

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:

Luminaire Tested: **ENT-SA1E-740-U-SL4-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number:
REPORT IS A COMBINATION OF REPORTS P401674 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1E-740-U-SL4-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 1050mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7545.9 lumens
Efficiency: N/A
Efficacy: 102.1 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type IV - Short
BUG Rating: B1 - U5 - G2

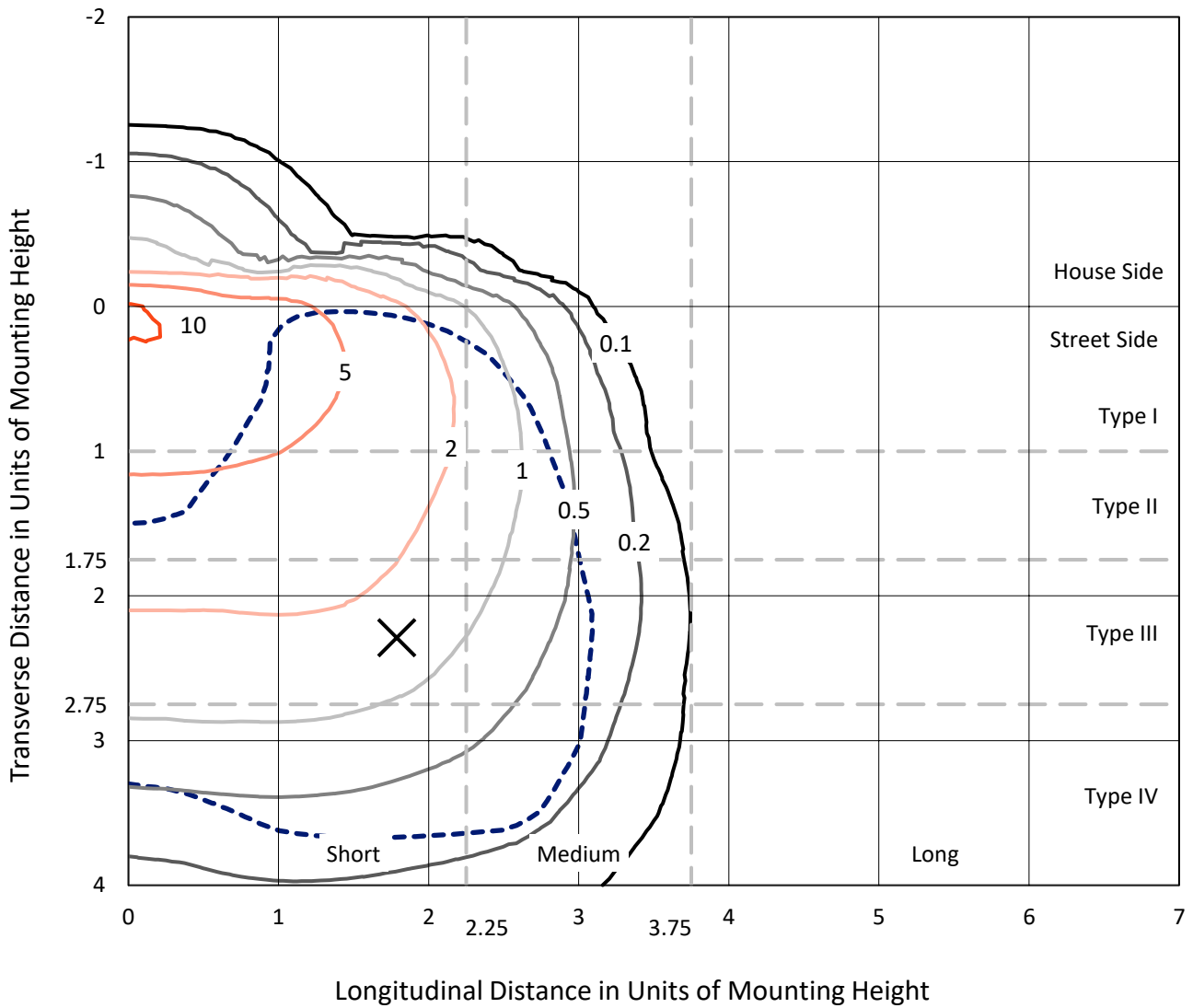
Input Watts (W): 73.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

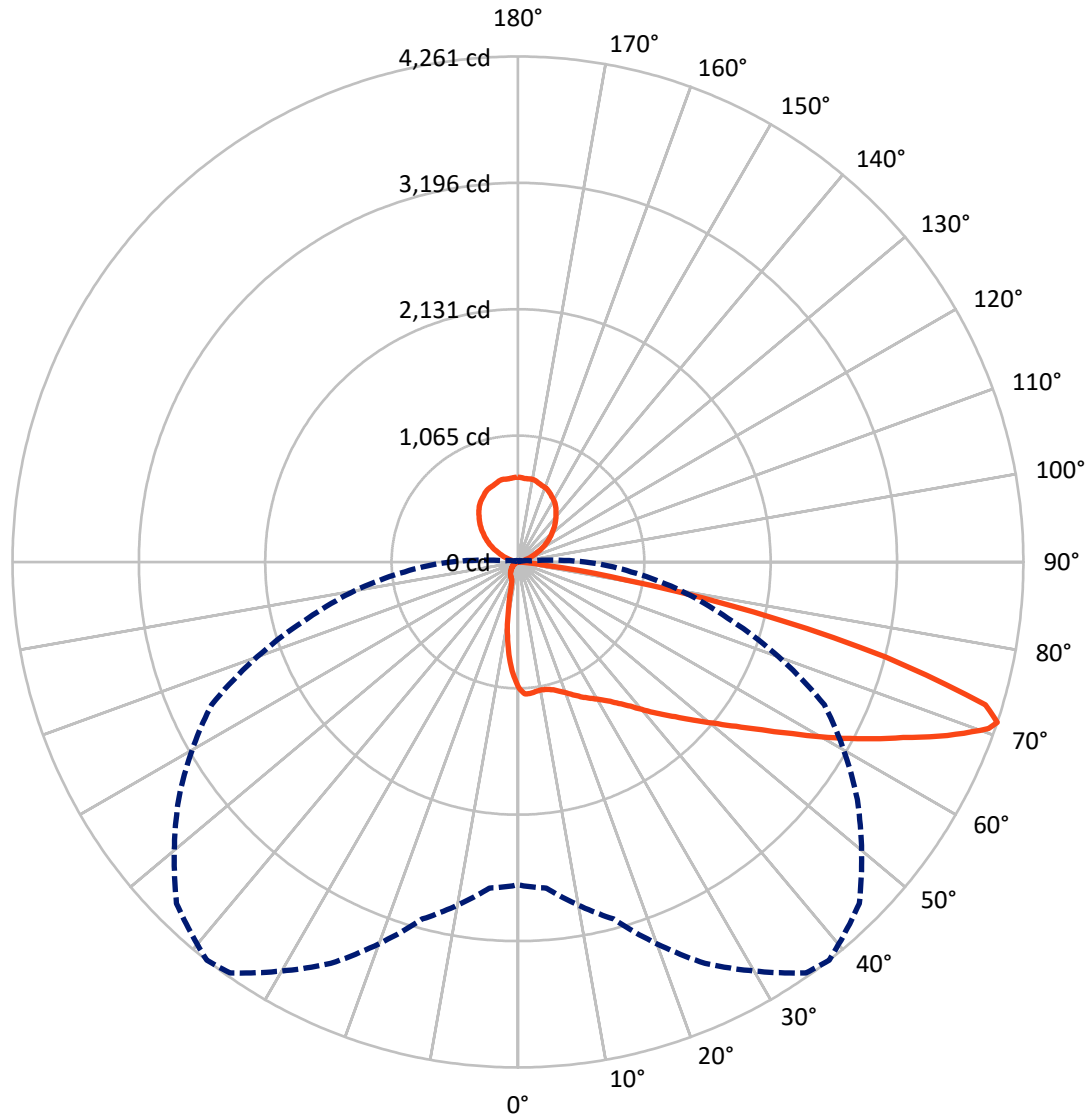
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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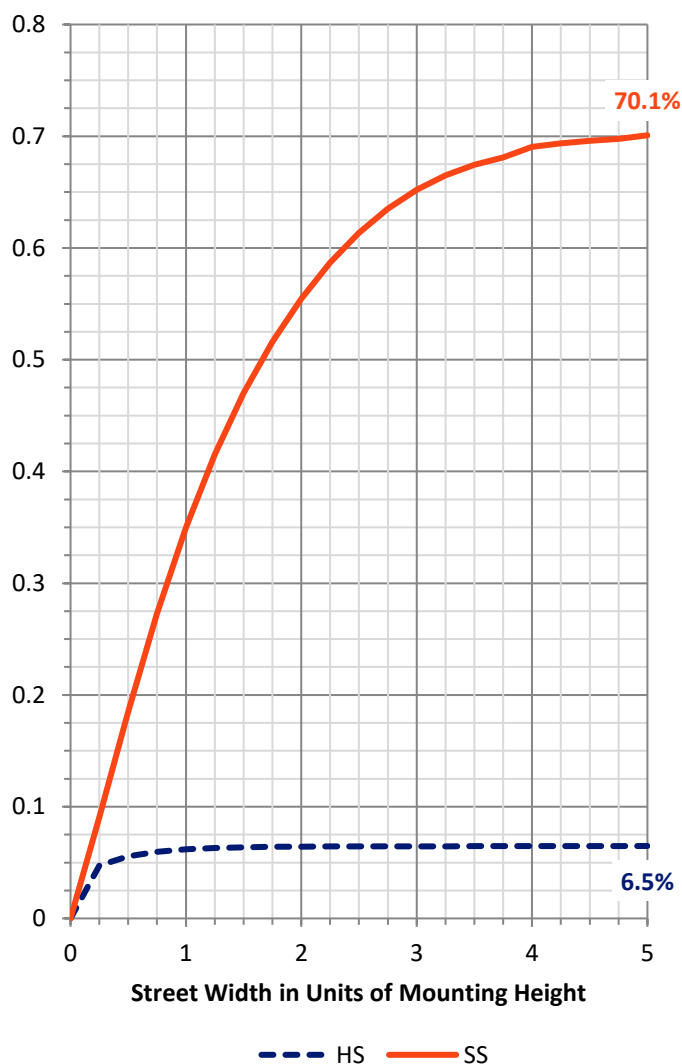
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	493.0	887.0	1380.0
	% Fixture	6.5	11.8	18.3
Street Side	Lumens	5279.0	887.0	6165.9
	% Fixture	70.0	11.8	81.7
Total	Lumens	5772.0	1773.9	7545.9
	% Fixture	76.5	23.5	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.9	1.2
10°-20°	217.6	2.9
20°-30°	348.9	4.6
30°-40°	530.8	7.0
40°-50°	827.3	11.0
50°-60°	1209.7	16.0
60°-70°	1551.7	20.6
70°-80°	948.4	12.6
80°-90°	47.6	0.6
90°-100°	8.4	0.1
100°-110°	58.7	0.8
110°-120°	169.9	2.3
120°-130°	279.4	3.7
130°-140°	344.6	4.6
140°-150°	352.5	4.7
150°-160°	297.0	3.9
160°-170°	195.5	2.6
170°-180°	67.8	0.9
0°-90°	5772.0	76.5
0°-180°	7545.9	100.0

Coefficient of Utilization



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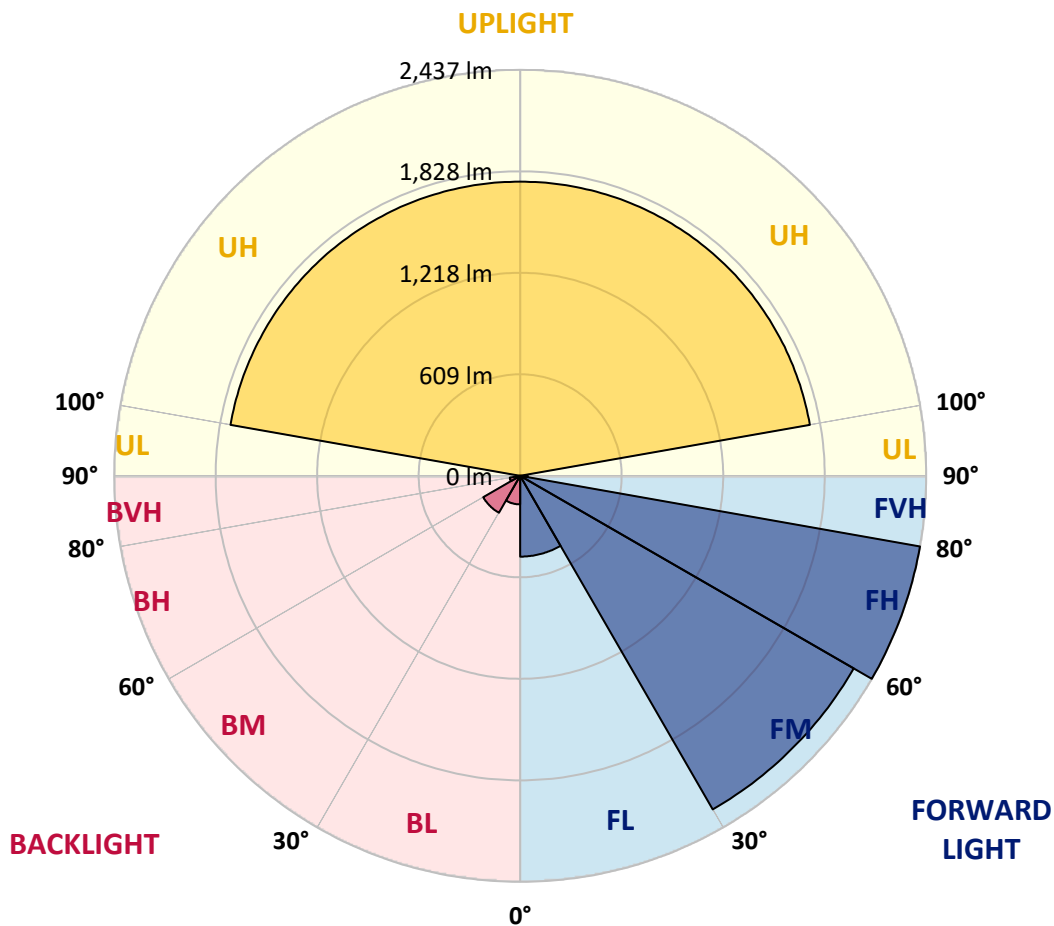
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	485.0	6.4			
FM (30°-60°)	2311.8	30.6			
FH (60°-80°)	2436.7	32.3			G2/5000
FVH (80°-90°)	45.5	0.6			G1/100
BL (0°-30°)	171.5	2.3	B1/500		
BM (30°-60°)	256.1	3.4	B1/1000		
BH (60°-80°)	63.4	0.8	B0/110		G0/110
BVH (80°-90°)	2.1	0.0			G0/10
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	23.4		U5	

BUG Rating: B1-U5-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	1064.1	1064.1	1064.1	1064.1	1064.1	1064.1	1064.1	1064.1	1064.1	1064.1	1064.1
2.5°	1127.1	1124.1	1127.1	1124.1	1118.1	1115.1	1111.1	1100.1	1090.1	1078.1	1060.1
5°	1129.1	1127.1	1127.1	1123.1	1116.1	1113.1	1109.1	1098.1	1085.1	1067.1	1040.1
7.5°	1118.1	1117.1	1115.1	1111.1	1103.1	1101.1	1098.1	1085.1	1072.1	1053.1	1020.1
10°	1100.1	1102.1	1101.1	1101.1	1098.1	1096.1	1094.1	1079.1	1065.1	1043.1	1008.1
12.5°	1083.1	1085.1	1090.1	1098.1	1101.1	1102.1	1102.1	1087.1	1070.1	1046.1	1010.1
15°	1072.1	1076.1	1090.1	1106.1	1115.1	1118.1	1121.1	1105.1	1085.1	1059.1	1021.1
17.5°	1069.1	1075.1	1102.1	1127.1	1144.1	1146.1	1146.1	1126.1	1105.1	1075.1	1034.1
20°	1079.1	1087.1	1122.1	1157.1	1178.1	1180.1	1176.1	1150.1	1125.1	1092.1	1045.1
22.5°	1109.1	1116.1	1156.1	1197.1	1217.1	1219.1	1210.1	1174.1	1147.1	1120.1	1060.1
25°	1161.1	1165.1	1208.1	1247.1	1258.1	1261.1	1246.1	1203.1	1172.1	1147.1	1081.1
27.5°	1230.1	1232.1	1271.1	1300.1	1302.1	1301.1	1285.1	1240.1	1209.1	1188.1	1113.1
30°	1302.1	1305.1	1337.1	1356.1	1348.1	1344.1	1330.1	1282.1	1254.1	1238.1	1159.1
32.5°	1369.1	1372.1	1407.1	1417.1	1399.1	1396.1	1386.1	1335.1	1311.1	1319.1	1225.1
35°	1435.1	1435.1	1475.1	1480.1	1464.1	1464.1	1464.1	1403.1	1399.1	1426.1	1317.1
37.5°	1494.1	1504.1	1546.1	1544.1	1541.1	1543.1	1549.1	1503.1	1517.1	1563.1	1438.1
40°	1544.1	1557.1	1613.1	1618.1	1631.1	1642.1	1651.1	1627.1	1660.1	1735.1	1593.1
42.5°	1589.1	1604.1	1676.1	1699.1	1735.1	1750.1	1767.1	1761.1	1834.1	1971.1	1791.1
45°	1647.1	1663.1	1737.1	1792.1	1842.1	1862.1	1900.1	1926.1	2047.2	2203.2	2005.1
47.5°	1724.1	1735.1	1803.1	1890.1	1958.1	1994.1	2053.2	2120.2	2267.2	2449.2	2196.2
50°	1829.1	1830.1	1881.1	1994.1	2095.2	2134.2	2236.2	2323.2	2507.2	2666.2	2334.2
52.5°	1945.1	1939.1	1979.1	2122.2	2250.2	2303.2	2423.2	2544.2	2729.2	2823.2	2396.2
55°	2055.2	2058.2	2083.2	2258.2	2445.2	2496.2	2648.2	2771.2	2932.2	2919.2	2430.2
57.5°	2182.2	2181.2	2213.2	2407.2	2673.2	2732.2	2891.2	2992.2	3055.2	2988.2	2436.2
60°	2302.2	2299.2	2348.2	2585.2	2916.2	3003.2	3146.2	3142.2	3178.2	3032.2	2431.2
62.5°	2409.2	2416.2	2502.2	2792.2	3188.2	3282.2	3354.3	3304.2	3314.2	3083.2	2369.2
65°	2539.2	2552.2	2691.2	3043.2	3524.3	3569.3	3597.3	3516.3	3416.3	3042.2	2181.2
67.5°	2703.2	2742.2	2938.2	3413.3	3874.3	3905.3	3906.3	3644.3	3412.3	2835.2	1834.1
70°	2768.2	2809.2	3121.2	3706.3	4169.3	4208.3	4086.3	3624.3	3143.2	2220.2	1238.1
71°	2723.2	2760.2	3116.2	3734.3	4230.3	4261.3	4070.3	3493.3	2850.2	1829.1	959.1
72.5°	2398.2	2494.2	2924.2	3558.3	4121.3	4122.3	3811.3	3184.2	2267.2	1142.1	482.0
75°	1295.1	1411.1	2143.2	2708.2	3179.2	3204.2	2932.2	2211.2	1097.1	296.0	117.0
77.5°	427.0	481.0	961.1	1406.1	1994.1	2033.2	1793.1	982.1	346.0	100.0	61.0
80°	268.0	274.0	325.0	591.0	887.1	920.1	738.1	398.0	156.0	55.0	42.0
82.5°	45.0	54.0	153.0	174.0	313.0	248.0	168.0	203.0	73.0	25.0	36.0
85°	0.0	0.0	1.0	1.0	5.0	1.0	1.0	41.0	4.0	4.0	19.0
87.5°	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	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
92.5°	4.1	4.1	5.1	6.1	6.1	6.1	6.1	7.2	7.2	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	7.2	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	9.2	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	15.1	21.5	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	31.6	40.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	53.7	64.4	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	79.3	90.0	97.2	96.2	92.1	89.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	108.0	116.6	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	139.9	146.3	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	173.7	178.0	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	207.5	209.7	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	244.3	248.6	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	279.1	283.4	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	313.5	317.1	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.1	347.8	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	379.1	380.5	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	413.6	414.3	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	445.6	447.0	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	475.8	478.7	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	504.1	508.4	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	534.2	537.0	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	562.9	563.6	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	587.5	588.2	593.3	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	606.6	610.7	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	624.0	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	643.9	642.4	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	660.5	659.8	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	670.0	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	676.8	678.2	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	688.4	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	702.9	700.7	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	708.3	706.9	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	705.8	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	706.6	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	712.4	711.0	709.9	715.0	717.1	714.0
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1064.1	1064.1	1064.1	1064.1	1064.1	1064.1	1064.1	1064.1	1064.1	1064.1	1064.1
2.5°	1052.1	1044.1	1028.1	1011.1	990.1	972.1	966.1	953.1	947.1	942.1	942.1
5°	1023.1	1009.1	975.1	940.1	906.1	870.1	837.1	806.1	791.1	770.1	780.1
7.5°	999.1	975.1	927.1	872.1	802.1	731.1	676.1	628.0	588.0	575.0	566.0
10°	982.1	952.1	882.1	798.1	696.1	595.0	510.0	431.0	385.0	357.0	357.0
12.5°	980.1	942.1	851.1	722.1	575.0	438.0	333.0	258.0	221.0	204.0	203.0
15°	987.1	941.1	823.1	653.0	464.0	304.0	208.0	175.0	166.0	164.0	164.0
17.5°	993.1	940.1	790.1	575.0	342.0	200.0	165.0	159.0	157.0	156.0	156.0
20°	999.1	935.1	752.1	487.0	242.0	163.0	154.0	151.0	150.0	149.0	149.0
22.5°	1007.1	930.1	713.1	387.0	179.0	152.0	147.0	144.0	143.0	143.0	143.0
25°	1018.1	927.1	665.0	293.0	154.0	144.0	139.0	137.0	137.0	136.0	136.0
27.5°	1039.1	930.1	613.0	210.0	144.0	136.0	133.0	131.0	131.0	130.0	130.0
30°	1068.1	939.1	548.0	164.0	136.0	128.0	125.0	124.0	123.0	123.0	123.0
32.5°	1109.1	953.1	477.0	140.0	126.0	120.0	117.0	116.0	116.0	116.0	115.0
35°	1172.1	982.1	390.0	128.0	117.0	111.0	108.0	108.0	108.0	107.0	108.0
37.5°	1268.1	1029.1	302.0	118.0	107.0	102.0	100.0	99.0	99.0	99.0	99.0
40°	1389.1	1105.1	220.0	109.0	98.0	93.0	91.0	90.0	89.0	89.0	89.0
42.5°	1545.1	1189.1	160.0	99.0	90.0	85.0	83.0	81.0	79.0	78.0	78.0
45°	1707.1	1289.1	125.0	91.0	82.0	78.0	76.0	73.0	70.0	67.0	67.0
47.5°	1864.1	1366.1	107.0	82.0	75.0	71.0	69.0	65.0	60.0	57.0	57.0
50°	1963.1	1390.1	96.0	74.0	68.0	65.0	62.0	57.0	50.0	47.0	47.0
52.5°	1994.1	1346.1	86.0	67.0	62.0	59.0	55.0	48.0	41.0	37.0	37.0
55°	2006.2	1261.1	76.0	62.0	56.0	52.0	47.0	40.0	33.0	29.0	29.0
57.5°	1991.1	1141.1	68.0	56.0	50.0	46.0	40.0	32.0	25.0	22.0	22.0
60°	1940.1	967.1	61.0	50.0	44.0	39.0	33.0	25.0	19.0	15.0	16.0
62.5°	1802.1	748.1	53.0	42.0	38.0	33.0	26.0	19.0	12.0	10.0	10.0
65°	1582.1	518.0	45.0	35.0	32.0	27.0	20.0	13.0	7.0	6.0	6.0
67.5°	1285.1	335.0	35.0	29.0	27.0	22.0	15.0	8.0	4.0	4.0	3.0
70°	807.1	166.0	28.0	22.0	22.0	17.0	11.0	5.0	3.0	3.0	3.0
71°	571.0	113.0	25.0	20.0	20.0	16.0	10.0	4.0	3.0	3.0	3.0
72.5°	258.0	71.0	21.0	18.0	17.0	13.0	9.0	4.0	4.0	4.0	4.0
75°	81.0	39.0	15.0	14.0	14.0	11.0	8.0	5.0	5.0	5.0	5.0
77.5°	54.0	30.0	10.0	9.0	11.0	11.0	8.0	6.0	6.0	6.0	6.0
80°	44.0	16.0	6.0	6.0	8.0	10.0	8.0	6.0	7.0	6.0	6.0
82.5°	43.0	8.0	2.0	3.0	5.0	6.0	6.0	5.0	6.0	6.0	6.0
85°	18.0	2.0	1.0	2.0	2.0	3.0	3.0	4.0	5.0	5.0	5.0
87.5°	0.0	0.0	0.0	0.0	1.0	1.0	2.0	2.0	3.0	4.0	4.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	6.1	6.1	6.1	7.2	7.2	6.1	6.1	6.1	5.1	4.1	4.1
95°	7.2	7.2	7.2	8.2	7.2	7.2	7.2	7.2	6.1	5.1	5.1
97.5°	8.2	8.2	9.2	10.2	12.3	9.2	9.2	8.2	8.2	7.2	7.2
100°	19.4	19.4	23.5	26.6	29.7	21.5	12.3	10.2	9.2	8.2	8.2
102.5°	38.9	39.9	43.0	48.1	51.1	40.9	27.6	18.4	13.3	11.3	11.3
105°	62.4	62.4	66.5	71.6	73.7	64.4	49.1	36.8	27.6	22.5	21.5
107.5°	88.0	89.0	92.1	96.2	97.2	90.0	74.7	59.3	50.1	43.0	41.9



REPORT NUMBER:

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	119.7	118.7	121.7	123.8	122.8	116.6	104.3	89.0	75.7	69.6	67.5
112.5°	150.4	150.4	152.4	153.4	151.4	146.3	137.1	123.8	108.4	101.3	101.3
115°	182.1	181.1	183.1	186.2	183.1	178.0	171.9	162.6	150.4	142.2	143.2
117.5°	213.8	212.8	214.8	219.9	215.8	209.7	206.6	201.5	193.3	188.2	188.2
120°	248.6	248.6	250.6	255.7	251.6	248.6	242.4	238.3	231.2	228.1	230.2
122.5°	283.4	282.3	284.4	289.5	285.4	283.4	277.2	273.1	267.0	266.0	269.0
125°	317.1	317.1	317.1	322.2	320.2	317.1	312.0	305.9	302.8	300.7	304.8
127.5°	355.0	352.9	353.9	353.9	352.9	347.8	346.8	340.6	336.6	336.6	337.6
130°	388.7	387.7	389.7	389.7	385.7	380.5	378.5	374.4	370.3	369.3	371.3
132.5°	424.5	423.5	423.5	425.5	420.4	414.3	413.3	410.2	402.0	403.0	405.1
135°	461.4	460.3	457.3	458.3	453.2	447.0	445.0	441.9	435.8	435.8	438.8
137.5°	493.1	492.0	486.9	485.9	483.9	478.7	474.6	470.6	469.5	467.5	470.6
140°	522.7	520.7	515.6	513.5	511.5	508.4	502.3	500.2	498.2	496.1	499.2
142.5°	548.3	546.3	545.2	545.2	539.1	537.0	533.0	529.9	528.9	526.8	529.9
145°	572.9	570.8	573.9	574.9	568.8	563.6	562.6	559.6	556.5	558.5	562.6
147.5°	598.4	596.4	599.4	598.4	593.3	588.2	587.2	587.2	584.1	585.1	588.2
150°	624.0	619.9	616.8	613.8	610.7	606.6	606.6	606.6	606.6	605.6	608.7
152.5°	642.4	637.3	632.2	628.1	625.0	624.0	624.0	623.0	622.0	622.0	625.0
155°	655.7	652.6	650.6	645.5	640.4	642.4	644.5	641.4	639.3	639.3	643.4
157.5°	670.0	664.9	664.9	662.9	658.8	659.8	660.8	658.8	657.8	657.8	660.8
160°	681.3	675.1	676.2	679.2	673.1	670.0	670.0	671.1	674.1	675.1	678.2
162.5°	689.5	683.3	685.4	686.4	682.3	678.2	676.2	680.3	684.4	684.4	688.4
165°	697.7	693.6	695.6	692.5	687.4	688.4	688.4	691.5	691.5	693.6	696.6
167.5°	709.9	703.8	703.8	699.7	693.6	700.7	703.8	701.7	699.7	702.8	705.8
170°	717.1	712.0	709.9	704.8	701.7	706.9	708.9	707.9	707.9	711.0	714.0
172.5°	717.1	712.0	709.9	707.9	704.8	705.8	705.8	708.9	711.0	713.0	715.0
175°	715.0	709.9	712.0	711.0	705.8	705.8	706.9	711.0	713.0	714.0	716.1
177.5°	718.1	714.0	717.1	715.0	709.9	711.0	713.0	715.0	716.1	721.2	723.2
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1

(END OF REPORT)