

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: P162612

Luminaire Tested: **ECM-F03-LED-E1-SL4-HSS**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P162612
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-F03-LED-E1-SL4-HSS
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (21) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4791.2 lumens
Efficiency: N/A
Efficacy: 61.2 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G2

Input Watts (W): 78.3
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

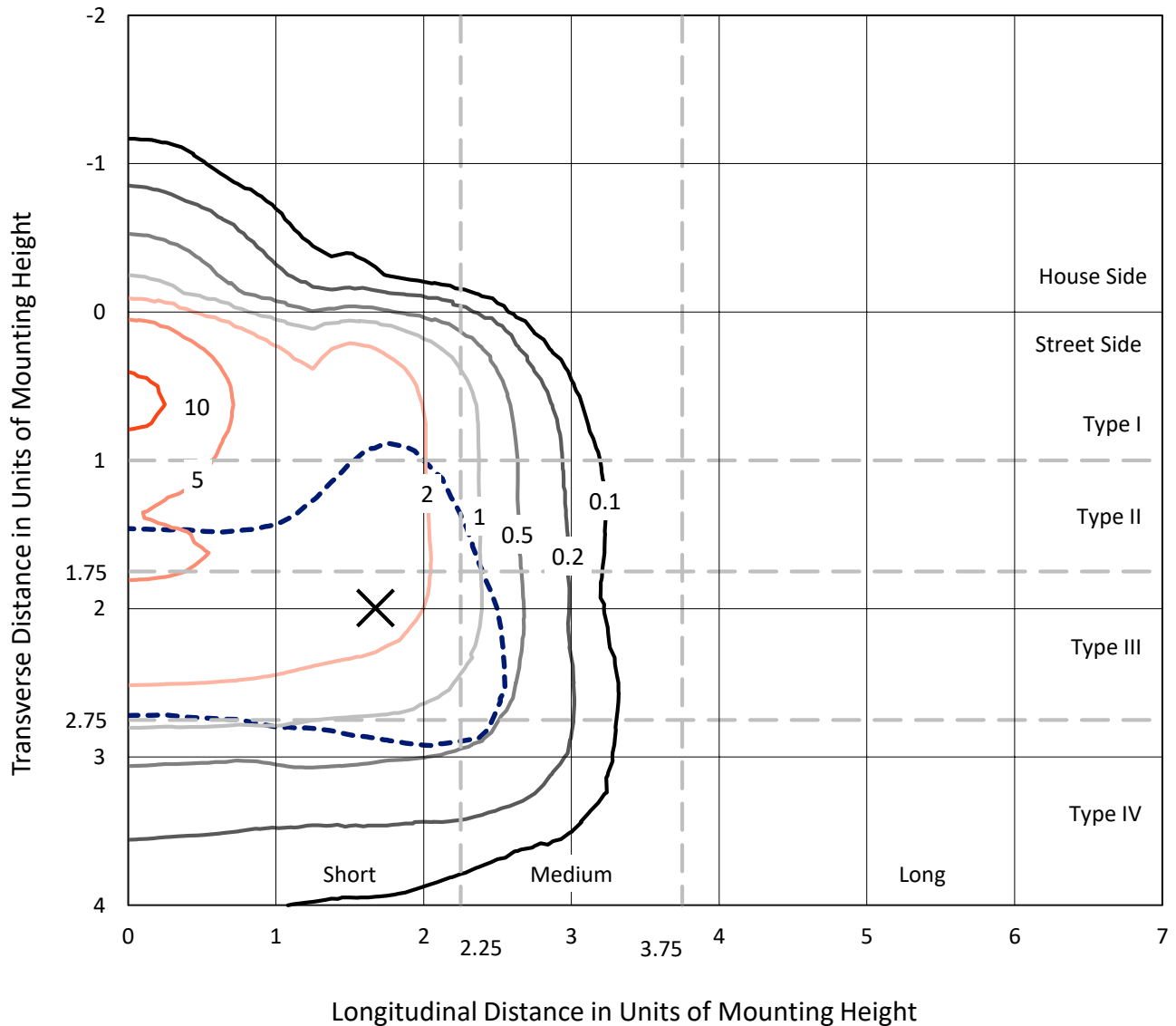


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

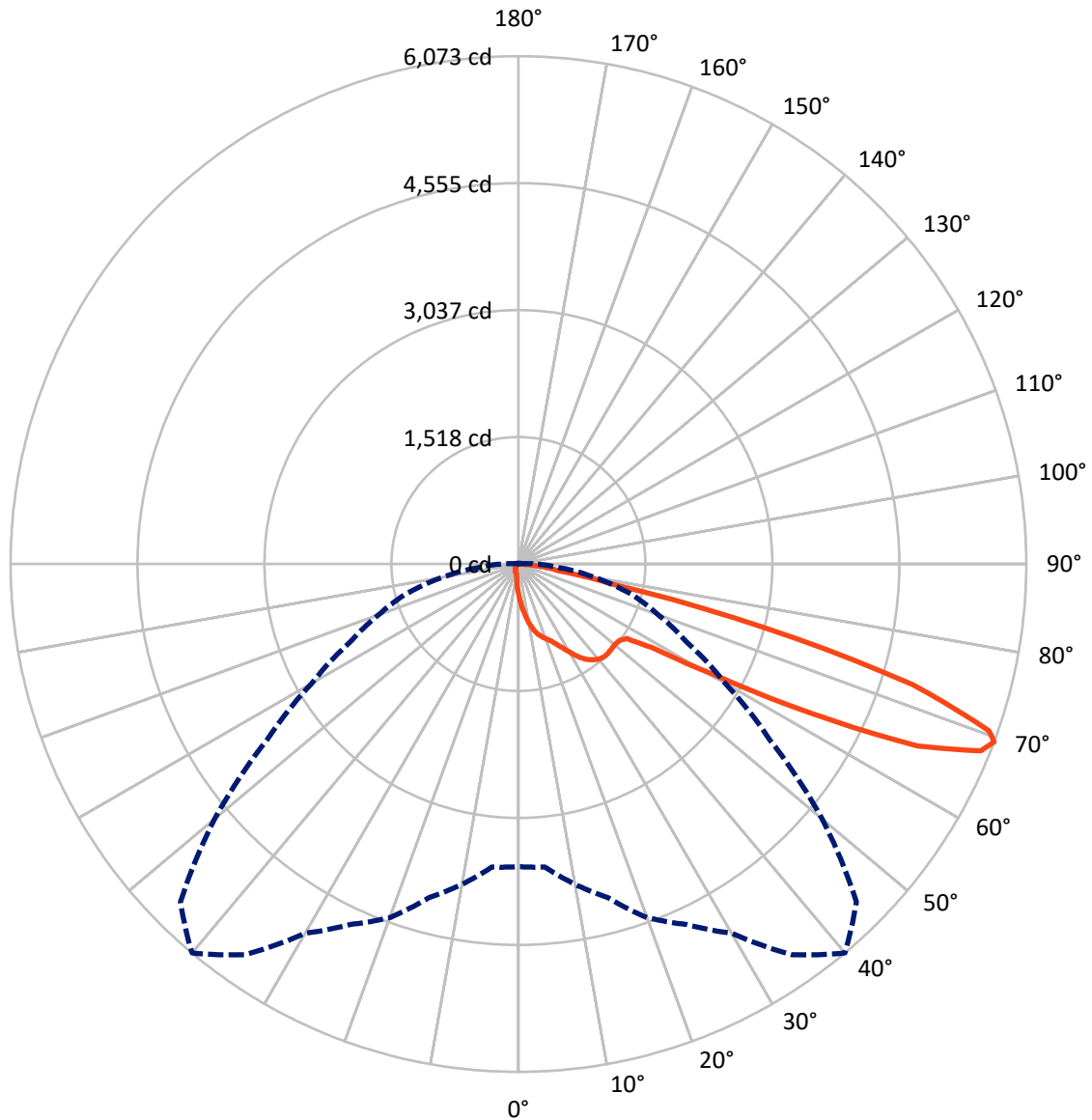


Based on 10 foot mounting height. Maximum calculated value = 10.7 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	142.7	0.0	142.7
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	4648.5	0.0	4648.5
	% Fixture	97.0	0.0	97.0
Total	Lumens	4791.2	0.0	4791.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.2	0.8
10°-20°	128.2	2.7
20°-30°	245.4	5.1
30°-40°	408.1	8.5
40°-50°	552.3	11.5
50°-60°	863.7	18.0
60°-70°	1775.7	37.1
70°-80°	714.5	14.9
80°-90°	66.1	1.4
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°	4791.2	100.0
0°-180°	4791.2	100.0



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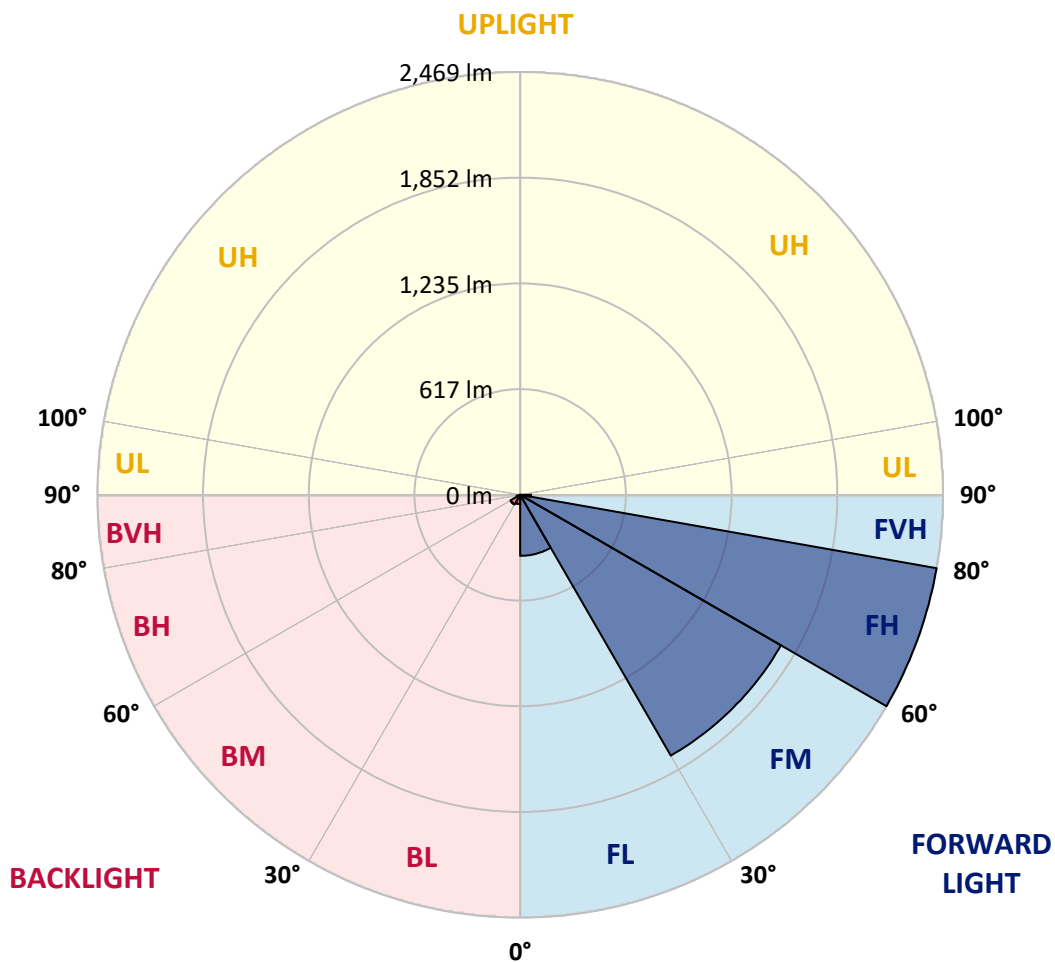
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	356.6	7.4			
FM	(30°-60°)	1758.9	36.7			
FH	(60°-80°)	2469.4	51.5			G2/5000
FVH	(80°-90°)	63.6	1.3			G1/100
BL	(0°-30°)	54.3	1.1	B0/110		
BM	(30°-60°)	65.1	1.4	B0/220		
BH	(60°-80°)	20.8	0.4	B0/110		G0/110
BVH	(80°-90°)	2.5	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	361.8	361.8	361.8	361.8	361.8	361.8	361.8	361.8	361.8	361.8	361.8
2.5°	482.7	477.2	471.0	471.0	463.0	463.0	458.3	445.8	444.2	437.2	430.1
5°	616.1	611.4	603.5	596.5	590.3	579.3	571.4	556.5	540.0	524.3	510.2
7.5°	746.4	744.0	729.9	727.6	717.4	699.3	683.6	661.7	633.4	611.4	585.5
10°	867.3	861.8	858.6	845.3	830.4	810.7	786.5	759.7	726.8	692.3	655.4
12.5°	963.1	959.9	945.8	940.3	924.6	904.9	874.3	839.8	806.9	762.1	718.9
15°	1034.5	1028.9	1019.5	1010.9	992.1	974.8	946.5	908.9	868.9	820.2	768.4
17.5°	1094.2	1083.9	1081.5	1068.2	1048.6	1028.2	996.8	962.2	915.2	866.5	810.0
20°	1174.1	1160.0	1155.3	1135.7	1113.0	1084.7	1048.6	1005.4	956.0	902.6	844.5
22.5°	1268.3	1258.2	1247.9	1230.7	1201.6	1161.6	1109.0	1062.0	999.1	940.3	877.5
25°	1401.8	1393.2	1376.6	1353.1	1317.0	1269.2	1205.6	1136.5	1062.7	987.4	913.6
27.5°	1531.3	1523.4	1511.7	1493.6	1452.8	1400.3	1321.7	1233.8	1140.5	1049.4	967.8
30°	1652.9	1645.8	1634.1	1616.0	1580.0	1528.1	1439.5	1345.3	1229.1	1123.1	1025.1
32.5°	1784.0	1781.6	1768.4	1742.4	1711.1	1641.1	1544.6	1443.3	1325.6	1203.2	1088.6
35°	1932.4	1914.3	1901.8	1875.8	1822.5	1747.9	1634.9	1524.2	1400.3	1274.6	1146.7
37.5°	2058.0	2040.7	2025.0	1992.0	1926.9	1831.9	1704.0	1582.3	1454.4	1326.5	1196.2
40°	2149.7	2141.2	2122.3	2079.2	2006.1	1893.1	1755.0	1622.3	1493.6	1364.9	1236.1
42.5°	2218.0	2204.7	2183.5	2138.8	2052.4	1923.7	1775.4	1638.8	1511.7	1388.5	1262.1
45°	2243.2	2232.2	2212.6	2163.9	2070.5	1932.4	1774.6	1634.1	1512.4	1395.5	1279.3
47.5°	2228.3	2217.3	2200.0	2154.5	2062.7	1922.2	1760.5	1620.8	1504.6	1397.9	1295.1
50°	2178.8	2172.5	2159.2	2120.8	2038.3	1902.5	1747.9	1613.7	1503.0	1409.7	1317.0
52.5°	2174.1	2170.2	2153.7	2115.2	2031.3	1896.2	1746.3	1617.6	1516.4	1424.5	1332.7
55°	2656.8	2601.1	2476.2	2370.3	2196.1	1988.9	1825.6	1681.2	1572.9	1483.4	1419.1
57.5°	3776.0	3692.8	3528.8	3327.1	2926.8	2533.6	2218.8	1991.2	1879.0	1838.2	1862.5
60°	4300.3	4285.4	4259.5	4163.8	3958.9	3620.7	3243.9	2836.5	2673.3	2659.2	2708.6
62.5°	4549.1	4539.7	4547.6	4535.8	4472.2	4373.3	4265.0	4089.2	3927.5	3823.2	3601.8
65°	4663.7	4670.0	4714.7	4750.1	4757.9	4783.8	4863.1	5082.1	5242.2	4973.0	4358.4
67.5°	4372.6	4409.5	4512.2	4640.9	4791.7	4937.6	5173.2	5634.6	5963.5	5647.2	4774.4
69°	3619.8	3637.9	3889.0	4131.6	4499.7	4757.2	5098.5	5703.7	6073.4	5716.3	4741.4
70°	2849.9	2866.4	3135.6	3465.2	4087.7	4418.9	4865.5	5586.7	5970.5	5624.4	4571.9
72.5°	1285.6	1262.1	1357.1	1533.7	2210.2	2736.0	3517.1	4526.4	4925.9	4506.0	3420.5
75°	897.9	887.7	897.9	898.7	1003.8	1295.1	1634.1	2453.5	3034.3	2618.3	1634.1
77.5°	695.4	688.3	681.3	673.5	686.0	768.4	801.3	870.4	1130.2	1069.0	623.2
80°	550.2	543.9	561.2	555.7	555.7	565.1	558.8	533.0	484.3	448.9	401.9
82.5°	255.8	257.4	257.4	279.4	336.7	393.2	411.3	385.4	342.2	291.2	234.7
85°	24.4	27.5	46.3	71.4	142.1	160.2	160.9	133.4	133.4	105.2	84.8
87.5°	0.0	0.8	0.8	0.8	7.1	19.6	16.5	4.7	2.4	2.4	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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	361.8	361.8	361.8	361.8	361.8	361.8	361.8	361.8	361.8	361.8	361.8
2.5°	417.6	415.2	405.7	396.3	387.7	378.3	369.7	361.0	351.6	344.6	335.9
5°	488.2	471.0	451.3	432.5	413.7	394.0	373.6	355.6	336.7	319.5	303.0
7.5°	559.6	525.9	499.2	465.4	434.8	404.2	375.9	346.9	320.2	295.1	271.6
10°	620.1	579.3	537.7	494.5	450.5	409.7	370.5	335.9	300.6	270.0	241.0
12.5°	669.5	617.7	566.6	512.5	463.0	411.3	362.7	321.0	279.4	244.9	215.0
15°	714.2	654.6	593.4	530.6	467.8	408.9	354.7	303.0	260.6	221.3	187.6
17.5°	750.3	682.0	613.0	542.4	474.8	405.7	344.6	290.4	241.0	200.1	167.2
20°	781.8	710.3	635.7	556.5	479.5	405.0	335.9	274.7	223.7	180.5	148.3
22.5°	810.7	739.3	659.3	574.6	486.6	404.2	328.1	262.9	208.8	165.6	133.4
25°	843.8	768.4	684.4	593.4	499.2	407.3	323.4	253.5	195.4	151.5	121.7
27.5°	880.7	801.3	714.2	616.9	515.6	413.7	321.8	243.3	183.7	138.1	112.3
30°	932.4	840.6	744.0	640.4	530.6	420.7	320.2	237.0	171.9	128.0	102.8
32.5°	977.9	879.1	777.1	664.8	547.1	427.8	319.5	228.4	160.9	117.7	95.8
35°	1025.8	914.4	805.3	688.3	561.2	435.6	318.7	222.1	150.7	107.6	88.7
37.5°	1067.4	944.2	827.3	708.7	576.9	442.6	319.5	216.6	141.2	98.9	82.4
40°	1102.7	974.8	851.6	727.6	593.4	453.6	320.2	211.2	131.8	91.1	76.9
42.5°	1134.1	1003.8	877.5	748.8	612.2	466.3	324.9	206.4	124.0	84.0	71.4
45°	1158.5	1030.5	905.8	778.6	642.8	486.6	333.6	203.2	116.2	77.7	66.7
47.5°	1183.6	1069.8	953.6	825.7	687.6	518.8	348.5	202.5	109.9	73.0	62.8
50°	1218.1	1109.0	996.0	873.6	728.4	551.8	366.5	203.2	102.0	68.3	58.9
52.5°	1243.2	1149.0	1051.0	956.8	825.7	652.2	436.4	217.4	98.1	64.4	54.2
55°	1391.6	1375.1	1377.5	1393.2	1291.9	1109.8	729.9	313.9	115.4	73.0	53.4
57.5°	1962.2	2020.3	2054.0	2053.2	1886.1	1564.3	980.3	403.4	128.7	84.8	63.6
60°	2712.5	2668.6	2606.6	2453.5	2231.4	1785.6	1096.5	434.1	111.4	67.5	58.1
62.5°	3375.7	3118.3	2889.9	2641.9	2350.7	1862.5	1120.0	431.7	97.3	51.0	40.8
65°	3789.4	3326.3	2957.4	2646.6	2303.6	1798.2	1059.6	396.3	82.4	41.6	33.8
67.5°	3888.3	3214.1	2692.1	2295.8	1924.5	1399.4	777.8	298.3	64.4	34.5	29.8
69°	3672.4	2857.0	2230.7	1780.9	1400.3	928.5	481.1	188.4	49.4	31.4	27.5
70°	3378.1	2484.9	1817.0	1429.2	1036.9	652.2	336.7	132.7	40.0	29.1	25.1
72.5°	2173.4	1305.2	893.2	621.6	427.8	259.8	131.8	59.7	30.6	24.4	20.4
75°	842.9	482.7	350.0	266.1	208.0	144.4	80.1	38.5	25.9	20.4	15.7
77.5°	415.2	317.9	259.8	178.1	103.6	64.4	43.2	29.8	21.2	14.9	10.2
80°	328.1	218.2	130.3	80.8	61.3	46.3	32.9	24.4	15.7	9.4	7.1
82.5°	168.0	91.8	67.5	55.0	45.5	36.1	26.7	17.3	10.2	6.3	5.5
85°	52.6	38.5	34.5	33.8	31.4	25.9	18.8	11.0	6.3	4.0	4.0
87.5°	4.0	5.5	7.1	5.5	6.3	5.5	7.1	4.7	3.1	3.1	2.4
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	361.8	361.8	361.8	361.8	361.8	361.8	361.8	361.8	361.8	361.8	361.8
2.5°	329.6	320.2	311.6	306.1	295.9	292.0	288.0	286.5	279.4	281.0	274.7
5°	288.0	271.6	259.0	246.4	234.7	226.0	219.0	210.3	203.2	200.1	193.8
7.5°	250.4	229.2	212.7	199.4	185.2	174.3	164.9	158.6	152.2	146.0	142.8
10°	217.4	194.7	175.8	162.5	149.1	139.7	132.7	128.0	124.0	121.7	120.9
12.5°	186.8	164.9	147.5	135.8	125.6	120.9	117.7	115.4	114.6	113.8	113.8
15°	163.3	141.2	128.0	119.3	114.6	112.3	111.4	109.9	108.3	107.6	107.6
17.5°	141.2	124.8	115.4	110.7	108.3	106.7	105.2	103.6	102.0	101.2	101.2
20°	126.4	113.0	108.3	105.2	102.8	101.2	98.9	97.3	96.5	95.8	94.9
22.5°	114.6	106.0	102.8	100.5	97.3	94.9	93.4	91.8	90.2	89.5	88.7
25°	106.0	100.5	98.1	94.9	91.8	89.5	87.1	84.8	83.2	82.4	80.8
27.5°	99.6	95.8	92.6	88.7	85.5	83.2	80.8	78.5	76.9	75.4	74.5
30°	94.2	90.2	86.3	83.2	79.3	76.9	73.8	71.4	70.7	69.1	67.5
32.5°	88.7	84.8	80.8	76.9	73.0	69.8	68.3	65.1	63.6	62.8	61.3
35°	82.4	78.5	73.8	70.7	66.7	63.6	61.3	58.9	57.3	55.7	55.0
37.5°	76.9	72.2	67.5	63.6	60.4	57.3	55.0	52.6	51.0	49.4	48.6
40°	70.7	66.0	61.3	57.3	54.2	51.8	49.4	47.1	45.5	44.7	44.7
42.5°	65.1	59.7	55.0	51.8	49.4	46.3	43.9	41.6	40.8	40.0	40.8
45°	59.7	54.2	50.2	47.1	44.7	41.6	39.2	37.6	36.9	37.6	38.5
47.5°	55.0	49.4	45.5	43.2	40.8	38.5	36.1	34.5	34.5	36.1	37.6
50°	50.2	44.7	41.6	40.0	37.6	35.3	32.2	31.4	32.2	33.8	35.3
52.5°	45.5	39.2	36.9	36.1	33.8	31.4	29.1	28.2	29.1	30.6	29.8
55°	40.8	34.5	33.8	32.9	30.6	27.5	25.1	25.1	25.1	24.4	22.8
57.5°	39.2	30.6	29.8	29.1	26.7	23.5	22.0	20.4	19.6	17.3	16.5
60°	40.8	27.5	27.5	25.9	23.5	20.4	18.1	15.7	14.1	12.5	12.5
62.5°	32.9	25.1	24.4	22.8	19.6	16.5	14.1	11.8	11.0	10.2	10.2
65°	26.7	22.8	21.2	18.8	16.5	13.4	11.0	9.4	8.7	8.7	9.4
67.5°	24.4	20.4	18.1	15.7	13.4	10.2	8.7	7.8	7.8	8.7	8.7
69°	22.8	18.8	16.5	14.1	11.8	9.4	7.8	7.8	7.8	7.8	8.7
70°	21.2	18.1	15.7	13.4	10.2	7.8	7.1	7.1	7.8	7.8	8.7
72.5°	16.5	14.1	13.4	11.0	7.8	7.1	6.3	7.1	7.1	7.8	7.8
75°	12.5	10.2	10.2	8.7	6.3	5.5	5.5	6.3	6.3	7.1	7.1
77.5°	8.7	7.1	7.1	6.3	5.5	4.7	4.7	5.5	6.3	6.3	7.1
80°	6.3	5.5	4.7	5.5	4.7	4.0	4.7	5.5	5.5	6.3	6.3
82.5°	4.7	4.7	4.7	4.7	4.0	4.0	4.7	4.7	5.5	6.3	6.3
85°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.7	4.7	5.5	5.5
87.5°	2.4	2.4	2.4	3.1	3.1	4.0	4.0	4.0	4.0	4.7	4.7
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):

	165°	170°	175°	180°
0°	361.8	361.8	361.8	361.8
2.5°	273.2	272.3	269.2	270.0
5°	191.5	186.8	190.0	189.1
7.5°	140.5	139.7	138.9	140.5
10°	120.1	120.1	119.3	120.1
12.5°	113.0	113.0	113.0	113.0
15°	107.6	107.6	106.7	106.7
17.5°	101.2	101.2	101.2	100.5
20°	94.9	94.2	94.2	94.2
22.5°	87.9	87.1	87.1	87.1
25°	80.8	80.1	80.1	80.1
27.5°	73.8	73.0	72.2	72.2
30°	66.7	66.0	65.1	65.1
32.5°	59.7	58.9	58.1	58.1
35°	53.4	53.4	52.6	51.8
37.5°	47.9	47.9	47.9	47.9
40°	43.9	44.7	44.7	44.7
42.5°	41.6	42.3	43.2	43.9
45°	40.0	41.6	42.3	42.3
47.5°	39.2	40.0	40.8	40.8
50°	36.1	35.3	35.3	35.3
52.5°	29.1	27.5	26.7	25.9
55°	21.2	20.4	18.8	18.8
57.5°	14.9	14.9	14.1	14.1
60°	11.8	11.8	11.0	11.8
62.5°	10.2	10.2	10.2	10.2
65°	9.4	9.4	9.4	9.4
67.5°	9.4	9.4	9.4	9.4
69°	8.7	8.7	8.7	8.7
70°	8.7	8.7	8.7	8.7
72.5°	7.8	7.8	7.8	7.8
75°	7.1	7.8	7.8	7.8
77.5°	7.1	7.1	7.1	7.1
80°	6.3	6.3	7.1	7.1
82.5°	6.3	6.3	6.3	6.3
85°	5.5	5.5	6.3	6.3
87.5°	4.7	4.7	5.5	5.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)