

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-SA1A-740-U-SL4-ULG**

Issue Date: 3/30/2022

**Test Information**

Test Method: LM-79-08  
Report Number: REPORT IS A COMBINATION OF REPORTS P400956 AND P226775  
Test Lab: INNOVATION CENTER  
Issue Date: 3/30/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1A-740-U-SL4-ULG  
Description: ENTRI LED LUMINAIRE WITH UPLIGHT  
(1) 70 CRI, 4000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL LIGHT  
ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

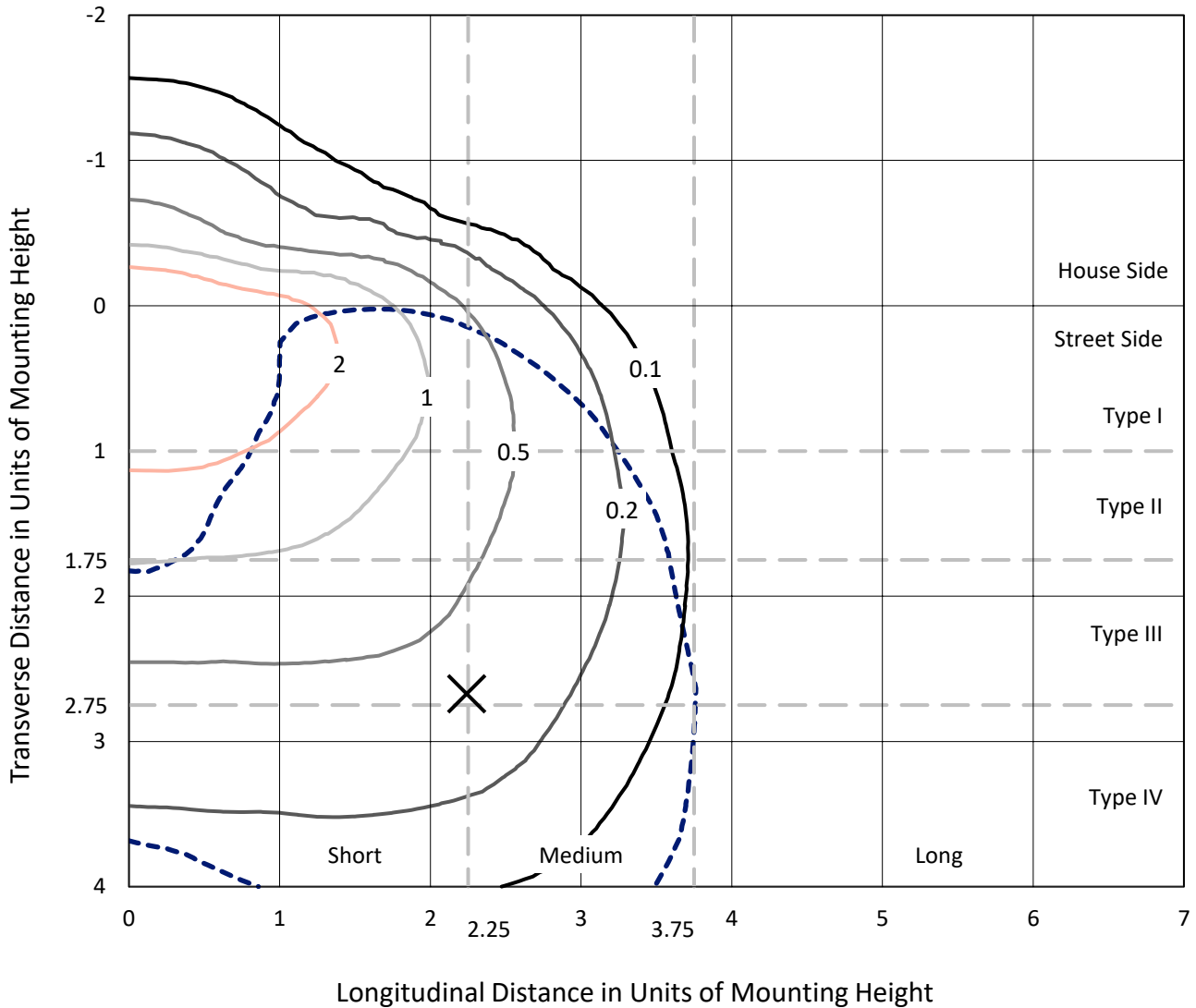
Lumens per Lamp: N/A  
Luminaire Lumens: 4365.9 lumens  
Efficiency: N/A  
Efficacy: 118.6 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U5 - G1  
  
Input Watts (W): 36.8  
Input Voltage (V): NR  
Input Current (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

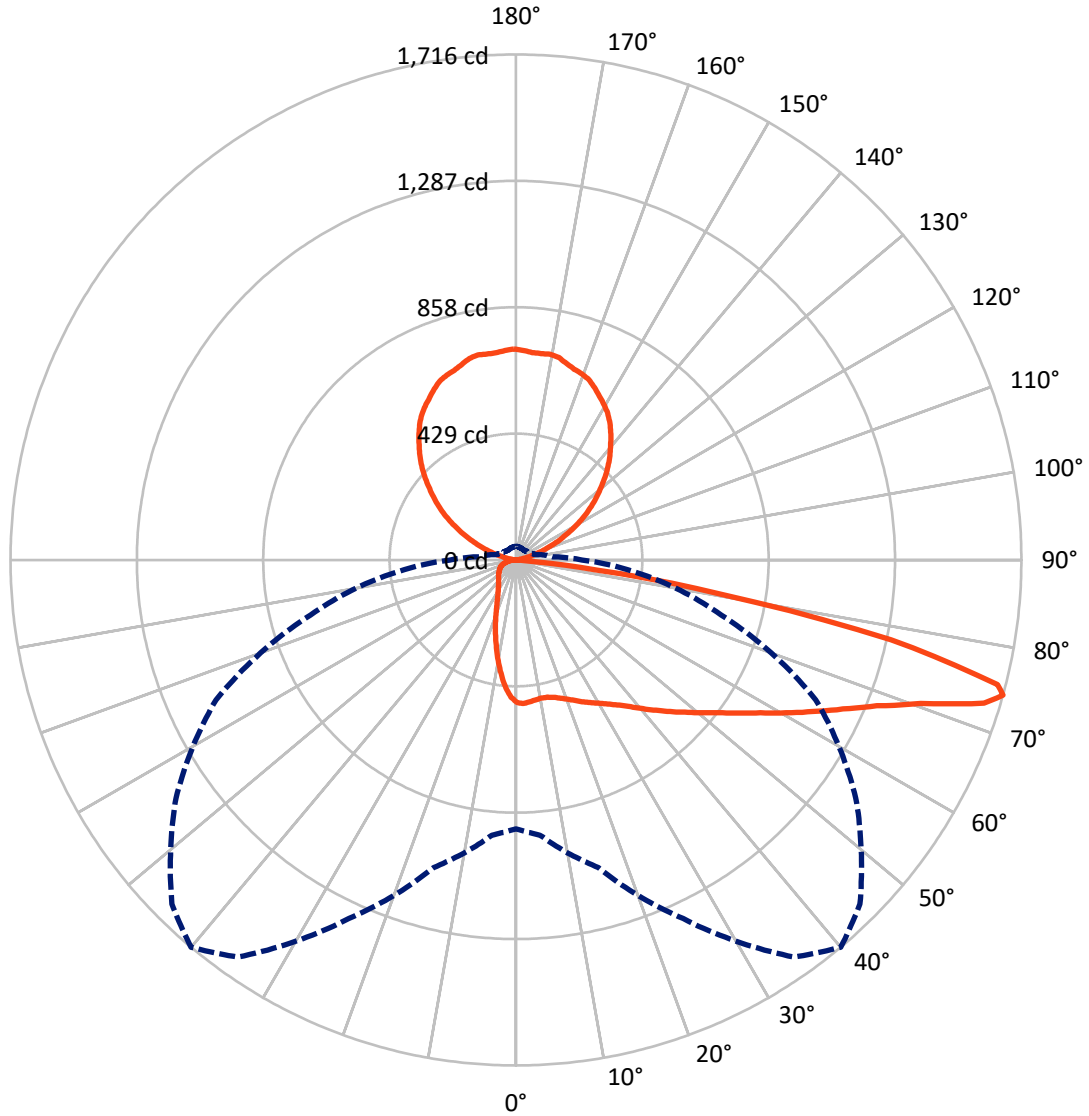
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.8 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral    - - - Horizontal Cone Through 74-Deg Vertical

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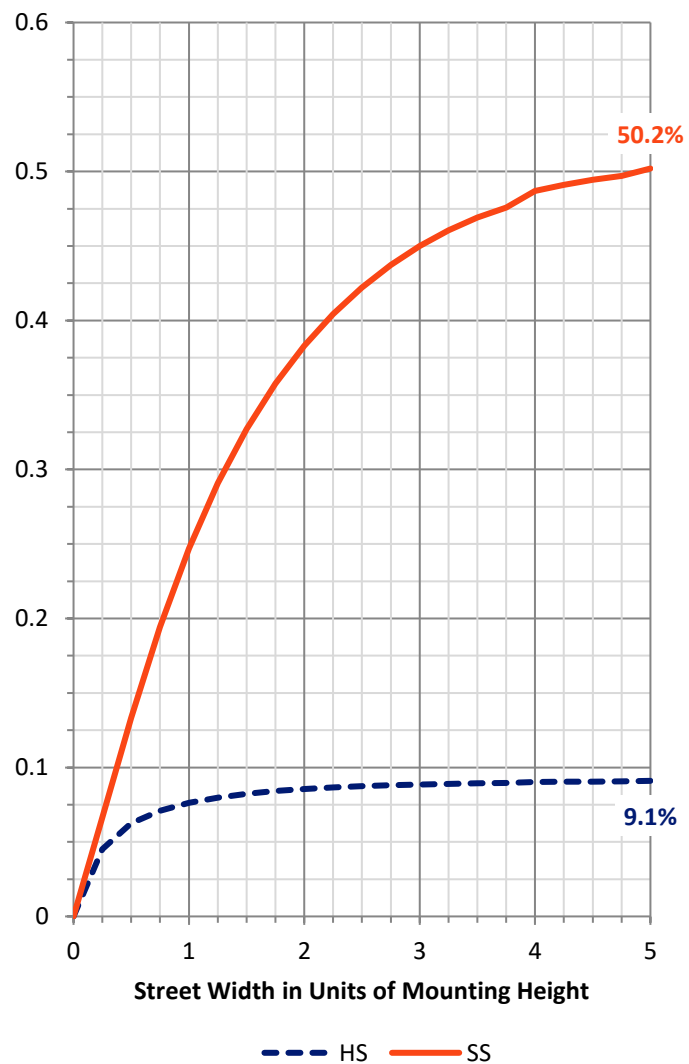
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	404.1	887.0	1291.1
	% Fixture	9.3	20.3	29.6
<b>Street Side</b>	Lumens	2187.9	887.0	3074.8
	% Fixture	50.1	20.3	70.4
<b>Total</b>	Lumens	2592.0	1773.9	4365.9
	% Fixture	59.4	40.6	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.7	1.0
10°-20°	110.0	2.5
20°-30°	168.7	3.9
30°-40°	243.7	5.6
40°-50°	350.5	8.0
50°-60°	484.0	11.1
60°-70°	610.2	14.0
70°-80°	529.2	12.1
80°-90°	53.0	1.2
90°-100°	8.4	0.2
100°-110°	58.7	1.3
110°-120°	169.9	3.9
120°-130°	279.4	6.4
130°-140°	344.6	7.9
140°-150°	352.5	8.1
150°-160°	297.0	6.8
160°-170°	195.5	4.5
170°-180°	67.8	1.6
0°-90°	2592.0	59.4
0°-180°	4365.9	100.0

**Coefficient of Utilization**



REPORT NUMBER:

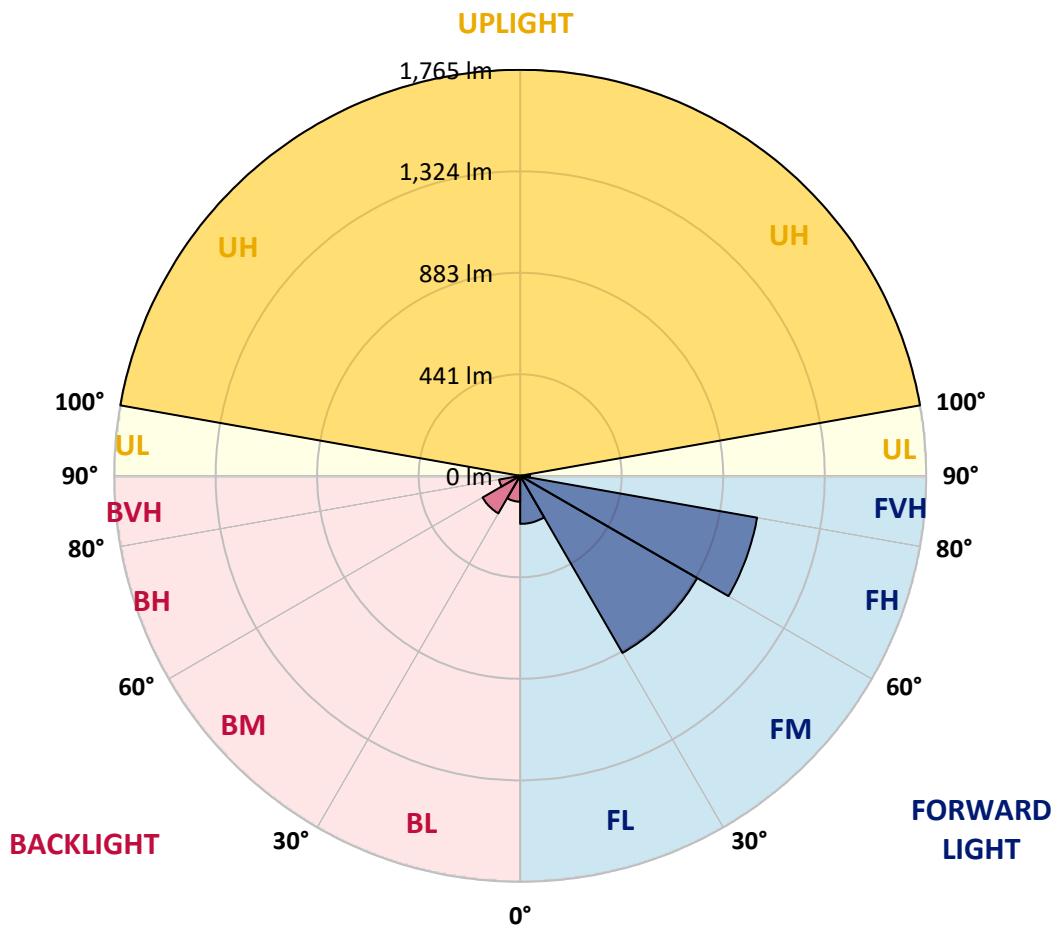
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	209.0	4.8			
FM (30°-60°)	889.5	20.4			
FH (60°-80°)	1046.1	24.0			G1/1800
FVH (80°-90°)	43.3	1.0			G1/100
BL (0°-30°)	112.5	2.6	B1/500		
BM (30°-60°)	188.7	4.3	B0/220		
BH (60°-80°)	93.3	2.1	B0/110		G0/110
BVH (80°-90°)	9.7	0.2			G0/10
UL (90°-100°)	8.4	0.2		U1/10	
UH (100°-180°)	1765.5	40.4		U5	

**BUG Rating: B1-U5-G1**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	483.8	483.8	483.8	483.8	483.8	483.8	483.8	483.8	483.8	483.8	483.8
2.5°	490.0	489.7	490.8	490.0	488.9	488.1	487.7	485.4	484.6	482.3	479.2
5°	488.1	488.1	488.1	487.3	485.0	484.2	483.4	479.9	477.6	473.7	467.9
7.5°	481.5	482.7	482.3	481.9	479.9	479.2	478.0	473.7	470.6	464.8	457.4
10°	475.3	475.3	475.7	477.2	476.4	476.8	476.4	471.8	467.5	460.1	450.8
12.5°	466.3	467.9	470.2	474.5	476.4	478.0	478.0	474.5	469.8	460.9	450.0
15°	460.9	462.8	468.7	476.4	481.1	483.8	484.6	480.3	474.5	465.6	453.5
17.5°	458.6	460.9	471.8	482.7	490.8	493.2	493.5	488.9	482.7	471.8	457.8
20°	460.9	463.6	478.0	492.8	502.5	504.4	505.2	498.6	490.8	480.3	462.1
22.5°	469.8	473.7	489.7	505.6	515.7	518.4	517.6	508.3	500.5	489.3	467.5
25°	489.3	491.6	506.0	523.1	530.9	534.0	532.0	521.5	511.4	500.2	475.3
27.5°	511.8	514.9	530.1	542.9	548.0	548.7	546.8	535.9	524.6	515.3	487.3
30°	539.0	541.7	554.2	563.9	564.3	564.7	563.5	551.1	541.7	534.4	504.8
32.5°	567.8	568.2	581.0	585.6	582.5	583.7	582.5	568.9	562.3	560.0	527.7
35°	594.2	594.6	607.8	609.4	604.3	604.7	607.0	591.1	591.1	596.5	561.9
37.5°	619.5	620.6	632.3	630.7	628.8	632.3	635.4	621.8	629.6	645.1	603.5
40°	638.5	641.2	656.8	656.0	660.3	663.8	666.5	659.5	671.9	702.2	654.8
42.5°	650.9	656.4	678.5	684.0	691.4	697.6	702.2	701.8	723.6	765.6	709.2
45°	663.8	669.2	698.7	711.9	724.4	734.1	743.0	747.7	782.3	832.4	772.6
47.5°	679.3	684.0	717.0	743.0	759.0	772.2	788.1	798.2	842.1	900.4	831.3
50°	703.0	706.1	735.7	776.1	796.3	814.5	834.4	855.0	906.6	970.0	882.6
52.5°	733.7	735.7	757.4	809.5	841.7	861.2	890.7	917.9	972.3	1032.9	924.5
55°	768.7	767.1	783.8	849.5	887.2	916.4	952.9	980.5	1041.5	1087.7	957.9
57.5°	803.7	802.5	815.7	888.0	944.7	978.9	1016.6	1045.8	1104.8	1139.0	982.0
60°	837.1	832.8	851.5	933.1	1014.3	1053.5	1087.4	1114.2	1164.7	1176.0	994.9
62.5°	866.6	866.6	893.8	988.6	1097.5	1132.8	1159.6	1177.5	1221.8	1203.2	989.8
65°	893.8	897.3	936.2	1050.8	1183.7	1219.9	1243.2	1250.2	1278.6	1204.3	947.1
67.5°	924.5	930.0	984.8	1123.5	1283.2	1321.7	1341.9	1339.6	1319.0	1186.5	855.3
70°	954.4	963.4	1045.0	1217.2	1406.0	1458.1	1480.2	1434.4	1340.0	1087.4	710.4
72.5°	976.2	991.4	1094.4	1310.8	1582.1	1662.1	1653.2	1460.4	1241.6	896.2	537.5
74°	912.5	937.7	1080.7	1343.1	1645.4	1715.8	1651.6	1408.7	1123.1	721.7	380.8
75°	838.3	862.7	1012.0	1330.2	1657.5	1688.9	1571.6	1317.8	1007.3	559.2	248.7
77.5°	620.6	639.7	777.2	1048.9	1310.8	1301.5	1170.1	893.0	496.3	168.7	104.9
80°	274.0	288.4	383.6	527.7	710.0	707.3	658.7	410.4	160.1	88.2	64.1
82.5°	82.8	82.4	110.4	153.9	269.7	274.8	233.6	141.5	76.6	36.5	31.1
85°	0.4	0.4	0.4	0.4	1.2	10.1	8.5	27.2	14.0	6.6	11.3
87.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	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	16.9	21.5	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	34.2	40.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	56.8	64.4	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	82.4	90.0	97.2	96.2	92.1	89.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	110.4	116.6	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	141.7	146.3	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	175.0	178.0	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	208.2	209.7	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	245.5	248.6	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	280.3	283.4	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	314.6	317.1	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.3	347.8	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	379.5	380.5	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	413.8	414.3	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	446.0	447.0	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	476.6	478.7	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	505.4	508.4	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	535.0	537.0	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.1	563.6	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	587.7	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	643.4	642.4	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	660.3	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	677.2	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	702.2	700.7	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	707.9	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	706.3	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	712.0	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°	483.8	483.8	483.8	483.8	483.8	483.8	483.8	483.8	483.8	483.8	483.8
2.5°	477.2	476.8	475.7	472.9	471.0	465.2	467.1	463.2	462.8	462.1	461.7
5°	465.2	463.6	459.0	453.5	447.3	437.6	434.5	428.6	425.1	424.0	424.8
7.5°	452.7	449.2	440.3	428.6	416.2	401.8	391.3	383.2	377.3	375.4	372.7
10°	445.0	439.1	424.0	404.6	384.3	364.1	346.6	334.6	325.7	318.7	318.7
12.5°	442.2	434.5	412.3	384.0	354.8	326.1	300.8	284.9	269.7	262.3	261.2
15°	443.8	432.9	402.6	365.3	326.4	289.1	258.0	235.1	220.7	211.8	214.9
17.5°	445.4	431.8	392.5	345.5	298.8	255.7	219.6	193.5	176.0	171.4	169.4
20°	447.3	429.4	379.7	324.1	270.5	223.5	185.4	158.9	145.7	139.9	139.9
22.5°	450.0	426.3	366.5	300.4	241.3	192.0	156.6	136.8	126.3	122.8	122.8
25°	453.9	424.4	352.9	276.7	213.7	167.1	137.6	122.0	116.6	114.3	113.9
27.5°	461.3	424.8	339.7	252.6	186.5	146.1	124.0	113.9	109.6	108.4	108.0
30°	472.6	428.6	325.7	227.0	162.4	130.2	114.6	107.6	104.9	104.1	104.1
32.5°	488.1	435.6	314.0	204.0	144.6	117.4	106.9	102.2	100.7	99.9	100.3
35°	512.2	447.7	300.0	183.0	127.9	108.4	100.7	97.2	96.0	96.0	96.4
37.5°	543.7	466.3	286.4	163.6	116.6	100.7	94.8	92.9	91.7	92.5	92.9
40°	583.3	488.5	273.6	146.1	107.3	94.4	89.8	88.2	87.8	88.6	89.4
42.5°	626.1	515.3	261.9	131.7	99.9	89.4	85.5	84.7	84.3	84.7	85.9
45°	675.8	546.0	252.2	120.9	94.4	85.1	81.6	80.8	80.4	81.2	82.0
47.5°	721.7	573.6	244.4	113.5	89.8	82.0	78.5	77.3	77.3	77.3	78.1
50°	759.0	595.4	239.8	108.4	85.9	78.5	75.4	74.2	73.8	73.4	73.8
52.5°	791.2	611.7	238.2	105.3	82.8	75.4	72.3	71.5	70.7	70.0	70.3
55°	812.6	619.8	235.1	102.6	80.1	71.9	69.2	68.4	67.6	66.5	66.5
57.5°	825.0	619.1	228.1	101.0	78.5	68.8	66.1	66.1	65.3	63.3	63.7
60°	826.2	605.5	211.0	99.1	77.3	65.7	62.6	63.3	63.3	61.8	61.8
62.5°	806.4	569.7	178.0	94.0	75.8	63.3	59.8	61.8	62.6	61.0	61.0
65°	745.4	485.4	143.0	86.7	71.9	60.6	56.7	60.6	63.0	61.8	61.4
67.5°	628.4	384.3	118.1	78.5	67.6	57.1	53.6	58.7	61.8	61.8	61.4
70°	504.4	291.9	97.2	69.6	61.0	52.9	50.1	54.4	57.1	57.9	57.9
72.5°	347.4	178.4	78.9	59.8	53.6	47.8	45.5	48.2	49.7	51.3	50.9
74°	224.2	125.1	69.2	54.4	49.0	43.9	42.7	43.9	44.7	46.2	46.6
75°	150.0	102.2	64.5	50.5	46.2	41.2	40.4	41.6	42.4	43.5	43.5
77.5°	86.3	73.1	52.1	42.0	38.5	35.4	35.0	35.4	36.5	37.7	37.3
80°	59.8	55.6	41.2	32.6	30.3	28.8	29.1	29.5	31.5	31.9	31.5
82.5°	36.1	40.0	29.1	24.5	22.9	22.5	23.7	24.5	26.0	26.4	26.0
85°	14.4	19.0	14.4	13.6	15.2	16.7	18.7	19.8	20.6	20.6	20.6
87.5°	0.0	2.7	3.5	5.4	8.5	10.1	13.2	14.4	15.2	14.8	14.4
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)