319.6	7314.6	7226.5	7354.8	7317.1	7319.6	7349.8
5°	7528.5	7485.7	7397.6	7357.4	7244.1	7213.9	7068.0	7148.5	7063.0	7055.4	7105.7
7.5°	7581.3	7533.5	7407.7	7344.8	7133.4	7032.8	6894.4	6964.8	6834.0	6806.3	6816.4
10°	7722.2	7661.8	7508.3	7359.9	7098.2	6952.2	6680.5	6703.1	6587.4	6549.7	6582.4
12.5°	7936.1	7863.1	7679.4	7460.5	7128.4	6871.7	6539.6	6406.2	6230.1	6172.2	6189.8
15°	8228.0	8142.4	7900.9	7646.7	7193.8	6834.0	6381.1	6104.3	5762.1	5666.5	5631.2
17.5°	8547.5	8456.9	8177.6	7858.1	7309.5	6791.2	6199.9	5759.6	5266.4	5050.0	5037.4
20°	8922.4	8824.3	8532.4	8104.7	7402.6	6738.4	5973.4	5341.9	4700.3	4337.9	4312.8
22.5°	9352.7	9267.1	8937.5	8323.6	7450.5	6600.0	5631.2	4808.4	4005.8	3552.9	3530.2
25°	9858.4	9777.9	9315.0	8477.1	7397.6	6355.9	5163.2	4154.2	3188.0	2735.1	2715.0
27.5°	10462.3	10336.5	9611.9	8522.4	7241.6	5955.8	4577.0	3313.8	2355.2	2010.4	1992.8
30°	11149.3	10925.3	9891.2	8509.8	6964.8	5445.0	3769.3	2443.2	1673.3	1441.8	1434.2
32.5°	12014.8	11622.3	10157.9	8409.1	6569.8	4775.7	2868.5	1695.9	1202.7	1089.5	1087.0
35°	13459.1	12618.7	10449.8	8228.0	6033.8	3897.6	1987.8	1154.9	978.8	956.2	956.2
37.5°	15613.0	14261.8	10864.9	7938.6	5339.4	2971.6	1308.4	918.4	920.9	933.5	936.0
40°	17824.7	16151.5	11466.3	7508.3	4529.1	2088.4	951.1	853.0	883.2	903.3	918.4
42.5°	19855.3	17862.5	12135.6	6919.5	3613.3	1378.9	850.5	820.3	835.4	850.5	865.6
45°	21558.8	19362.1	12767.2	6247.7	2677.2	981.3	842.9	782.5	775.0	785.1	795.1
47.5°	22995.5	20582.5	13210.0	5490.3	1821.7	840.4	822.8	742.3	717.1	719.6	724.7
50°	24092.6	21445.5	13406.3	4657.5	1207.8	817.8	785.1	699.5	659.2	659.2	664.3
52.5°	24832.3	21986.5	13290.5	3718.9	868.1	805.2	754.9	654.2	606.4	614.0	619.0
55°	25380.9	22275.9	12835.1	2732.6	764.9	767.4	719.6	601.4	561.1	581.2	588.8
57.5°	25594.7	22268.3	12070.2	1887.1	759.9	709.6	669.3	556.1	523.4	551.0	563.6
60°	25516.7	21901.0	10958.0	1285.8	744.8	664.3	616.5	513.3	488.1	488.1	490.7
62.5°	25360.7	21385.1	9345.1	953.6	709.6	631.6	576.2	478.1	447.9	432.8	427.8
65°	24656.2	20134.6	6861.7	822.8	674.3	614.0	538.5	445.4	405.1	379.9	374.9
67.5°	23262.2	17983.2	3834.7	759.9	649.2	603.9	513.3	415.2	369.9	339.7	337.2
68°	22834.5	17311.4	3250.9	754.9	654.2	603.9	510.8	407.6	364.8	332.1	329.6
70°	20303.2	13964.9	1343.6	709.6	689.4	606.4	498.2	385.0	344.7	312.0	309.5
72.5°	15356.3	8089.6	709.6	616.5	671.8	596.3	503.2	367.4	327.1	289.4	284.3
75°	8462.0	2317.4	631.6	500.7	621.5	629.0	513.3	364.8	317.0	269.2	259.2
77.5°	1879.6	754.9	588.8	437.8	535.9	578.7	475.6	347.2	322.1	246.6	236.5
80°	719.6	614.0	558.6	337.2	425.2	490.7	395.0	309.5	329.6	231.5	218.9
82.5°	601.4	538.5	513.3	261.7	294.4	359.8	317.0	264.2	304.5	213.9	203.8
85°	442.9	520.9	362.3	206.3	216.4	221.4	221.4	206.3	261.7	188.7	178.6
87.5°	178.6	251.6	153.5	95.6	110.7	103.2	90.6	110.7	151.0	133.4	133.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)