

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: INVUE

Report Number: P139595

Luminaire Tested: **ENT-F02-LED-E1-BL3**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P139595
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33645)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-F02-LED-E1-BL3
Description: ENTRI LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (14) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4461.8 lumens
Efficiency: N/A
Efficacy: 90.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

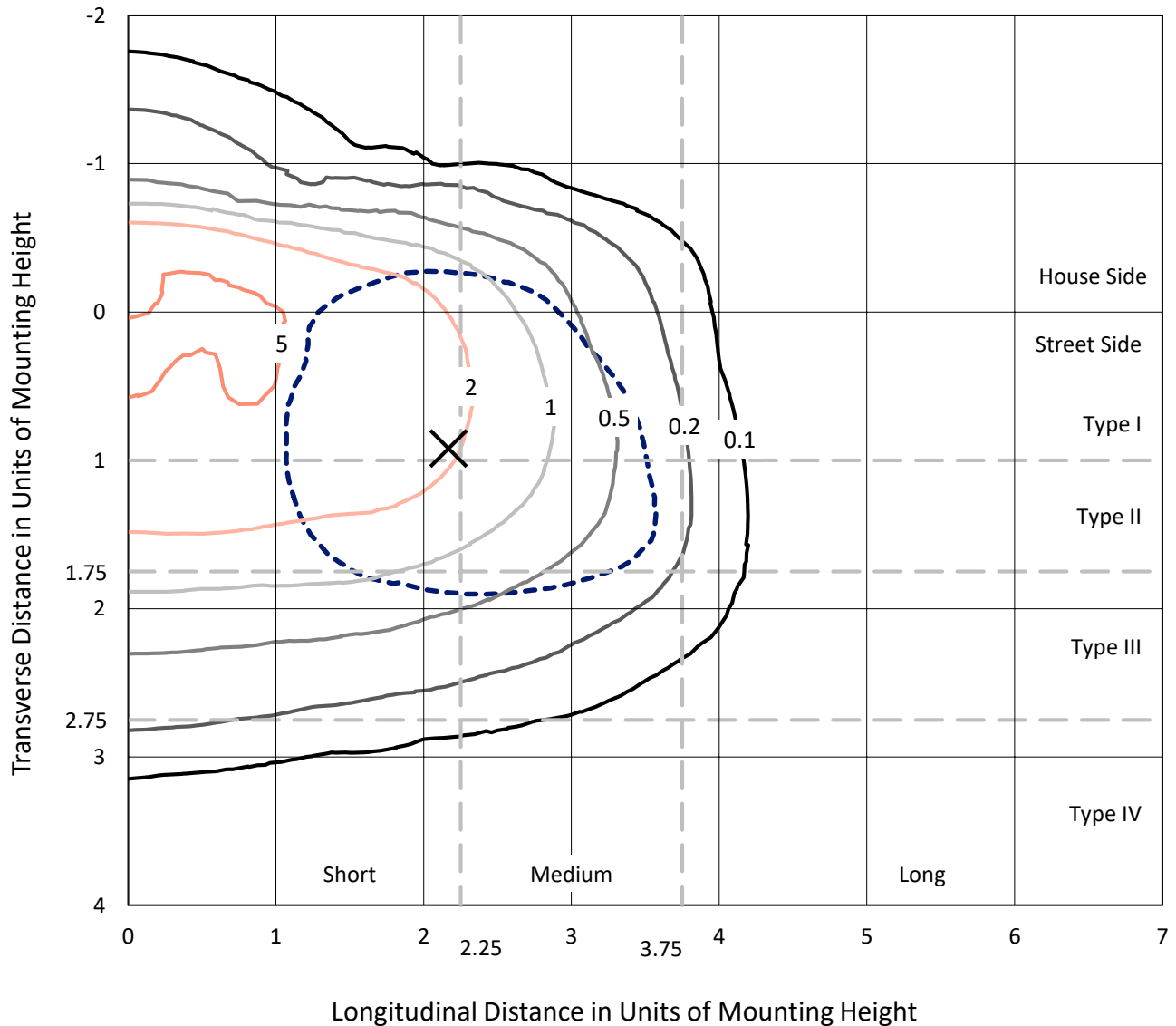
Input Watts (W): 49.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

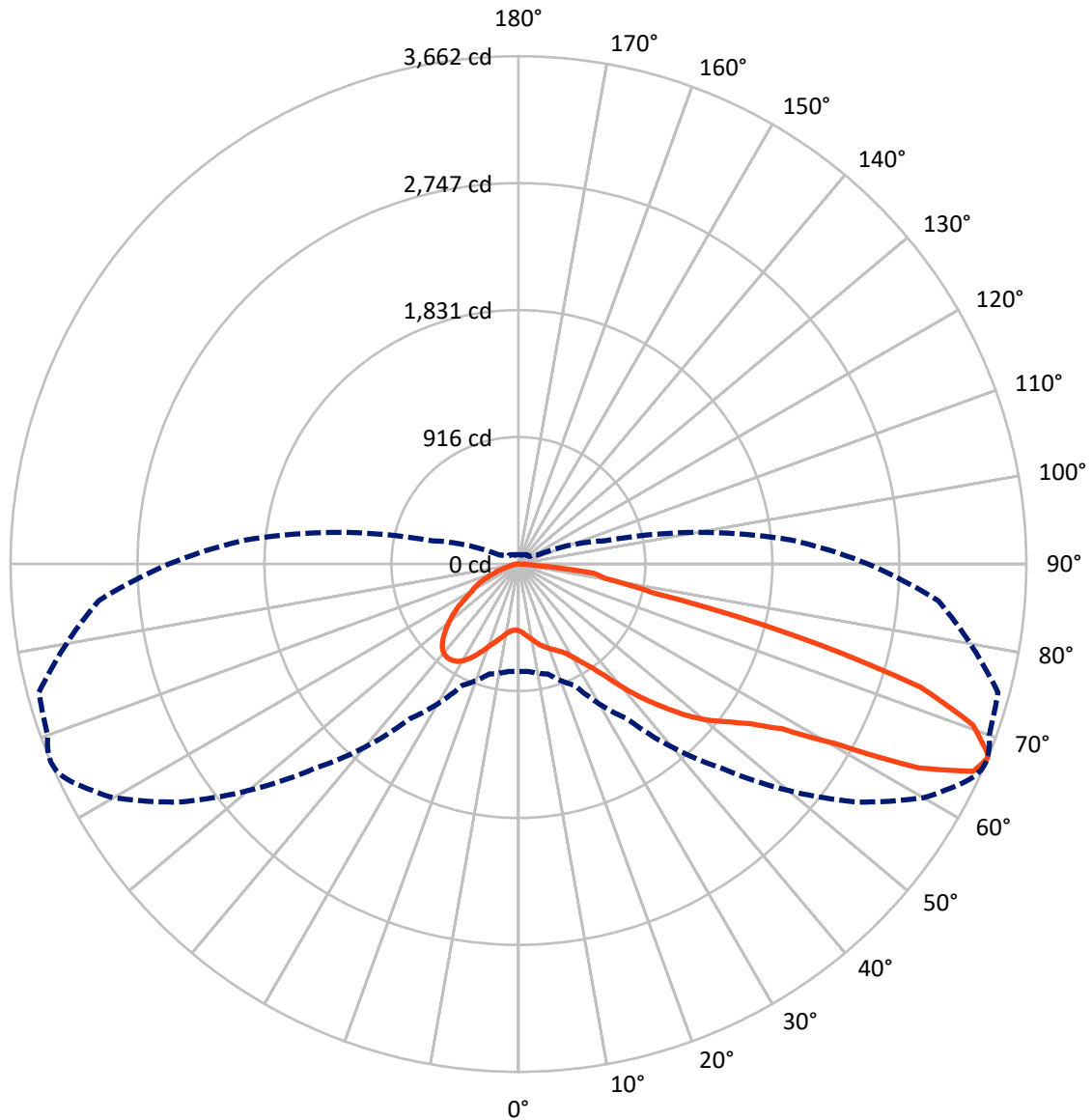
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.1 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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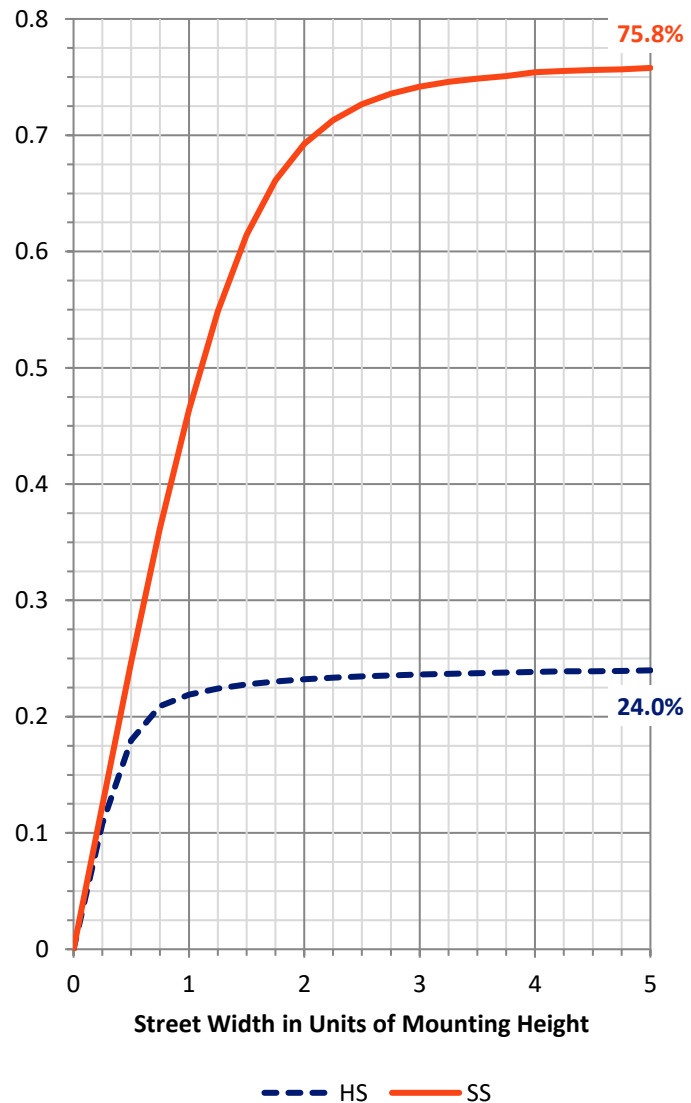
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1083.3	0.0	1083.3
	% Fixture	24.3	0.0	24.3
Street Side	Lumens	3378.5	0.0	3378.5
	% Fixture	75.7	0.0	75.7
Total	Lumens	4461.8	0.0	4461.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.4	1.1
10°-20°	167.5	3.8
20°-30°	303.7	6.8
30°-40°	443.9	9.9
40°-50°	672.4	15.1
50°-60°	964.4	21.6
60°-70°	1232.4	27.6
70°-80°	575.3	12.9
80°-90°	53.9	1.2
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°-90°	4461.8	100.0
0°-180°	4461.8	100.0



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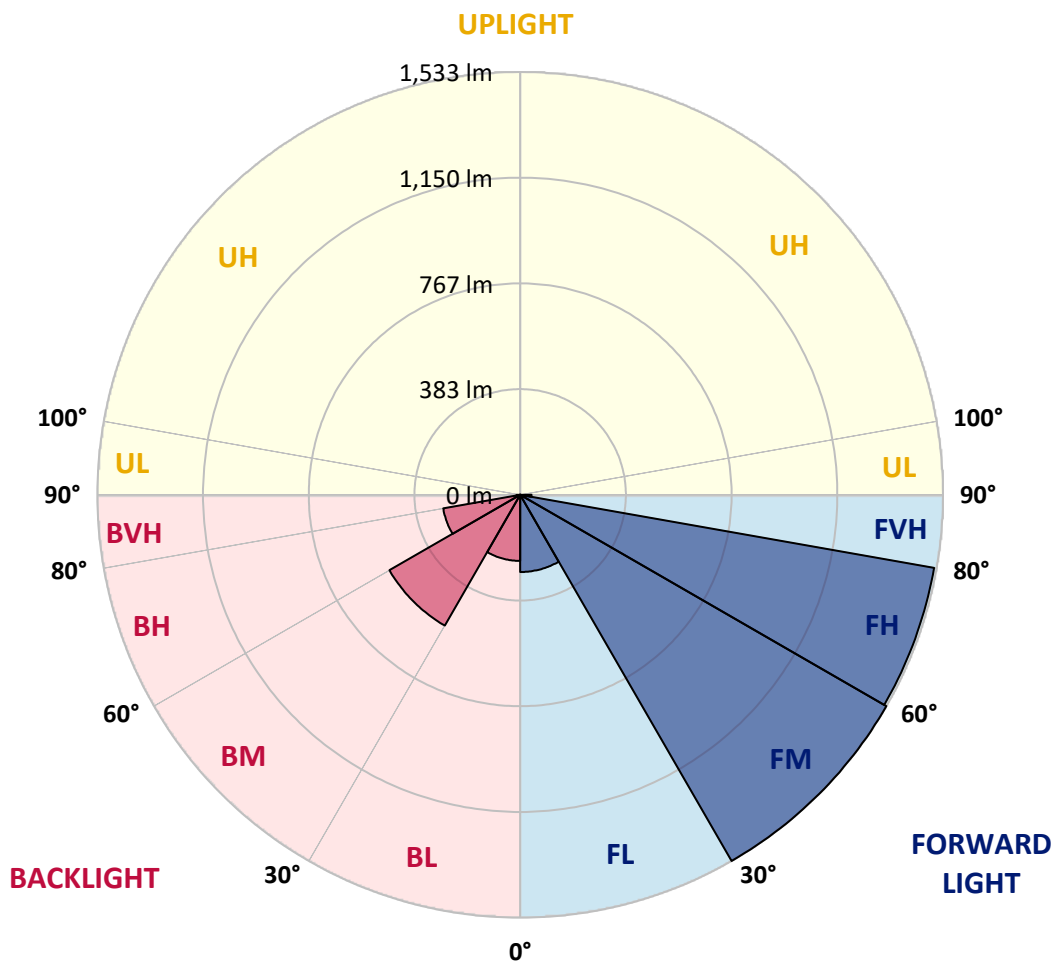
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	279.9	6.3			
FM	(30°-60°)	1533.4	34.4			
FH	(60°-80°)	1524.3	34.2			G1/1800
FVH	(80°-90°)	40.9	0.9			G1/100
BL	(0°-30°)	239.7	5.4	B1/500		
BM	(30°-60°)	547.2	12.3	B1/1000		
BH	(60°-80°)	283.4	6.4	B1/500		G1/500
BVH	(80°-90°)	13.0	0.3			G1/100
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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	480.5	480.5	480.5	480.5	480.5	480.5	480.5	480.5	480.5	480.5	480.5
2.5°	499.4	499.4	500.3	500.3	499.4	499.4	494.5	494.5	494.5	493.7	493.7
5°	526.7	527.5	527.5	526.7	525.0	521.7	515.1	515.1	515.1	514.3	512.7
7.5°	558.1	557.2	558.1	555.6	552.3	548.1	539.1	538.2	536.6	536.6	534.9
10°	592.7	590.3	592.7	589.4	582.8	575.4	564.7	561.4	561.4	561.4	558.1
12.5°	628.2	627.4	629.0	623.3	611.7	603.5	592.7	588.6	587.8	587.8	586.1
15°	667.0	666.2	661.2	652.2	637.3	629.9	617.5	612.5	611.7	611.7	609.2
17.5°	707.5	707.5	695.1	676.1	655.5	644.7	635.7	632.4	631.5	631.5	630.7
20°	742.1	742.1	725.6	694.3	664.5	653.0	649.7	649.7	649.7	649.7	650.5
22.5°	767.7	765.3	743.0	704.2	667.8	657.9	666.2	667.0	667.0	668.7	669.5
25°	779.3	778.5	752.1	705.8	667.0	665.4	683.5	686.0	687.7	689.3	691.8
27.5°	780.1	780.1	753.7	705.0	666.2	678.6	705.0	712.4	714.1	717.4	721.5
30°	771.9	772.7	750.4	704.2	672.0	703.3	738.8	752.9	756.2	761.1	767.7
32.5°	762.0	763.6	750.4	712.4	697.6	746.3	793.3	813.1	816.4	823.0	829.7
35°	763.6	766.1	768.6	745.4	754.5	819.7	887.4	899.0	898.2	908.9	912.2
37.5°	774.3	780.1	798.3	802.4	837.1	927.9	998.9	1023.7	1023.7	1033.6	1030.3
40°	776.0	785.1	830.5	878.4	946.9	1058.3	1155.7	1184.6	1184.6	1188.8	1187.1
42.5°	814.8	823.0	888.3	973.3	1070.7	1202.0	1309.3	1334.9	1340.7	1336.5	1339.8
45°	885.0	890.7	970.8	1078.1	1190.4	1339.8	1459.5	1484.3	1490.1	1485.9	1481.0
47.5°	974.1	982.4	1067.4	1194.5	1310.1	1467.0	1613.1	1642.0	1647.7	1641.1	1643.6
50°	1048.4	1064.1	1154.9	1305.2	1425.7	1575.9	1732.0	1771.6	1776.5	1776.5	1778.2
52.5°	1116.1	1130.1	1217.6	1385.2	1519.0	1674.2	1820.3	1871.5	1877.2	1881.4	1884.7
55°	1144.2	1158.2	1245.7	1419.9	1575.9	1765.8	1922.6	1991.2	1994.5	2005.2	2019.2
57.5°	1145.0	1156.6	1242.4	1419.1	1605.6	1848.4	2062.2	2168.7	2181.9	2195.9	2219.8
60°	1067.4	1081.4	1167.3	1377.8	1630.4	1940.8	2273.5	2469.1	2488.1	2528.6	2581.4
62.5°	950.2	960.1	1034.4	1241.6	1630.4	2068.8	2613.6	2937.2	3000.8	3066.8	3164.2
65°	841.2	848.6	895.7	1074.8	1514.8	2172.8	2969.4	3341.7	3410.2	3459.8	3542.3
67°	773.5	776.8	821.4	967.5	1359.6	2089.4	2993.4	3369.8	3428.4	3479.6	3583.6
67.5°	750.4	752.9	795.0	940.3	1311.8	2039.0	2957.0	3346.7	3410.2	3462.3	3567.9
70°	577.0	569.6	605.9	739.7	1060.0	1627.1	2596.3	3045.4	3118.0	3187.4	3315.3
72.5°	344.2	333.5	356.6	429.3	686.8	1143.4	1968.9	2498.9	2591.3	2678.0	2845.6
75°	207.2	208.0	225.4	275.7	374.8	719.0	1272.1	1626.3	1713.0	1794.7	1926.8
77.5°	103.2	102.4	118.1	160.2	273.2	446.6	738.8	937.8	966.7	1005.5	989.8
80°	33.0	32.2	34.7	43.8	98.2	299.7	464.8	588.6	601.8	609.2	618.3
82.5°	5.0	5.8	6.6	10.7	18.2	71.8	288.9	409.5	427.6	449.1	490.4
85°	0.0	0.0	0.8	0.8	2.5	5.8	27.2	70.2	73.5	89.2	104.8
87.5°	0.0	0.0	0.0	0.8	1.7	2.5	4.1	4.1	4.1	4.1	4.1
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):

	65°	66°	67°	68°	69°	70°	75°	85°	90°	95°	105°
0°	480.5	480.5	480.5	480.5	480.5	480.5	480.5	480.5	480.5	480.5	480.5
2.5°	492.8	492.8	492.0	491.2	491.2	491.2	489.5	488.7	483.8	482.1	478.8
5°	512.7	512.7	511.0	510.2	509.3	509.3	506.9	501.9	495.3	491.2	484.6
7.5°	534.1	533.3	531.6	531.6	528.3	528.3	525.0	516.0	509.3	503.6	495.3
10°	558.9	558.1	555.6	554.8	553.1	551.5	548.1	537.4	530.8	523.4	513.5
12.5°	586.1	584.5	582.8	582.0	580.3	578.7	575.4	565.5	558.9	551.5	539.9
15°	610.1	609.2	607.6	606.8	606.8	605.1	602.6	593.6	586.9	578.7	569.6
17.5°	631.5	630.7	629.9	629.9	629.0	629.0	628.2	620.0	615.8	609.2	600.2
20°	649.7	650.5	650.5	650.5	651.3	652.2	653.8	649.7	645.6	639.8	634.8
22.5°	669.5	670.3	672.8	672.8	674.5	675.3	681.1	680.2	678.6	674.5	670.3
25°	693.4	695.1	696.7	699.2	700.0	702.5	712.4	716.6	713.3	710.8	714.9
27.5°	724.8	728.1	729.8	733.1	734.7	738.0	752.9	762.0	759.5	760.3	769.4
30°	771.9	775.2	780.1	781.8	787.6	789.2	806.5	820.6	820.6	818.9	835.4
32.5°	834.6	837.1	842.9	847.0	850.3	853.6	870.1	885.0	886.6	891.6	898.2
35°	917.2	918.8	922.1	928.7	927.9	929.5	938.6	953.5	961.7	973.3	953.5
37.5°	1026.1	1031.9	1030.3	1031.1	1024.5	1028.6	1031.9	1047.6	1064.9	1076.5	999.7
40°	1181.3	1185.5	1181.3	1175.5	1170.6	1168.1	1163.2	1180.5	1195.4	1187.1	1036.0
42.5°	1332.4	1334.0	1330.7	1320.8	1316.7	1308.5	1295.2	1316.7	1325.0	1286.2	1055.0
45°	1481.8	1479.3	1473.6	1471.9	1463.7	1455.4	1448.0	1462.0	1458.7	1382.8	1063.3
47.5°	1638.7	1636.2	1632.1	1625.5	1616.4	1614.7	1608.1	1606.5	1582.5	1465.3	1059.1
50°	1775.7	1777.4	1768.3	1771.6	1767.4	1759.2	1753.4	1756.7	1699.8	1538.0	1050.9
52.5°	1893.8	1893.8	1889.6	1893.8	1892.1	1888.0	1892.9	1946.6	1828.5	1640.3	1038.5
55°	2030.8	2035.7	2032.4	2036.6	2039.0	2048.1	2068.8	2194.2	2020.9	1765.8	1010.4
57.5°	2231.4	2243.8	2240.5	2257.0	2271.8	2295.8	2370.9	2503.0	2259.5	1903.7	955.1
60°	2591.3	2631.8	2630.1	2659.0	2688.7	2716.0	2847.2	2872.8	2529.4	2083.6	913.9
62.5°	3190.7	3223.7	3237.7	3269.1	3288.1	3293.0	3398.7	3211.3	2770.5	2247.1	890.7
65°	3578.7	3591.9	3604.2	3600.1	3588.6	3569.6	3576.2	3179.9	2690.4	2142.2	764.4
67°	3624.9	3652.1	3662.0	3655.4	3638.1	3611.7	3579.5	3037.9	2520.3	1978.8	646.4
67.5°	3611.7	3639.7	3648.8	3643.0	3628.2	3608.4	3570.4	2984.3	2462.5	1925.9	615.8
70°	3399.5	3440.0	3477.1	3489.5	3490.3	3487.0	3449.0	2605.4	2096.0	1617.2	467.2
72.5°	2898.4	2950.4	3028.0	3003.3	3042.9	3017.3	2930.6	1780.7	1436.4	1155.7	327.7
75°	1955.7	1978.8	2041.5	1969.7	1976.3	1930.9	1594.1	1034.4	890.7	752.1	197.3
77.5°	984.0	998.9	989.0	946.1	929.5	892.4	690.1	224.5	224.5	267.5	103.2
80°	624.1	629.9	636.5	646.4	658.8	660.4	478.8	66.0	59.4	61.9	56.1
82.5°	511.8	527.5	548.1	552.3	557.2	561.4	330.2	36.3	29.7	33.0	39.6
85°	118.9	128.8	123.0	109.0	116.4	90.0	46.2	14.9	13.2	16.5	27.2
87.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	3.3	5.8	14.0
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):

	115°	125°	135°	145°	155°	165°	175°	180°
0°	480.5	480.5	480.5	480.5	480.5	480.5	480.5	480.5
2.5°	475.5	473.0	469.7	468.9	468.1	466.4	465.6	464.8
5°	478.0	473.0	468.1	464.8	463.1	461.5	459.8	459.8
7.5°	487.9	482.1	474.7	471.4	468.1	465.6	463.9	463.9
10°	504.4	497.8	488.7	484.6	480.5	478.0	476.3	474.7
12.5°	529.2	520.9	510.2	503.6	499.4	498.6	497.0	496.1
15°	559.7	550.6	539.1	532.5	525.9	524.2	522.6	521.7
17.5°	590.3	582.8	573.7	562.2	549.0	538.2	533.3	532.5
20°	624.9	621.6	607.6	582.0	553.1	530.8	521.7	521.7
22.5°	668.7	659.6	625.7	580.3	537.4	506.0	493.7	493.7
25°	716.6	686.0	623.3	562.2	509.3	470.5	454.0	454.0
27.5°	758.7	693.4	608.4	531.6	467.2	425.1	406.2	405.3
30°	791.7	689.3	582.0	488.7	417.7	369.8	348.4	348.4
32.5°	809.8	675.3	545.7	438.4	357.5	303.0	276.6	277.4
35°	814.8	651.3	497.8	371.5	284.8	231.1	207.2	207.2
37.5°	809.8	613.4	438.4	298.0	213.0	175.0	156.8	155.2
40°	793.3	556.4	359.1	217.9	158.5	136.2	128.8	127.1
42.5°	760.3	487.9	269.9	156.0	127.1	118.1	116.4	115.6
45°	708.3	395.4	187.4	122.2	113.9	111.4	111.4	110.6
47.5°	643.1	302.1	133.7	108.1	107.3	107.3	107.3	107.3
50°	570.4	213.8	109.0	102.4	101.5	103.2	104.0	104.0
52.5°	495.3	149.4	99.9	98.2	96.6	99.1	99.9	99.9
55°	413.6	117.2	95.8	94.1	91.6	92.5	94.1	94.1
57.5°	329.4	104.0	94.1	91.6	86.7	86.7	88.3	88.3
60°	261.7	99.9	93.3	87.5	80.9	80.9	82.6	83.4
62.5°	218.8	99.1	93.3	83.4	78.4	75.9	77.6	77.6
65°	182.4	99.1	90.8	83.4	74.3	71.0	72.6	72.6
67°	152.7	97.4	89.2	83.4	72.6	68.5	68.5	68.5
67.5°	144.5	96.6	90.0	83.4	71.8	67.7	66.9	66.9
70°	108.1	87.5	90.0	84.2	70.2	61.9	60.3	60.3
72.5°	84.2	80.1	87.5	86.7	68.5	57.0	53.7	52.8
75°	68.5	72.6	88.3	84.2	64.4	52.0	47.1	46.2
77.5°	58.6	61.9	74.3	67.7	53.7	46.2	41.3	40.5
80°	46.2	52.8	52.8	46.2	39.6	37.1	34.7	34.7
82.5°	37.1	40.5	34.7	31.4	29.7	28.9	27.2	27.2
85°	30.5	33.0	25.6	23.1	22.3	21.5	19.8	19.8
87.5°	23.9	20.6	13.2	12.4	12.4	11.6	11.6	12.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)