

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-SA1D-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 P401494 AND P226775  
Test Lab: INNOVATION CENTER  
Issue Date: 3/30/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1D-740-U-SL4-HSS-ULG  
Description: ENTRI LED LUMINAIRE WITH UPLIGHT  
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL LIGHT  
ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

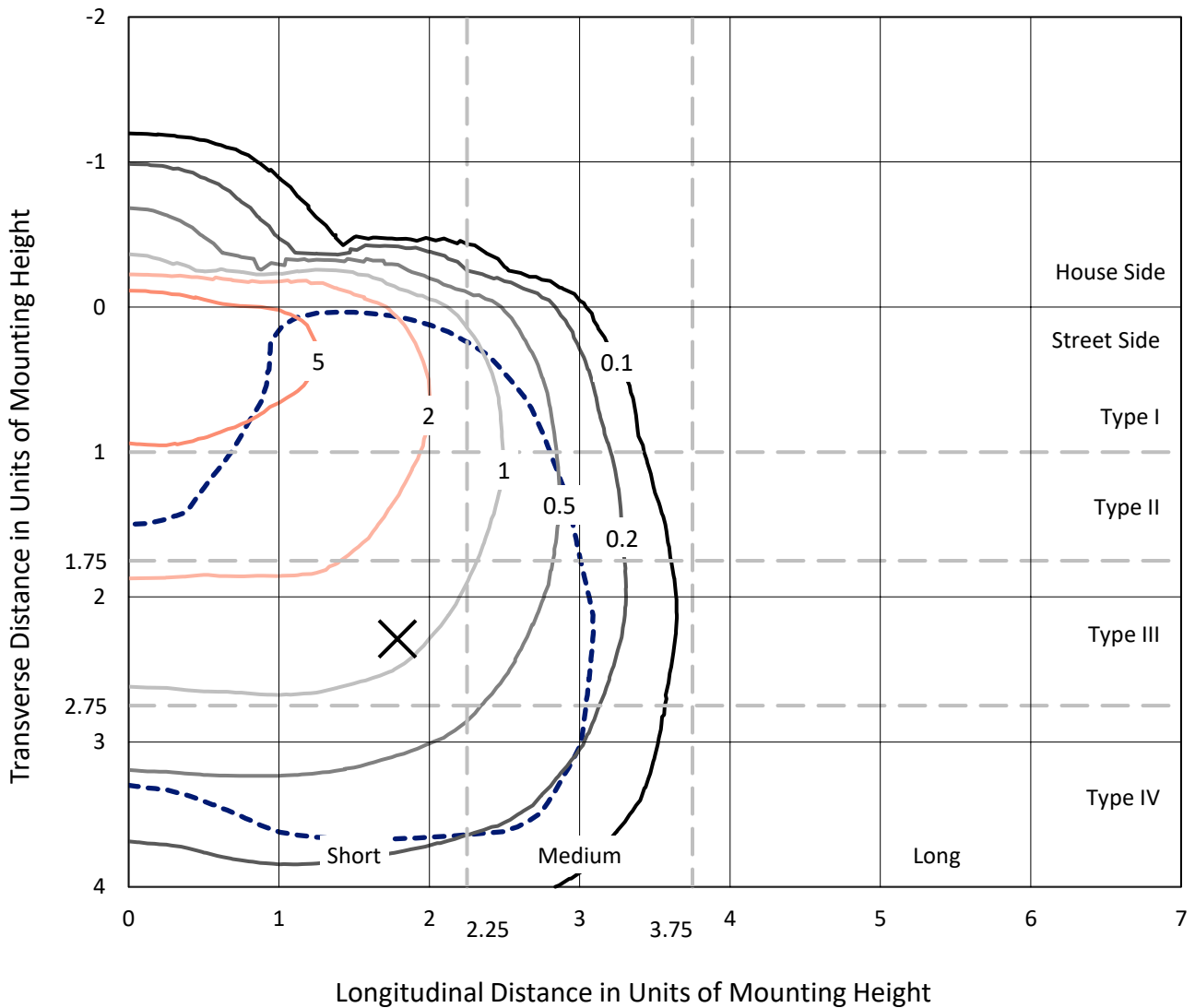
Lumens per Lamp: N/A  
Luminaire Lumens: 6406.9 lumens  
Efficiency: N/A  
Efficacy: 107.1 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U5 - G2  
  
Input Watts (W): 59.8  
Input Voltage (V): NR  
Input Current (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

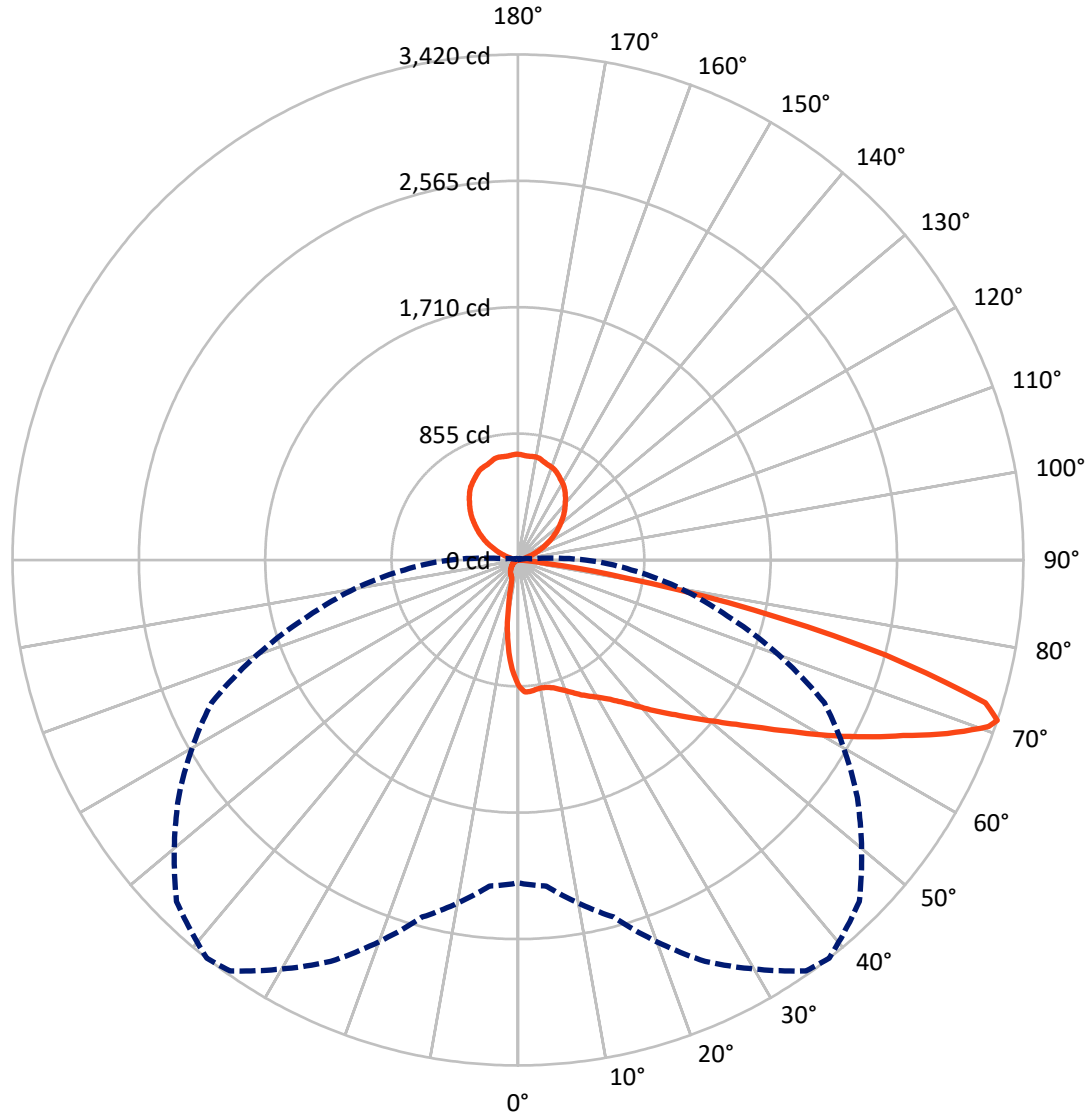
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.8 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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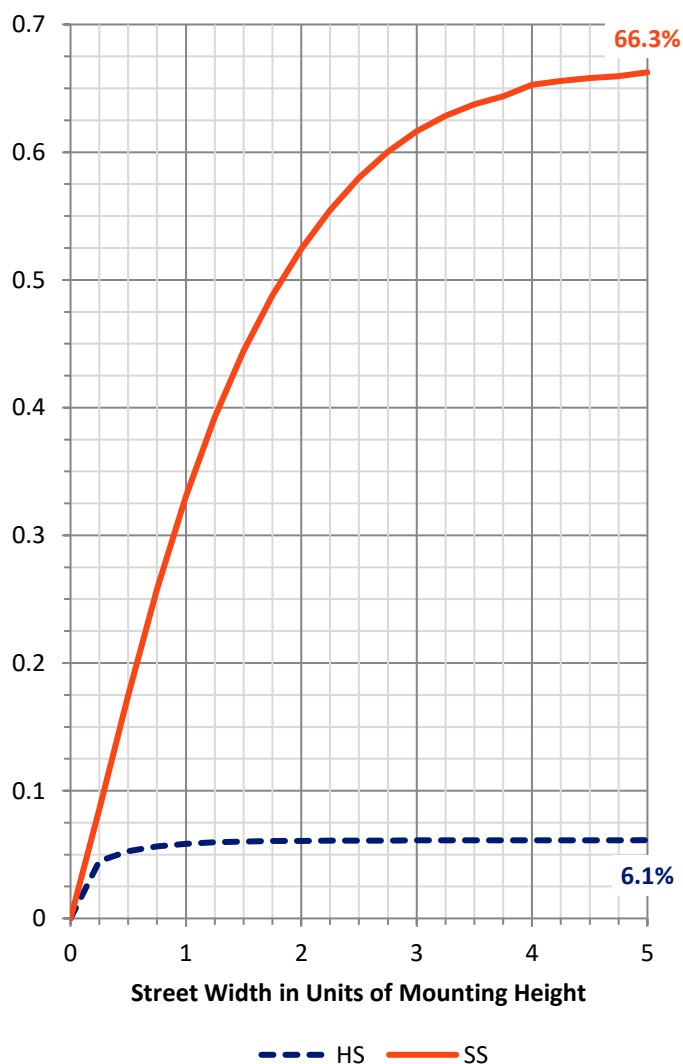
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	395.7	887.0	1282.7
	% Fixture	6.2	13.8	20.0
<b>Street Side</b>	Lumens	4237.2	887.0	5124.2
	% Fixture	66.1	13.8	80.0
<b>Total</b>	Lumens	4633.0	1773.9	6406.9
	% Fixture	72.3	27.7	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.1	1.1
10°-20°	174.7	2.7
20°-30°	280.1	4.4
30°-40°	426.1	6.7
40°-50°	664.0	10.4
50°-60°	971.0	15.2
60°-70°	1245.5	19.4
70°-80°	761.3	11.9
80°-90°	38.2	0.6
90°-100°	8.4	0.1
100°-110°	58.7	0.9
110°-120°	169.9	2.7
120°-130°	279.4	4.4
130°-140°	344.6	5.4
140°-150°	352.5	5.5
150°-160°	297.0	4.6
160°-170°	195.5	3.1
170°-180°	67.8	1.1
0°-90°	4633.0	72.3
0°-180°	6406.9	100.0

**Coefficient of Utilization**

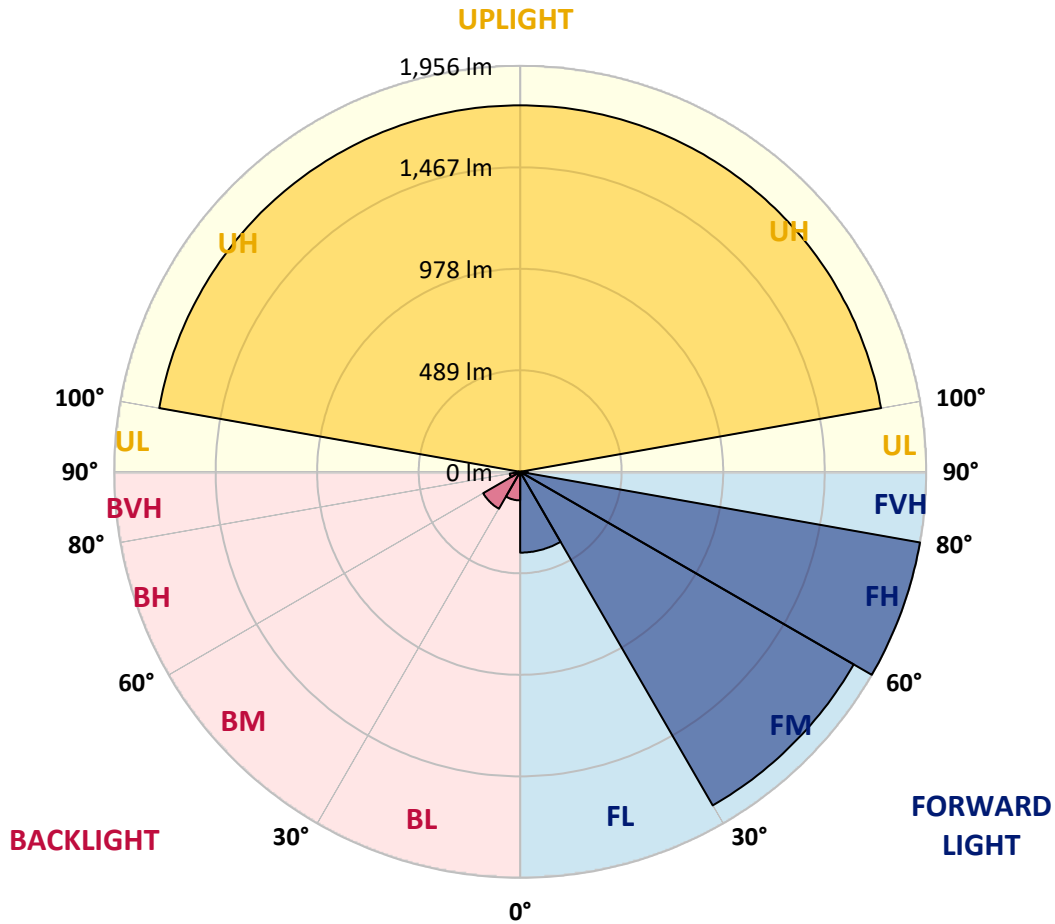


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	389.3	6.1			
FM (30°-60°)	1855.6	29.0			
FH (60°-80°)	1955.9	30.5			G2/5000
FVH (80°-90°)	36.5	0.6			G1/100
BL (0°-30°)	137.6	2.1	B1/500		
BM (30°-60°)	205.6	3.2	B0/220		
BH (60°-80°)	50.9	0.8	B0/110		G0/110
BVH (80°-90°)	1.7	0.0			G0/10
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	27.6		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°	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1
2.5°	904.7	902.3	904.7	902.3	897.5	895.0	891.8	883.0	875.0	865.3	850.9
5°	906.3	904.7	904.7	901.5	895.8	893.4	890.2	881.4	871.0	856.5	834.8
7.5°	897.5	896.6	895.0	891.8	885.4	883.8	881.4	871.0	860.5	845.3	818.8
10°	883.0	884.6	883.8	883.8	881.4	879.8	878.2	866.1	854.9	837.2	809.1
12.5°	869.4	871.0	875.0	881.4	883.8	884.6	884.6	872.6	858.9	839.7	810.8
15°	860.5	863.7	875.0	887.8	895.0	897.5	899.9	887.0	871.0	850.1	819.6
17.5°	858.1	862.9	884.6	904.7	918.3	919.9	919.9	903.9	887.0	862.9	830.0
20°	866.1	872.6	900.7	928.8	945.6	947.2	944.0	923.1	903.1	876.6	838.9
22.5°	890.2	895.8	928.0	960.9	976.9	978.5	971.3	942.4	920.7	899.1	850.9
25°	932.0	935.2	969.7	1001.0	1009.8	1012.2	1000.2	965.7	940.8	920.7	867.7
27.5°	987.4	989.0	1020.3	1043.5	1045.2	1044.3	1031.5	995.4	970.5	953.6	893.4
30°	1045.2	1047.6	1073.2	1088.5	1082.1	1078.9	1067.6	1029.1	1006.6	993.8	930.4
32.5°	1098.9	1101.3	1129.4	1137.5	1123.0	1120.6	1112.6	1071.6	1052.4	1058.8	983.3
35°	1151.9	1151.9	1184.0	1188.0	1175.2	1175.2	1175.2	1126.2	1123.0	1144.7	1057.2
37.5°	1199.3	1207.3	1241.0	1239.4	1237.0	1238.6	1243.4	1206.5	1217.7	1254.7	1154.3
40°	1239.4	1249.8	1294.8	1298.8	1309.2	1318.1	1325.3	1306.0	1332.5	1392.7	1278.7
42.5°	1275.5	1287.6	1345.4	1363.8	1392.7	1404.8	1418.4	1413.6	1472.2	1582.2	1437.7
45°	1322.1	1334.9	1394.3	1438.5	1478.6	1494.7	1525.2	1546.1	1643.2	1768.4	1609.5
47.5°	1383.9	1392.7	1447.3	1517.2	1571.7	1600.6	1648.0	1701.8	1819.8	1965.9	1762.8
50°	1468.2	1469.0	1509.9	1600.6	1681.7	1713.0	1794.9	1864.7	2012.4	2140.1	1873.6
52.5°	1561.3	1556.5	1588.6	1703.4	1806.1	1848.7	1945.0	2042.1	2190.6	2266.1	1923.3
55°	1649.6	1652.0	1672.1	1812.6	1962.7	2003.6	2125.6	2224.4	2353.6	2343.2	1950.6
57.5°	1751.6	1750.7	1776.4	1932.2	2145.7	2193.1	2320.7	2401.8	2452.3	2398.6	1955.4
60°	1847.9	1845.5	1884.8	2075.1	2340.8	2410.6	2525.4	2522.2	2551.1	2433.9	1951.4
62.5°	1933.8	1939.4	2008.4	2241.2	2559.1	2634.6	2692.4	2652.2	2660.2	2474.8	1901.7
65°	2038.1	2048.6	2160.1	2442.7	2828.8	2864.9	2887.4	2822.4	2742.1	2441.9	1750.7
67.5°	2169.8	2201.1	2358.4	2739.7	3109.8	3134.7	3135.5	2925.1	2738.9	2275.7	1472.2
70°	2222.0	2254.9	2505.3	2974.9	3346.6	3377.9	3279.9	2909.1	2523.0	1782.1	993.8
71°	2185.8	2215.5	2501.3	2997.4	3395.5	3420.4	3267.1	2803.9	2287.8	1468.2	769.8
72.5°	1924.9	2002.0	2347.2	2856.1	3308.0	3308.8	3059.2	2555.9	1819.8	916.7	386.9
75°	1039.5	1132.6	1720.2	2173.8	2551.9	2571.9	2353.6	1774.8	880.6	237.6	93.9
77.5°	342.8	386.1	771.4	1128.6	1600.6	1631.9	1439.3	788.3	277.7	80.3	49.0
80°	215.1	219.9	260.9	474.4	712.0	738.5	592.4	319.5	125.2	44.2	33.7
82.5°	36.1	43.3	122.8	139.7	251.3	199.1	134.9	163.0	58.6	20.1	28.9
85°	0.0	0.0	0.8	0.8	4.0	0.8	0.8	32.9	3.2	3.2	15.3
87.5°	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	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°	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1
2.5°	844.5	838.0	825.2	811.6	794.7	780.3	775.4	765.0	760.2	756.2	756.2
5°	821.2	810.0	782.7	754.6	727.3	698.4	671.9	647.0	635.0	618.1	626.1
7.5°	801.9	782.7	744.1	700.0	643.8	586.8	542.6	504.1	472.0	461.6	454.3
10°	788.3	764.2	708.0	640.6	558.7	477.6	409.4	346.0	309.1	286.6	286.6
12.5°	786.7	756.2	683.1	579.6	461.6	351.6	267.3	207.1	177.4	163.8	163.0
15°	792.3	755.4	660.6	524.2	372.5	244.0	167.0	140.5	133.3	131.6	131.6
17.5°	797.1	754.6	634.2	461.6	274.5	160.5	132.5	127.6	126.0	125.2	125.2
20°	801.9	750.6	603.7	390.9	194.3	130.8	123.6	121.2	120.4	119.6	119.6
22.5°	808.3	746.5	572.3	310.7	143.7	122.0	118.0	115.6	114.8	114.8	114.8
25°	817.2	744.1	533.8	235.2	123.6	115.6	111.6	110.0	110.0	109.2	109.2
27.5°	834.0	746.5	492.1	168.6	115.6	109.2	106.8	105.2	105.2	104.4	104.4
30°	857.3	753.8	439.9	131.6	109.2	102.7	100.3	99.5	98.7	98.7	98.7
32.5°	890.2	765.0	382.9	112.4	101.1	96.3	93.9	93.1	93.1	93.1	92.3
35°	940.8	788.3	313.1	102.7	93.9	89.1	86.7	86.7	86.7	85.9	86.7
37.5°	1017.9	826.0	242.4	94.7	85.9	81.9	80.3	79.5	79.5	79.5	79.5
40°	1115.0	887.0	176.6	87.5	78.7	74.7	73.0	72.2	71.4	71.4	71.4
42.5°	1240.2	954.4	128.4	79.5	72.2	68.2	66.6	65.0	63.4	62.6	62.6
45°	1370.3	1034.7	100.3	73.0	65.8	62.6	61.0	58.6	56.2	53.8	53.8
47.5°	1496.3	1096.5	85.9	65.8	60.2	57.0	55.4	52.2	48.2	45.8	45.8
50°	1575.8	1115.8	77.1	59.4	54.6	52.2	49.8	45.8	40.1	37.7	37.7
52.5°	1600.6	1080.5	69.0	53.8	49.8	47.4	44.2	38.5	32.9	29.7	29.7
55°	1610.3	1012.2	61.0	49.8	45.0	41.7	37.7	32.1	26.5	23.3	23.3
57.5°	1598.2	915.9	54.6	45.0	40.1	36.9	32.1	25.7	20.1	17.7	17.7
60°	1557.3	776.2	49.0	40.1	35.3	31.3	26.5	20.1	15.3	12.0	12.8
62.5°	1446.5	600.4	42.5	33.7	30.5	26.5	20.9	15.3	9.6	8.0	8.0
65°	1269.9	415.8	36.1	28.1	25.7	21.7	16.1	10.4	5.6	4.8	4.8
67.5°	1031.5	268.9	28.1	23.3	21.7	17.7	12.0	6.4	3.2	3.2	2.4
70°	647.8	133.3	22.5	17.7	17.7	13.6	8.8	4.0	2.4	2.4	2.4
71°	458.4	90.7	20.1	16.1	16.1	12.8	8.0	3.2	2.4	2.4	2.4
72.5°	207.1	57.0	16.9	14.4	13.6	10.4	7.2	3.2	3.2	3.2	3.2
75°	65.0	31.3	12.0	11.2	11.2	8.8	6.4	4.0	4.0	4.0	4.0
77.5°	43.3	24.1	8.0	7.2	8.8	8.8	6.4	4.8	4.8	4.8	4.8
80°	35.3	12.8	4.8	4.8	6.4	8.0	6.4	4.8	5.6	4.8	4.8
82.5°	34.5	6.4	1.6	2.4	4.0	4.8	4.8	4.0	4.8	4.8	4.8
85°	14.4	1.6	0.8	1.6	1.6	2.4	2.4	3.2	4.0	4.0	4.0
87.5°	0.0	0.0	0.0	0.0	0.8	0.8	1.6	1.6	2.4	3.2	3.2
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)