

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-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number:
REPORT IS A COMBINATION OF REPORTS P401676 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-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 1050mA 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: 8443.9 lumens
Efficiency: N/A
Efficacy: 114.3 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

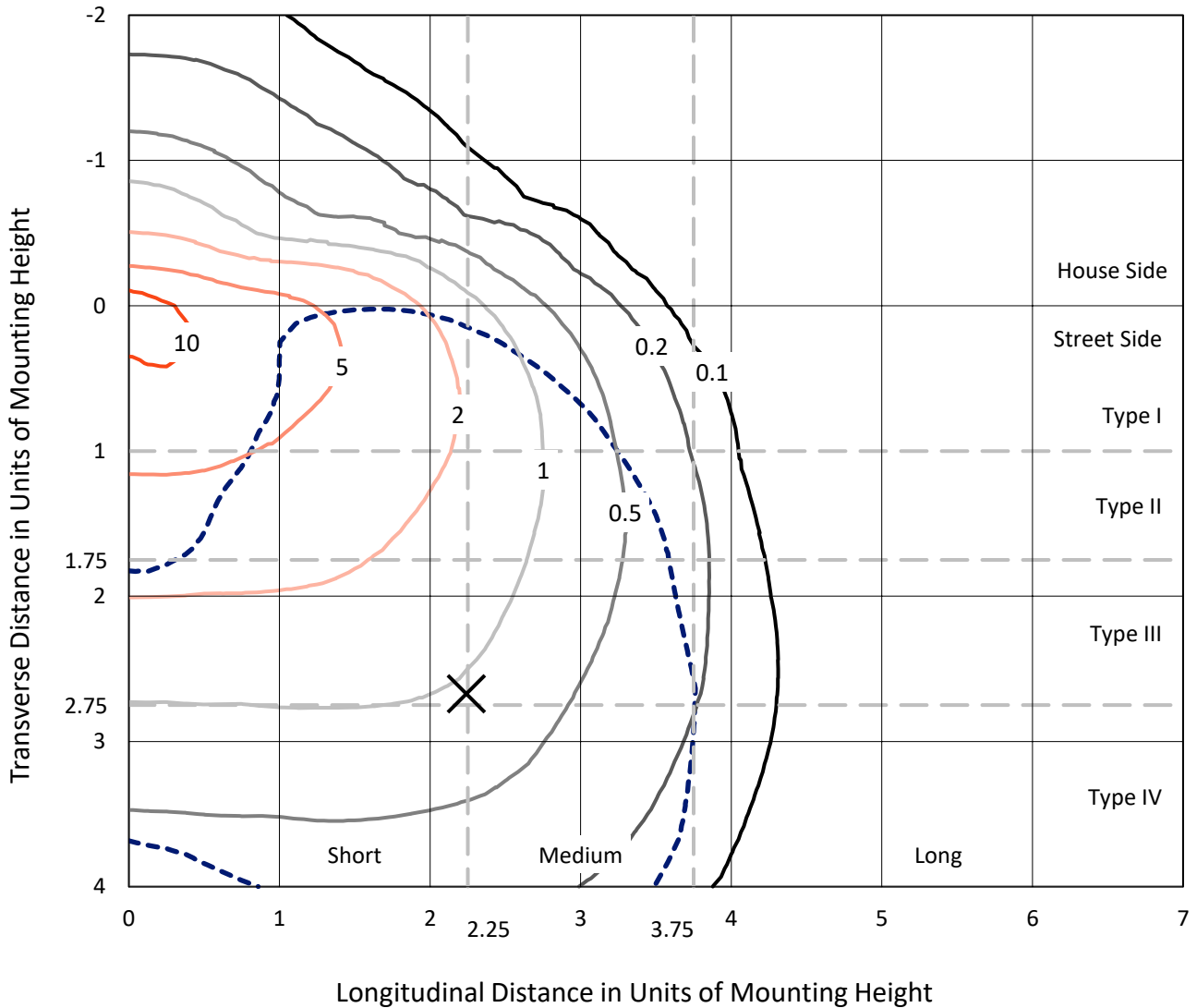
Input Watts (W): 73.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

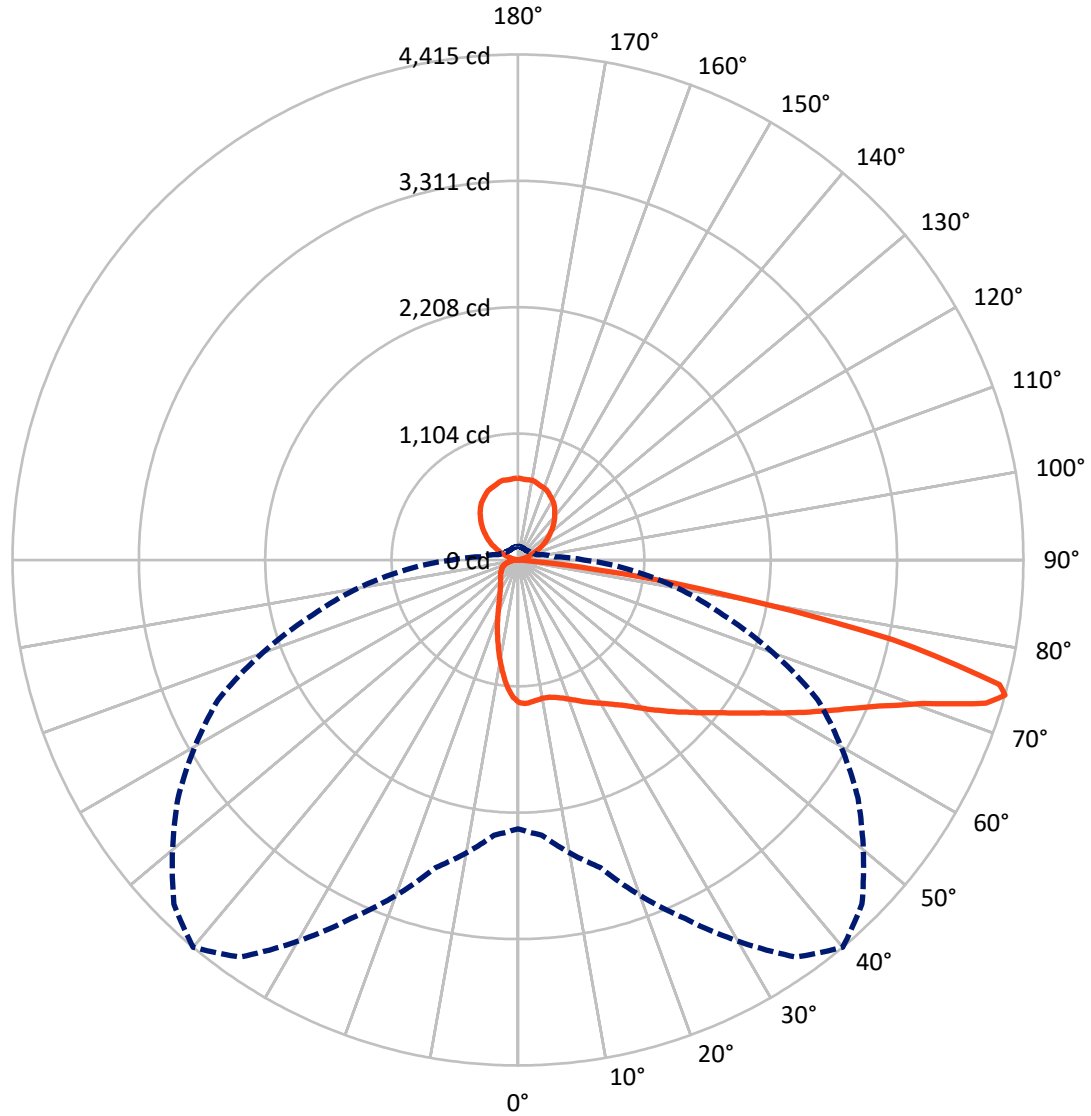
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.4 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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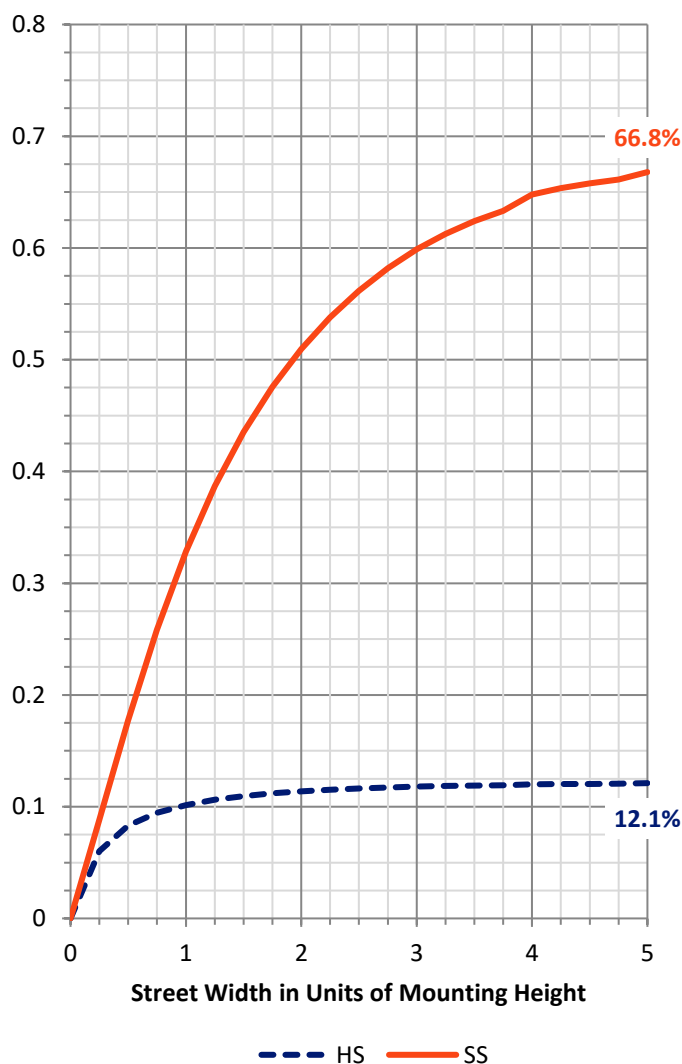
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1039.9	887.0	1926.9
	% Fixture	12.3	10.5	22.8
Street Side	Lumens	5630.0	887.0	6517.0
	% Fixture	66.7	10.5	77.2
Total	Lumens	6670.0	1773.9	8443.9
	% Fixture	79.0	21.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.9	1.3
10°-20°	283.0	3.4
20°-30°	434.1	5.1
30°-40°	627.0	7.4
40°-50°	902.1	10.7
50°-60°	1245.5	14.8
60°-70°	1570.3	18.6
70°-80°	1361.7	16.1
80°-90°	136.3	1.6
90°-100°	8.4	0.1
100°-110°	58.7	0.7
110°-120°	169.9	2.0
120°-130°	279.4	3.3
130°-140°	344.6	4.1
140°-150°	352.5	4.2
150°-160°	297.0	3.5
160°-170°	195.5	2.3
170°-180°	67.8	0.8
0°-90°	6670.0	79.0
0°-180°	8443.9	100.0

Coefficient of Utilization

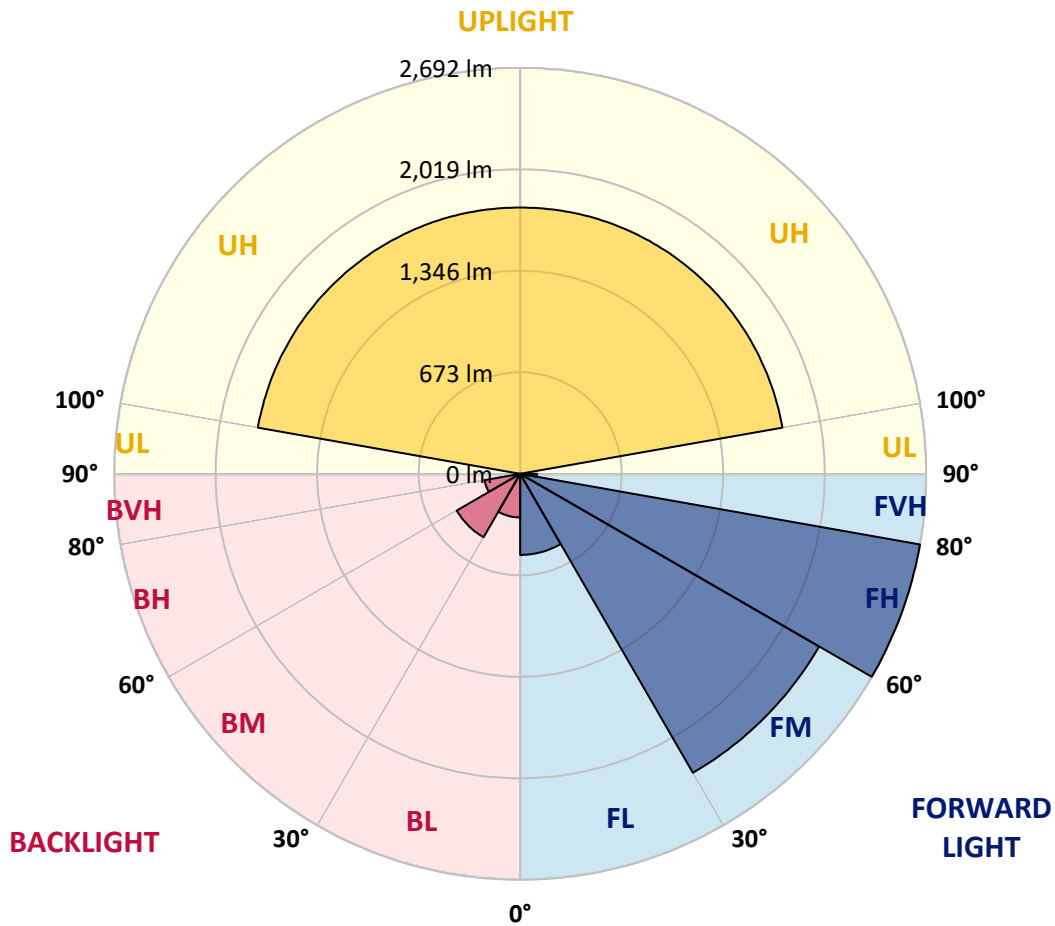


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	537.7	6.4			
FM (30°-60°)	2288.9	27.1			
FH (60°-80°)	2692.0	31.9			G2/5000
FVH (80°-90°)	111.5	1.3			G2/225
BL (0°-30°)	289.4	3.4	B1/500		
BM (30°-60°)	485.7	5.8	B1/1000		
BH (60°-80°)	240.0	2.8	B1/500		G1/500
BVH (80°-90°)	24.9	0.3			G1/100
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	20.9		U5	

BUG Rating: B1-U5-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	1245.0	1245.0	1245.0	1245.0	1245.0	1245.0	1245.0	1245.0	1245.0	1245.0	1245.0
2.5°	1261.0	1260.0	1263.0	1261.0	1258.0	1256.0	1255.0	1249.0	1247.0	1241.0	1233.0
5°	1256.0	1256.0	1256.0	1254.0	1248.0	1246.0	1244.0	1235.0	1229.0	1219.0	1204.0
7.5°	1239.0	1242.0	1241.0	1240.0	1235.0	1233.0	1230.0	1219.0	1211.0	1196.0	1177.0
10°	1223.0	1223.0	1224.0	1228.0	1226.0	1227.0	1226.0	1214.0	1203.0	1184.0	1160.0
12.5°	1200.0	1204.0	1210.0	1221.0	1226.0	1230.0	1230.0	1221.0	1209.0	1186.0	1158.0
15°	1186.0	1191.0	1206.0	1226.0	1238.0	1245.0	1247.0	1236.0	1221.0	1198.0	1167.0
17.5°	1180.0	1186.0	1214.0	1242.0	1263.0	1269.0	1270.0	1258.0	1242.0	1214.0	1178.0
20°	1186.0	1193.0	1230.0	1268.0	1293.0	1298.0	1300.0	1283.0	1263.0	1236.0	1189.0
22.5°	1209.0	1219.0	1260.0	1301.0	1327.0	1334.0	1332.0	1308.0	1288.0	1259.0	1203.0
25°	1259.0	1265.0	1302.0	1346.0	1366.0	1374.0	1369.0	1342.0	1316.0	1287.0	1223.0
27.5°	1317.0	1325.0	1364.0	1397.0	1410.0	1412.0	1407.0	1379.0	1350.0	1326.0	1254.0
30°	1387.0	1394.0	1426.0	1451.0	1452.0	1453.0	1450.0	1418.0	1394.0	1375.0	1299.0
32.5°	1461.0	1462.0	1495.1	1507.1	1499.1	1502.1	1499.1	1464.0	1447.0	1441.0	1358.0
35°	1529.1	1530.1	1564.1	1568.1	1555.1	1556.1	1562.1	1521.1	1521.1	1535.1	1446.0
37.5°	1594.1	1597.1	1627.1	1623.1	1618.1	1627.1	1635.1	1600.1	1620.1	1660.1	1553.1
40°	1643.1	1650.1	1690.1	1688.1	1699.1	1708.1	1715.1	1697.1	1729.1	1807.1	1685.1
42.5°	1675.1	1689.1	1746.1	1760.1	1779.1	1795.1	1807.1	1806.1	1862.1	1970.1	1825.1
45°	1708.1	1722.1	1798.1	1832.1	1864.1	1889.1	1912.1	1924.1	2013.1	2142.1	1988.1
47.5°	1748.1	1760.1	1845.1	1912.1	1953.1	1987.1	2028.1	2054.1	2167.1	2317.1	2139.1
50°	1809.1	1817.1	1893.1	1997.1	2049.1	2096.1	2147.1	2200.1	2333.1	2496.1	2271.1
52.5°	1888.1	1893.1	1949.1	2083.1	2166.1	2216.1	2292.1	2362.1	2502.1	2658.1	2379.1
55°	1978.1	1974.1	2017.1	2186.1	2283.1	2358.1	2452.1	2523.1	2680.1	2799.1	2465.1
57.5°	2068.1	2065.1	2099.1	2285.1	2431.1	2519.1	2616.1	2691.1	2843.1	2931.1	2527.1
60°	2154.1	2143.1	2191.1	2401.1	2610.1	2711.1	2798.1	2867.1	2997.1	3026.1	2560.1
62.5°	2230.1	2230.1	2300.1	2544.1	2824.1	2915.1	2984.1	3030.1	3144.1	3096.1	2547.1
65°	2300.1	2309.1	2409.1	2704.1	3046.1	3139.1	3199.1	3217.1	3290.1	3099.1	2437.1
67.5°	2379.1	2393.1	2534.1	2891.1	3302.1	3401.1	3453.1	3447.1	3394.1	3053.1	2201.1
70°	2456.1	2479.1	2689.1	3132.1	3618.1	3752.1	3809.1	3691.1	3448.1	2798.1	1828.1
72.5°	2512.1	2551.1	2816.1	3373.1	4071.1	4277.1	4254.1	3758.1	3195.1	2306.1	1383.0
74°	2348.1	2413.1	2781.1	3456.1	4234.1	4415.1	4250.1	3625.1	2890.1	1857.1	980.0
75°	2157.1	2220.1	2604.1	3423.1	4265.1	4346.1	4044.1	3391.1	2592.1	1439.0	640.0
77.5°	1597.1	1646.1	2000.1	2699.1	3373.1	3349.1	3011.1	2298.1	1277.0	434.0	270.0
80°	705.0	742.0	987.0	1358.0	1827.1	1820.1	1695.1	1056.0	412.0	227.0	165.0
82.5°	213.0	212.0	284.0	396.0	694.0	707.0	601.0	364.0	197.0	94.0	80.0
85°	1.0	1.0	1.0	1.0	3.0	26.0	22.0	70.0	36.0	17.0	29.0
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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	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°	1245.0	1245.0	1245.0	1245.0	1245.0	1245.0	1245.0	1245.0	1245.0	1245.0	1245.0
2.5°	1228.0	1227.0	1224.0	1217.0	1212.0	1197.0	1202.0	1192.0	1191.0	1189.0	1188.0
5°	1197.0	1193.0	1181.0	1167.0	1151.0	1126.0	1118.0	1103.0	1094.0	1091.0	1093.0
7.5°	1165.0	1156.0	1133.0	1103.0	1071.0	1034.0	1007.0	986.0	971.0	966.0	959.0
10°	1145.0	1130.0	1091.0	1041.0	989.0	937.0	892.0	861.0	838.0	820.0	820.0
12.5°	1138.0	1118.0	1061.0	988.0	913.0	839.0	774.0	733.0	694.0	675.0	672.0
15°	1142.0	1114.0	1036.0	940.0	840.0	744.0	664.0	605.0	568.0	545.0	553.0
17.5°	1146.0	1111.0	1010.0	889.0	769.0	658.0	565.0	498.0	453.0	441.0	436.0
20°	1151.0	1105.0	977.0	834.0	696.0	575.0	477.0	409.0	375.0	360.0	360.0
22.5°	1158.0	1097.0	943.0	773.0	621.0	494.0	403.0	352.0	325.0	316.0	316.0
25°	1168.0	1092.0	908.0	712.0	550.0	430.0	354.0	314.0	300.0	294.0	293.0
27.5°	1187.0	1093.0	874.0	650.0	480.0	376.0	319.0	293.0	282.0	279.0	278.0
30°	1216.0	1103.0	838.0	584.0	418.0	335.0	295.0	277.0	270.0	268.0	268.0
32.5°	1256.0	1121.0	808.0	525.0	372.0	302.0	275.0	263.0	259.0	257.0	258.0
35°	1318.0	1152.0	772.0	471.0	329.0	279.0	259.0	250.0	247.0	247.0	248.0
37.5°	1399.0	1200.0	737.0	421.0	300.0	259.0	244.0	239.0	236.0	238.0	239.0
40°	1501.1	1257.0	704.0	376.0	276.0	243.0	231.0	227.0	226.0	228.0	230.0
42.5°	1611.1	1326.0	674.0	339.0	257.0	230.0	220.0	218.0	217.0	218.0	221.0
45°	1739.1	1405.0	649.0	311.0	243.0	219.0	210.0	208.0	207.0	209.0	211.0
47.5°	1857.1	1476.0	629.0	292.0	231.0	211.0	202.0	199.0	199.0	199.0	201.0
50°	1953.1	1532.1	617.0	279.0	221.0	202.0	194.0	191.0	190.0	189.0	190.0
52.5°	2036.1	1574.1	613.0	271.0	213.0	194.0	186.0	184.0	182.0	180.0	181.0
55°	2091.1	1595.1	605.0	264.0	206.0	185.0	178.0	176.0	174.0	171.0	171.0
57.5°	2123.1	1593.1	587.0	260.0	202.0	177.0	170.0	170.0	168.0	163.0	164.0
60°	2126.1	1558.1	543.0	255.0	199.0	169.0	161.0	163.0	163.0	159.0	159.0
62.5°	2075.1	1466.0	458.0	242.0	195.0	163.0	154.0	159.0	161.0	157.0	157.0
65°	1918.1	1249.0	368.0	223.0	185.0	156.0	146.0	156.0	162.0	159.0	158.0
67.5°	1617.1	989.0	304.0	202.0	174.0	147.0	138.0	151.0	159.0	159.0	158.0
70°	1298.0	751.0	250.0	179.0	157.0	136.0	129.0	140.0	147.0	149.0	149.0
72.5°	894.0	459.0	203.0	154.0	138.0	123.0	117.0	124.0	128.0	132.0	131.0
74°	577.0	322.0	178.0	140.0	126.0	113.0	110.0	113.0	115.0	119.0	120.0
75°	386.0	263.0	166.0	130.0	119.0	106.0	104.0	107.0	109.0	112.0	112.0
77.5°	222.0	188.0	134.0	108.0	99.0	91.0	90.0	91.0	94.0	97.0	96.0
80°	154.0	143.0	106.0	84.0	78.0	74.0	75.0	76.0	81.0	82.0	81.0
82.5°	93.0	103.0	75.0	63.0	59.0	58.0	61.0	63.0	67.0	68.0	67.0
85°	37.0	49.0	37.0	35.0	39.0	43.0	48.0	51.0	53.0	53.0	53.0
87.5°	0.0	7.0	9.0	14.0	22.0	26.0	34.0	37.0	39.0	38.0	37.0
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



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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)