

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: McGRAW-EDISON

Report Number: P226690

Luminaire Tested: **IST-AF-600-LED-E1-T4W-ULG**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P226690  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35944)-DOWNLIGHT AND  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: IST-AF-600-LED-E1-T4W-ULG  
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE WITH UPLIGHT  
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV WIDE, WITH UPLIGHT GLOW  
Light Source: (16) 4000K CCT, 70 CRI LEDs and (1) UPLIGHT LED  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

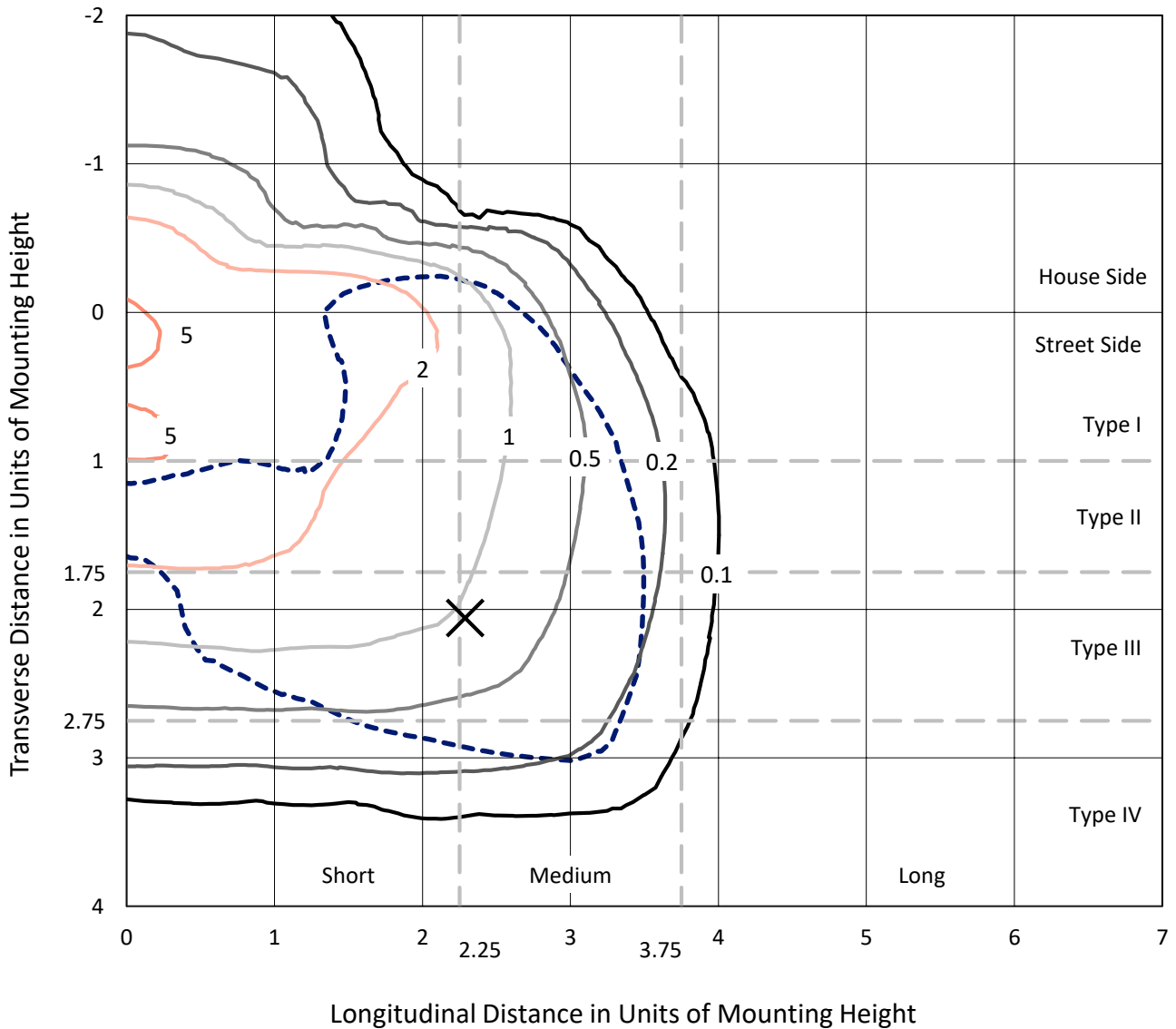
Lumens per Lamp: N/A  
Luminaire Lumens: 5967.5 lumens  
Efficiency: N/A  
Efficacy: 118.4 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')  
IES Classification: Type IV - Medium - Non-Cutoff  
BUG Rating: B1 - U5 - G1  
  
Input Watts (W): 50.4  
Input Voltage (V): 120  
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

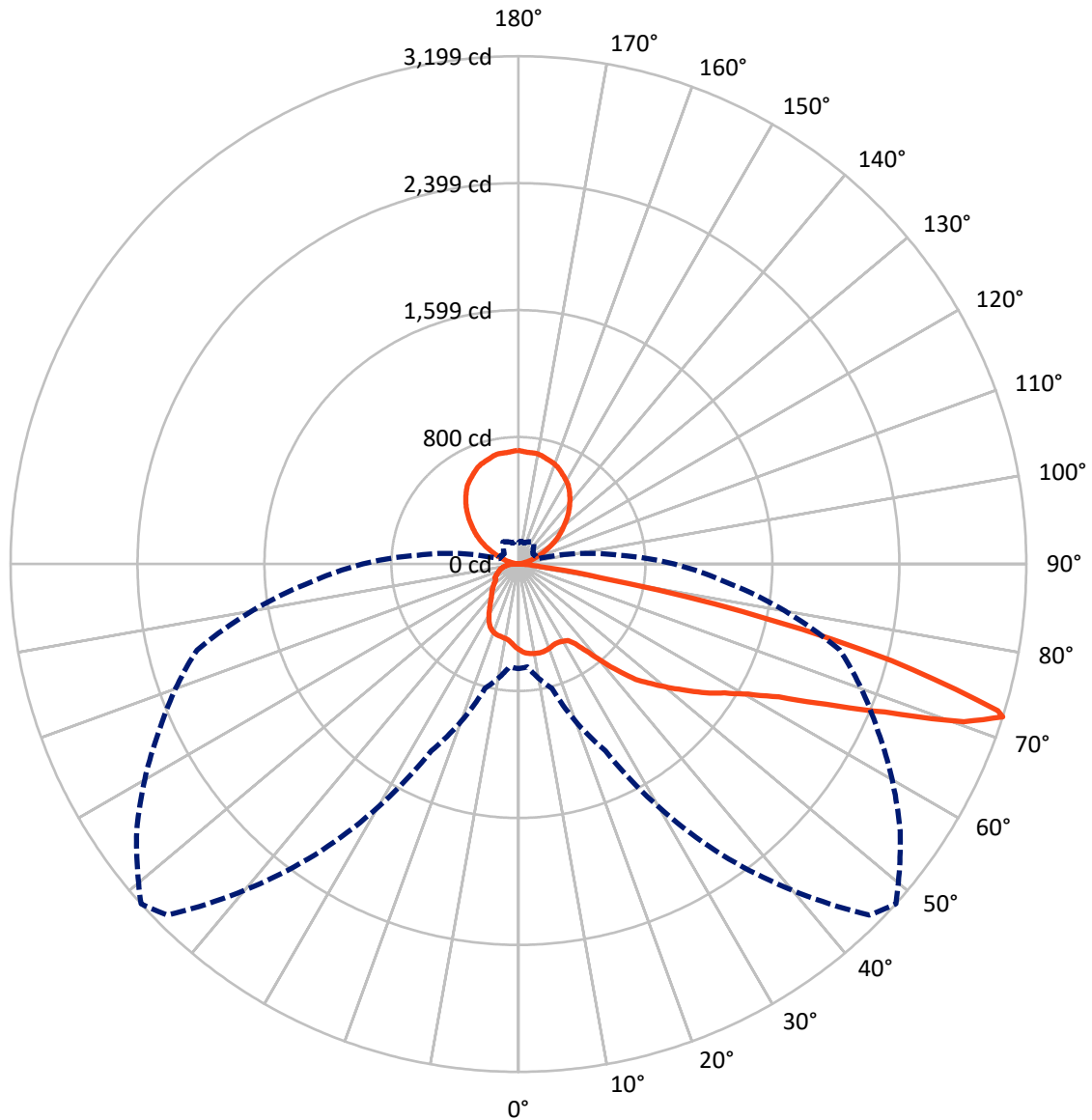
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6 fc  
 Type IV - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 48-Deg Lateral    - - - Horizontal Cone Through 72-Deg Vertical

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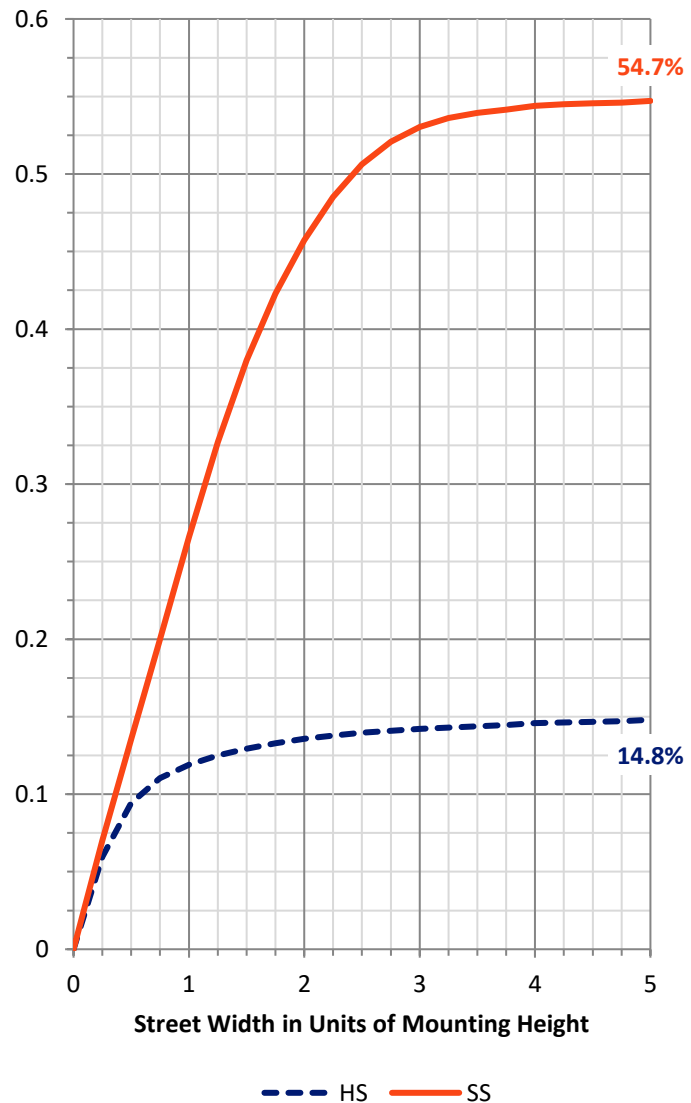
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	910.9	889.4	1800.3
	% Fixture	15.3	14.9	30.2
<b>Street Side</b>	Lumens	3279.1	888.1	4167.3
	% Fixture	54.9	14.9	69.8
<b>Total</b>	Lumens	4190.0	1777.5	5967.5
	% Fixture	70.2	29.8	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.0	0.9
10°-20°	148.9	2.5
20°-30°	229.7	3.8
30°-40°	344.2	5.8
40°-50°	573.2	9.6
50°-60°	895.8	15.0
60°-70°	1183.2	19.8
70°-80°	684.5	11.5
80°-90°	79.5	1.3
90°-100°	12.0	0.2
100°-110°	58.7	1.0
110°-120°	169.9	2.8
120°-130°	279.4	4.7
130°-140°	344.6	5.8
140°-150°	352.5	5.9
150°-160°	297.0	5.0
160°-170°	195.5	3.3
170°-180°	67.8	1.1
0°-90°	4190.0	70.2
0°-180°	5967.5	100.0



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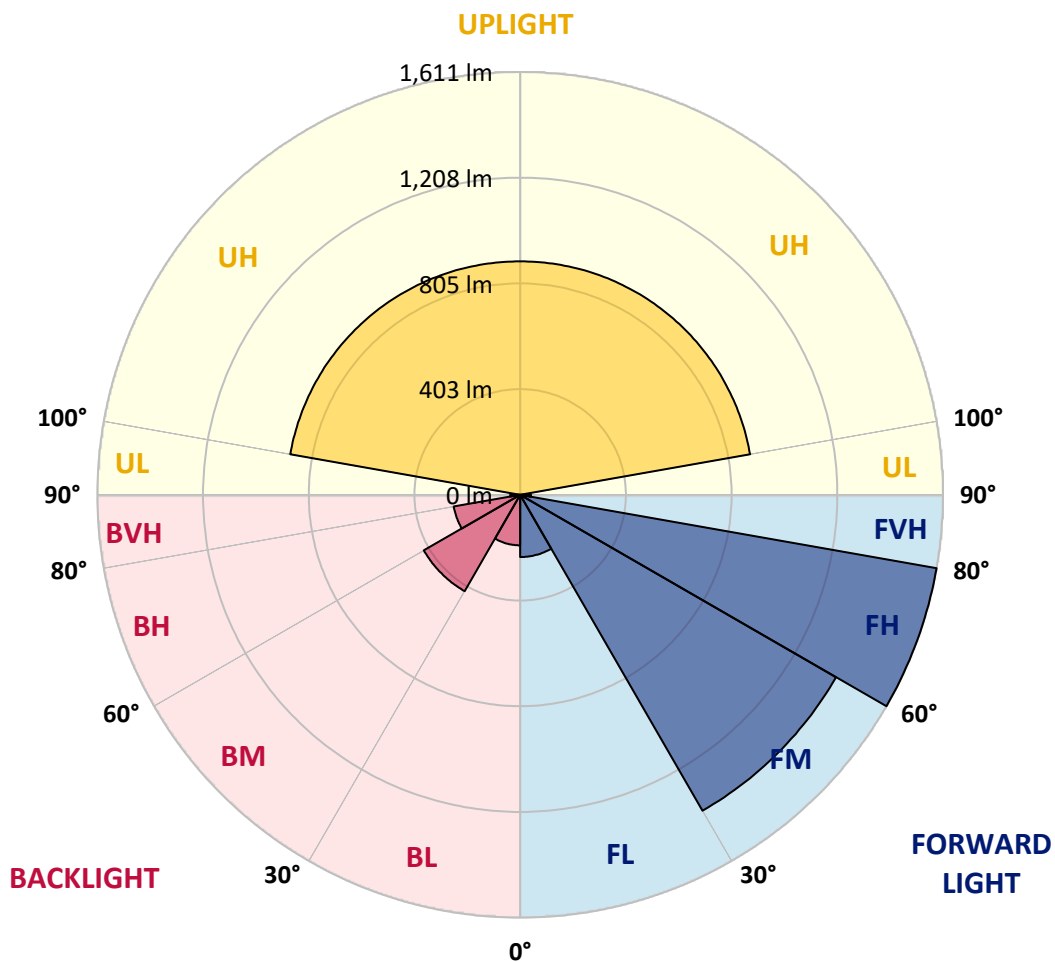
CATALOG NUMBER: IST-AF-600-LED-E1-T4W-ULG

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	237.0	4.0			
FM	(30°-60°)	1389.6	23.3			
FH	(60°-80°)	1610.8	27.0			G1/1800
FVH	(80°-90°)	41.7	0.7			G1/100
BL	(0°-30°)	192.6	3.2	B1/500		
BM	(30°-60°)	423.6	7.1	B1/1000		
BH	(60°-80°)	256.9	4.3	B1/500		G1/500
BVH	(80°-90°)	37.8	0.6			G1/100
UL	(90°-100°)	12.0	0.2		U2/50	
UH	(100°-180°)	889.4	14.9		U4/1000	

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

Type IV Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	48°	55°	65°	75°	85°
0°	539.2	539.2	539.2	539.2	539.2	539.2	539.2	539.2	539.2	539.2	539.2
2.5°	567.8	567.2	567.2	562.3	560.5	557.5	555.1	551.4	547.7	543.5	538.0
5°	595.2	597.0	594.5	587.3	578.2	568.4	564.8	556.3	544.7	534.4	524.7
7.5°	621.3	621.9	615.2	603.0	589.1	573.9	569.0	557.5	544.7	530.7	516.7
10°	640.2	640.8	631.1	614.0	595.2	578.2	572.6	561.1	545.3	530.1	512.5
12.5°	651.1	651.7	637.1	619.5	597.0	579.9	575.1	562.9	546.6	527.0	507.6
15°	649.3	651.1	638.9	619.5	595.8	580.5	574.5	564.2	543.5	524.1	503.4
17.5°	637.1	639.5	629.8	608.6	589.6	577.6	570.8	560.5	540.4	519.8	497.3
20°	613.4	616.4	612.1	591.5	578.8	569.0	564.8	555.1	536.2	515.0	491.8
22.5°	586.7	589.6	588.5	571.4	565.4	560.5	556.3	548.9	532.5	511.3	489.4
25°	567.2	569.6	567.8	553.2	555.1	555.1	552.6	547.1	531.9	512.5	489.4
27.5°	599.4	599.4	583.6	553.8	550.8	556.3	555.1	552.0	539.8	518.5	494.2
30°	717.3	708.2	679.6	604.9	566.6	564.2	563.5	561.7	550.8	531.9	509.4
32.5°	849.3	840.1	806.1	712.5	632.8	580.5	575.1	575.7	572.6	555.1	532.5
35°	966.6	965.4	938.7	837.1	735.6	638.3	616.4	601.8	600.6	593.3	575.7
37.5°	1061.4	1061.4	1063.9	948.4	846.8	730.1	693.0	646.8	646.8	642.6	631.7
40°	1169.6	1174.4	1180.0	1049.2	966.0	839.5	797.6	727.6	706.3	713.1	715.6
42.5°	1311.8	1318.0	1314.3	1173.8	1074.8	970.3	918.6	834.0	781.7	792.7	818.3
45°	1407.9	1410.3	1436.5	1304.0	1211.6	1080.8	1037.1	921.0	869.3	891.8	936.8
47.5°	1516.7	1522.9	1527.1	1451.7	1372.1	1206.1	1125.9	1005.5	972.0	1006.1	1077.3
50°	1623.1	1615.2	1626.8	1623.7	1524.1	1317.4	1221.9	1084.5	1087.0	1133.1	1249.8
52.5°	1715.5	1688.8	1715.5	1748.9	1719.8	1431.6	1320.4	1177.5	1212.8	1269.3	1453.5
55°	1786.7	1722.2	1767.2	1862.1	1855.3	1532.6	1432.8	1301.5	1360.5	1437.8	1701.0
57.5°	1641.3	1649.3	1773.3	1938.1	1935.0	1634.7	1531.4	1456.6	1528.9	1615.2	1993.9
60°	1505.8	1541.1	1732.6	1950.2	1990.4	1746.0	1663.8	1632.8	1699.7	1804.9	2274.8
62.5°	1434.1	1467.5	1666.3	1927.8	2078.4	1910.7	1842.0	1818.3	1909.4	2027.4	2525.3
65°	1456.6	1477.2	1662.1	1961.7	2180.0	2160.0	2130.1	2090.6	2136.2	2246.8	2638.4
67.5°	1393.4	1427.4	1626.8	2022.0	2365.4	2463.9	2488.8	2446.3	2407.9	2392.8	2473.6
70°	1037.1	1069.9	1279.1	1773.3	2517.4	2991.5	2976.4	2834.1	2576.3	2361.2	1932.6
72°	659.0	649.9	809.8	1299.1	2237.7	3127.2	3198.9	2935.7	2499.8	2096.7	1312.4
72.5°	479.0	522.2	671.8	1155.0	2125.9	3053.0	3157.5	2902.8	2399.4	1980.6	1154.4
75°	116.7	123.4	161.1	414.0	1245.0	2297.3	2428.6	2242.6	1751.4	1175.7	511.9
77.5°	79.1	82.0	106.4	145.9	366.0	1310.1	1441.3	1238.3	783.6	400.0	228.0
80°	58.9	60.8	77.2	103.3	152.0	446.8	527.0	418.9	195.2	221.9	162.3
82.5°	41.3	42.6	58.4	76.0	100.9	104.5	139.2	153.9	126.4	145.3	94.8
85°	28.5	28.5	42.6	52.3	63.8	51.7	55.3	77.2	85.7	86.3	57.8
87.5°	15.2	17.0	25.0	33.5	33.5	23.7	26.2	39.5	48.0	51.7	34.7
90°	10.5	10.5	17.5	21.0	16.1	13.2	12.6	15.0	20.8	25.6	18.1
92.5°	4.1	4.1	5.1	6.1	6.1	6.1	6.4	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	10.1	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	23.9	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	44.0	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	67.2	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	92.2	97.2	96.2	92.1	89.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	48°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	118.5	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	147.8	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	179.5	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	211.5	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	249.5	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	284.0	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	318.0	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	349.3	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	382.1	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	416.1	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	448.9	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	480.3	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	509.3	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	537.7	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	565.2	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	589.7	593.3	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	607.8	610.7	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	624.3	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	641.8	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	659.5	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	671.0	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	679.4	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	688.1	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	698.6	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	705.3	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	705.5	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	710.6	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°	539.2	539.2	539.2	539.2	539.2	539.2	539.2	539.2	539.2	539.2	539.2
2.5°	536.7	533.2	528.3	525.8	524.7	522.2	519.8	518.5	518.5	516.1	516.7
5°	519.8	514.3	507.6	502.8	502.2	502.2	503.4	503.4	504.0	502.2	504.5
7.5°	511.3	505.1	495.4	490.0	485.7	485.1	487.5	492.4	494.8	493.1	495.4
10°	505.1	498.5	487.5	480.9	477.8	476.6	478.4	483.3	491.2	491.2	493.7
12.5°	499.1	490.6	479.7	474.8	472.4	472.9	475.4	479.0	487.5	490.6	491.8
15°	493.1	483.3	474.1	467.5	467.5	469.3	472.4	476.6	484.5	490.0	491.2
17.5°	486.9	477.2	469.3	463.8	463.8	466.3	469.3	474.8	480.3	488.2	488.2
20°	481.5	473.5	463.2	458.4	457.8	459.6	463.2	468.7	472.9	480.9	481.5
22.5°	478.4	468.7	459.0	451.6	448.7	447.4	451.1	456.5	460.8	468.7	469.9
25°	477.2	466.3	454.1	440.8	432.8	430.4	432.2	438.9	442.5	448.7	450.5
27.5°	481.5	471.2	452.2	428.0	411.5	404.9	406.7	410.9	412.1	418.9	421.9
30°	496.0	483.9	455.9	414.6	384.8	372.7	372.7	373.3	375.1	380.5	381.2
32.5°	519.8	508.2	466.9	400.6	357.4	340.4	336.1	333.2	333.2	332.6	333.2
35°	563.5	553.8	485.7	384.8	327.7	308.8	298.5	293.0	287.6	285.1	284.5
37.5°	626.8	618.3	512.5	366.5	301.6	282.6	270.0	259.0	252.9	252.3	255.3
40°	721.0	712.5	542.3	345.9	276.6	262.6	249.3	237.7	231.0	231.6	234.7
42.5°	837.1	811.0	574.5	317.9	256.6	249.3	234.7	224.9	218.2	214.6	214.0
45°	972.6	928.9	604.9	291.8	234.7	237.7	223.7	212.8	204.3	194.6	193.3
47.5°	1141.7	1046.8	631.7	265.7	210.9	225.6	212.2	201.8	189.0	177.5	175.6
50°	1318.0	1182.4	654.7	237.7	189.7	212.2	200.6	186.6	169.0	158.7	158.7
52.5°	1521.6	1345.3	684.6	206.7	173.3	197.5	186.0	167.8	153.2	152.0	152.0
55°	1748.3	1516.1	705.2	182.4	160.5	181.8	176.3	170.8	165.9	167.2	167.8
57.5°	1985.4	1694.2	686.9	165.3	150.2	178.1	194.0	186.6	171.4	170.8	170.2
60°	2189.7	1832.8	586.0	154.4	142.3	184.2	207.9	186.6	171.4	179.3	179.9
62.5°	2323.4	1898.5	390.3	140.5	130.7	173.9	203.1	181.2	172.1	194.6	196.4
65°	2305.2	1824.9	224.3	130.7	123.4	159.9	196.4	174.5	160.5	173.3	169.6
67.5°	2033.5	1529.5	162.3	126.4	117.9	150.2	184.2	164.7	149.6	165.3	158.7
70°	1461.4	1041.4	139.8	122.8	114.3	138.6	175.6	158.7	143.4	154.4	144.0
72°	980.6	633.4	128.3	119.8	110.7	131.3	169.6	153.9	138.0	144.0	132.6
72.5°	834.6	499.7	125.2	118.6	109.5	129.5	167.8	152.6	136.8	142.9	132.0
75°	311.9	195.8	111.3	109.5	100.9	120.4	160.5	147.1	130.7	128.9	124.0
77.5°	160.5	124.0	94.8	96.7	90.5	110.1	152.6	138.6	120.4	113.6	111.3
80°	116.7	90.0	76.6	82.0	77.2	99.1	141.7	125.8	109.5	102.1	99.1
82.5°	73.6	56.0	58.4	65.1	65.7	87.6	128.9	113.0	97.3	91.1	86.3
85°	35.3	33.5	41.3	48.0	52.9	74.2	117.9	100.4	85.1	72.9	73.6
87.5°	18.8	25.6	25.0	32.2	40.7	60.8	104.5	82.0	68.1	54.7	55.3
90°	11.5	13.8	16.5	22.0	23.5	33.3	75.7	55.0	52.8	24.6	22.1
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)