

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: P821253

Luminaire Tested: **TT-D5-735-24VDC-MQ-HSS**

Issue Date: 12/2/2020

Test Information

Test Method: LM-79-08
Report Number: P821253
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D5-735-24VDC-MQ-HSS
Description: TOPTIER LED PARKING GARAGE LUMINAIRE
3500K, 70 CRI LEDS AND MEDIUM DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

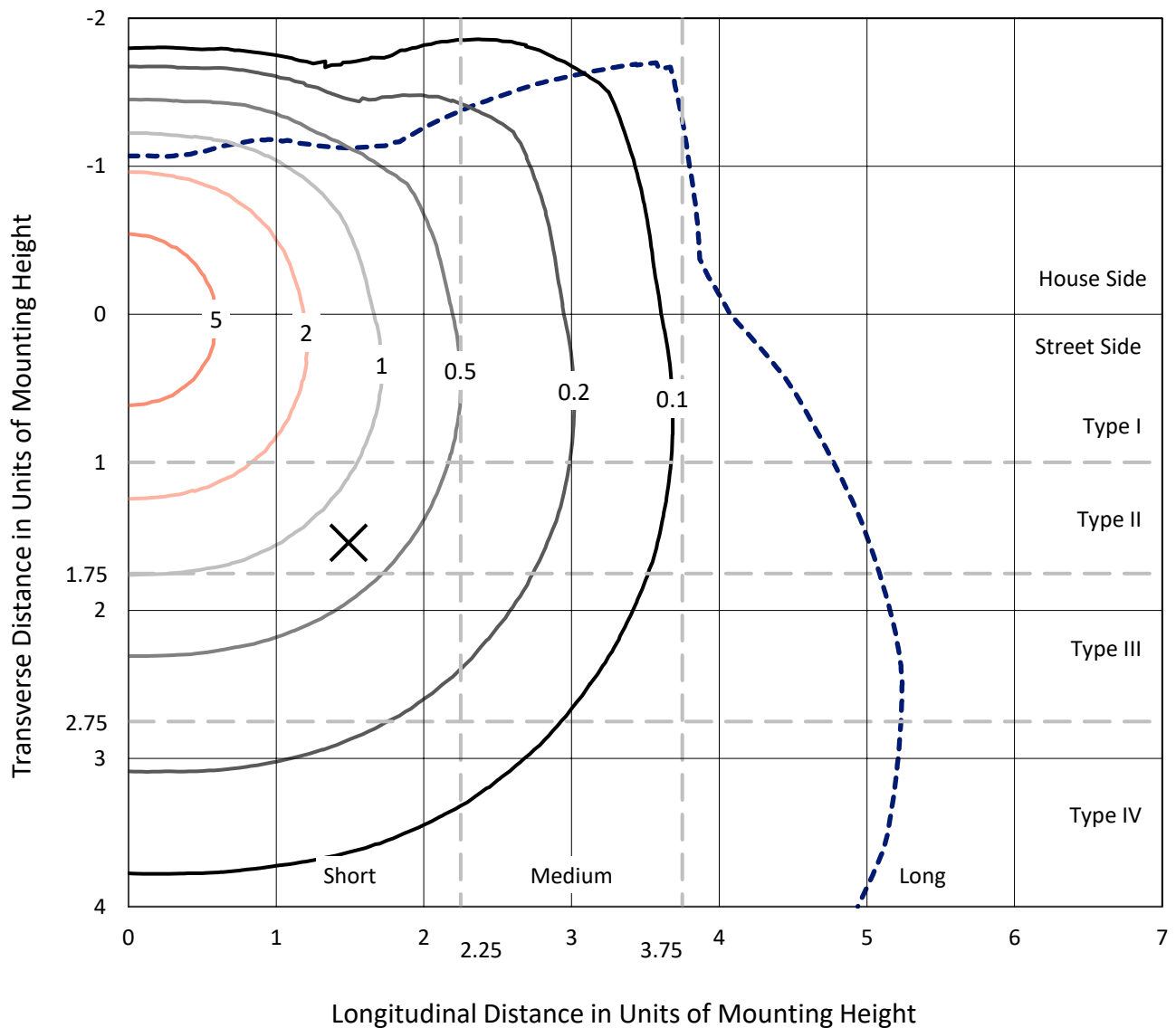
Lumens per Lamp: N/A
Luminaire Lumens: 8013.9 lumens
Efficiency: N/A
Efficacy: 109.8 lumens/watt
Luminous Opening: Circular (Dia: 1.12' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U2 - G3

Input Watts (W): 73
Input Voltage (V): NR
Input Current (A_{in}): 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

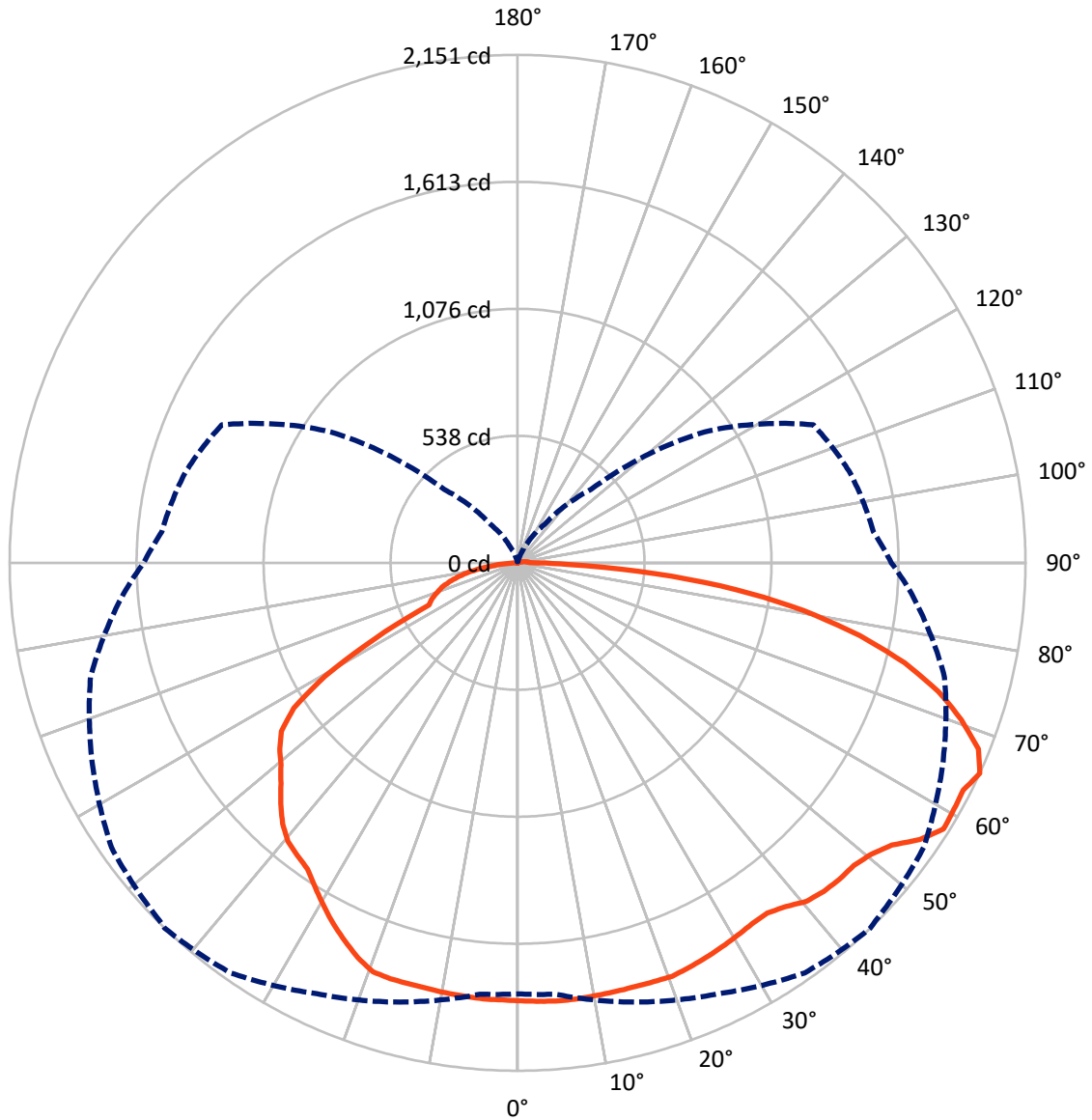
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 8.2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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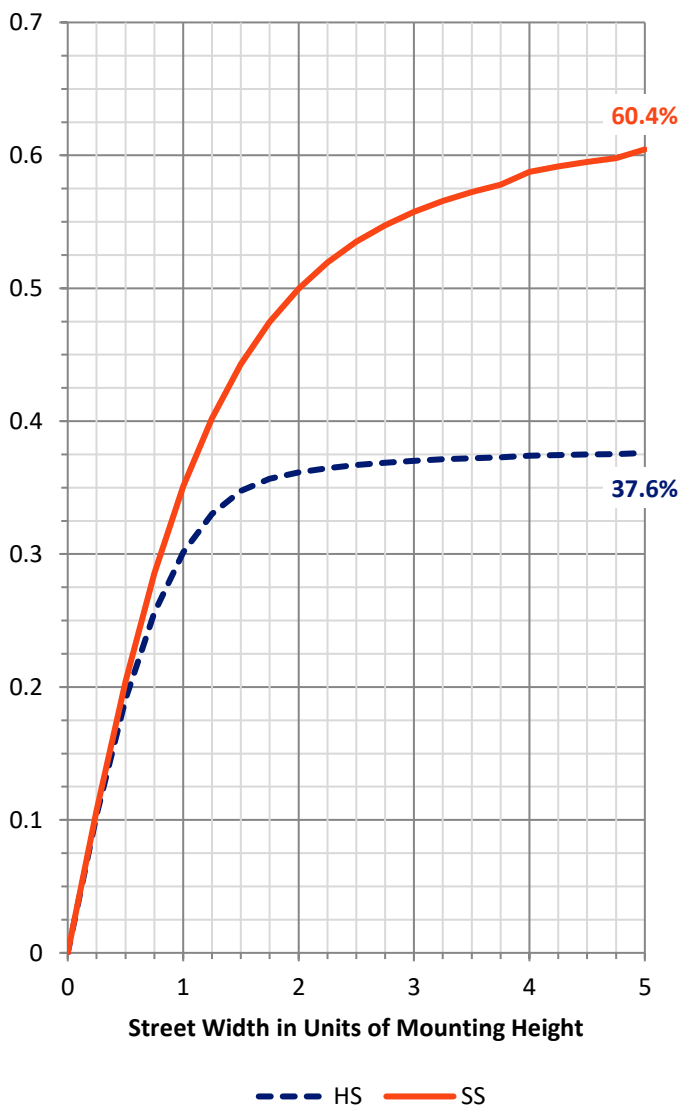
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3034.4	2.1	3036.5
	% Fixture	37.9	0.0	37.9
Street Side	Lumens	4950.2	27.1	4977.4
	% Fixture	61.8	0.3	62.1
Total	Lumens	7984.7	29.2	8013.9
	% Fixture	99.6	0.4	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.1	2.2
10°-20°	524.4	6.5
20°-30°	834.6	10.4
30°-40°	1069.3	13.3
40°-50°	1266.7	15.8
50°-60°	1387.3	17.3
60°-70°	1318.7	16.5
70°-80°	1049.9	13.1
80°-90°	356.7	4.5
90°-100°	18.8	0.2
100°-110°	6.2	0.1
110°-120°	1.3	0.0
120°-130°	0.8	0.0
130°-140°	0.6	0.0
140°-150°	0.6	0.0
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-90°	7984.7	99.6
0°-180°	8013.9	100.0

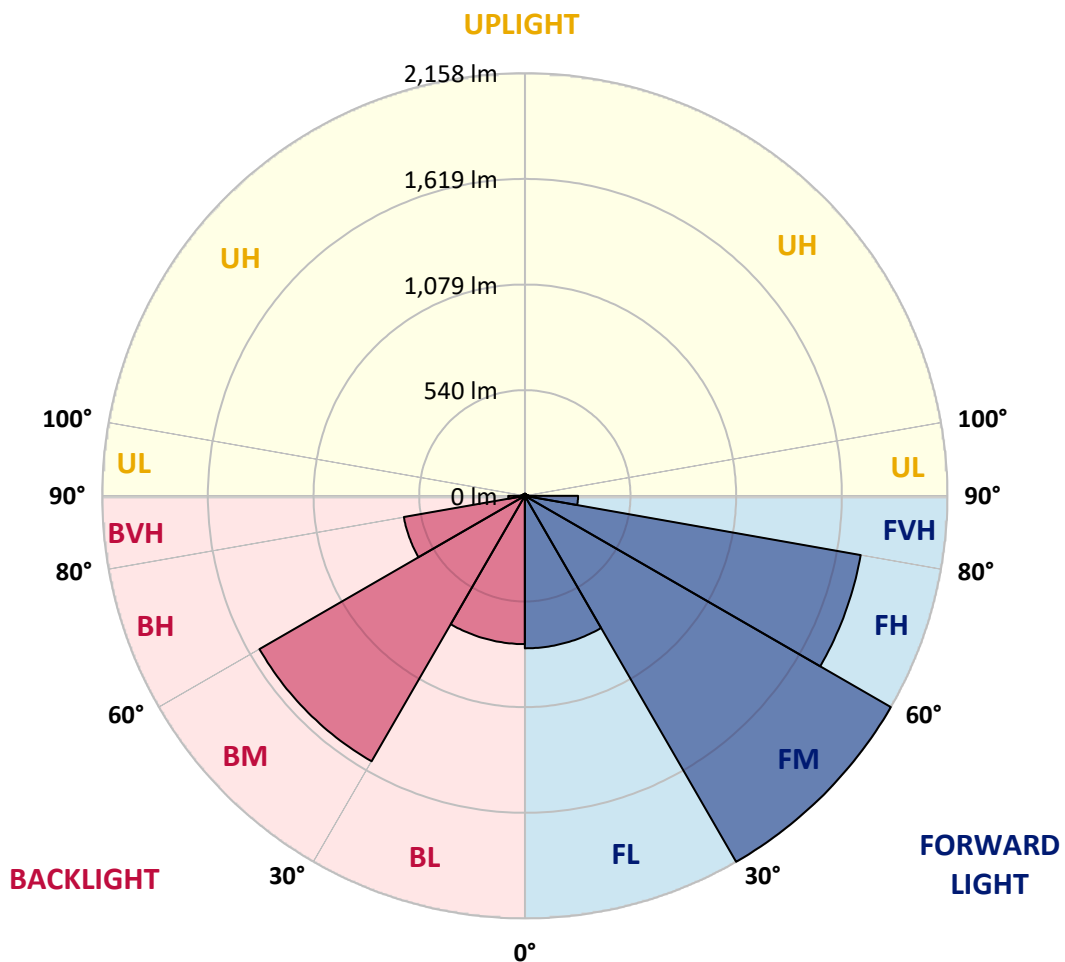


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	778.9	9.7			
FM (30°-60°)	2158.1	26.9			
FH (60°-80°)	1741.5	21.7			G1/1800
FVH (80°-90°)	271.7	3.4			G3/500
BL (0°-30°)	757.2	9.4	B2/1000		
BM (30°-60°)	1565.2	19.5	B2/2500		
BH (60°-80°)	627.1	7.8	B2/1000		G2/1000
BVH (80°-90°)	85.0	1.1			G1/100
UL (90°-100°)	18.8	0.2		U2/50	
UH (100°-180°)	10.5	0.1		U2/50	

BUG Rating: B2-U2-G3
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	1855.2	1855.2	1855.2	1855.2	1855.2	1855.2	1855.2	1855.2	1855.2	1855.2	1855.2
2.5°	1862.3	1860.9	1860.9	1860.9	1860.9	1859.4	1860.9	1858.0	1859.4	1855.2	1855.2
5°	1866.5	1863.7	1865.1	1865.1	1865.1	1863.7	1865.1	1860.9	1862.3	1856.6	1855.2
7.5°	1867.9	1866.5	1866.5	1866.5	1866.5	1863.7	1865.1	1862.3	1860.9	1856.6	1853.8
10°	1867.9	1866.5	1866.5	1866.5	1865.1	1862.3	1863.7	1859.4	1859.4	1853.8	1850.9
12.5°	1867.9	1866.5	1867.9	1865.1	1865.1	1862.3	1862.3	1858.0	1858.0	1850.9	1848.1
15°	1866.5	1865.1	1865.1	1866.5	1865.1	1862.3	1862.3	1858.0	1856.6	1848.1	1845.3
17.5°	1865.1	1863.7	1865.1	1866.5	1867.9	1865.1	1866.5	1859.4	1856.6	1848.1	1843.9
20°	1866.5	1865.1	1866.5	1869.3	1869.3	1869.3	1869.3	1862.3	1856.6	1848.1	1841.0
22.5°	1862.3	1862.3	1862.3	1862.3	1865.1	1860.9	1860.9	1856.6	1849.5	1842.4	1835.4
25°	1852.4	1852.4	1853.8	1855.2	1855.2	1852.4	1850.9	1846.7	1841.0	1832.5	1824.0
27.5°	1841.0	1841.0	1842.4	1842.4	1845.3	1842.4	1841.0	1835.4	1829.7	1819.8	1809.9
30°	1828.3	1828.3	1828.3	1831.1	1832.5	1832.5	1831.1	1824.0	1816.9	1805.6	1792.9
32.5°	1814.1	1814.1	1818.4	1821.2	1822.6	1822.6	1822.6	1814.1	1805.6	1791.5	1773.0
35°	1802.8	1802.8	1808.5	1818.4	1824.0	1821.2	1819.8	1814.1	1801.4	1785.8	1756.1
37.5°	1809.9	1809.9	1822.6	1836.8	1849.5	1846.7	1846.7	1836.8	1819.8	1794.3	1757.5
40°	1826.9	1828.3	1848.1	1866.5	1882.1	1884.9	1884.9	1873.6	1848.1	1815.5	1764.6
42.5°	1831.1	1833.9	1853.8	1880.7	1894.8	1901.9	1901.9	1886.3	1859.4	1821.2	1761.7
45°	1831.1	1832.5	1855.2	1883.5	1906.2	1911.8	1911.8	1894.8	1860.9	1824.0	1751.8
47.5°	1831.1	1829.7	1849.5	1889.2	1911.8	1916.1	1916.1	1897.7	1865.1	1818.4	1737.6
50°	1826.9	1833.9	1863.7	1894.8	1934.5	1940.2	1938.7	1918.9	1873.6	1825.4	1726.3
52.5°	1836.8	1835.4	1875.0	1937.3	1972.7	1985.5	1986.9	1961.4	1914.7	1845.3	1719.2
55°	1877.8	1879.3	1917.5	1989.7	2043.5	2067.6	2064.8	2032.2	1965.6	1884.9	1739.1
57.5°	1892.0	1906.2	1961.4	2023.7	2105.8	2127.1	2127.1	2087.4	2006.7	1916.1	1753.2
60°	1863.7	1869.3	1937.3	2043.5	2118.6	2122.8	2124.3	2095.9	2011.0	1899.1	1724.9
62.5°	1856.6	1867.9	1920.3	2039.3	2087.4	2118.6	2117.2	2078.9	2006.7	1886.3	1715.0
65°	1825.4	1833.9	1926.0	2013.8	2120.0	2151.2	2144.1	2100.2	1988.3	1872.2	1683.8
67.5°	1761.7	1770.2	1855.2	1978.4	2074.7	2104.4	2111.5	2060.5	1944.4	1805.6	1617.3
70°	1655.5	1668.3	1754.6	1875.0	1977.0	1994.0	1991.1	1960.0	1843.9	1695.2	1519.6
72.5°	1506.8	1526.6	1635.7	1750.4	1838.2	1863.7	1852.4	1816.9	1722.1	1562.0	1386.4
75°	1349.6	1368.0	1454.4	1583.3	1675.3	1692.3	1683.8	1641.3	1545.0	1387.8	1229.2
77.5°	1178.3	1193.8	1267.5	1399.2	1467.2	1481.3	1485.6	1428.9	1338.3	1196.7	1055.0
80°	947.4	954.5	1053.6	1140.0	1199.5	1227.8	1225.0	1182.5	1091.9	974.3	832.7
82.5°	699.6	705.3	781.7	855.4	909.2	934.7	920.5	878.0	805.8	705.3	597.6
85°	429.1	419.2	481.5	536.7	569.3	586.3	572.1	548.1	484.3	405.0	330.0
87.5°	154.4	145.9	174.2	182.7	219.5	213.8	226.6	182.7	147.3	104.8	73.6
90°	68.0	68.0	66.6	63.7	58.1	52.4	51.0	42.5	31.2	19.8	7.1
92.5°	62.3	62.3	60.9	58.1	52.4	46.7	46.7	38.2	28.3	18.4	7.1
95°	52.4	52.4	51.0	48.1	43.9	39.7	39.7	31.2	24.1	15.6	5.7
97.5°	41.1	41.1	39.7	38.2	34.0	31.2	31.2	25.5	18.4	11.3	4.2
100°	31.2	31.2	29.7	28.3	26.9	24.1	22.7	18.4	14.2	8.5	2.8
102.5°	22.7	22.7	22.7	21.2	18.4	17.0	17.0	14.2	9.9	7.1	2.8
105°	15.6	15.6	15.6	14.2	12.7	11.3	11.3	9.9	7.1	4.2	1.4
107.5°	9.9	9.9	9.9	9.9	8.5	7.1	7.1	5.7	4.2	2.8	1.4
110°	5.7	4.2	5.7	5.7	5.7	4.2	4.2	2.8	2.8	1.4	1.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
112.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.4	1.4	1.4	1.4
115°	1.4	1.4	1.4	2.8	2.8	1.4	1.4	1.4	1.4	1.4	1.4
117.5°	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
120°	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
122.5°	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
125°	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
127.5°	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
130°	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
132.5°	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
135°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
137.5°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
140°	0.0	1.4	1.4	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4
142.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
145°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
147.5°	1.4	1.4	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
150°	1.4	1.4	1.4	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4
152.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
155°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
157.5°	1.4	1.4	1.4	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
160°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
162.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
165°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
167.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
170°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
172.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
175°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
177.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
180°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1855.2	1855.2	1855.2	1855.2	1855.2	1855.2	1855.2	1855.2	1855.2	1855.2	1855.2
2.5°	1855.2	1853.8	1852.4	1853.8	1852.4	1852.4	1850.9	1850.9	1849.5	1849.5	1848.1
5°	1855.2	1853.8	1852.4	1853.8	1850.9	1852.4	1852.4	1850.9	1849.5	1848.1	1846.7
7.5°	1853.8	1853.8	1850.9	1852.4	1849.5	1849.5	1848.1	1848.1	1846.7	1846.7	1845.3
10°	1850.9	1849.5	1849.5	1849.5	1846.7	1846.7	1845.3	1843.9	1843.9	1842.4	1841.0
12.5°	1848.1	1846.7	1845.3	1845.3	1843.9	1842.4	1841.0	1841.0	1839.6	1838.2	1836.8
15°	1843.9	1842.4	1842.4	1842.4	1841.0	1841.0	1839.6	1838.2	1835.4	1833.9	1832.5
17.5°	1842.4	1841.0	1842.4	1842.4	1841.0	1842.4	1839.6	1836.8	1833.9	1832.5	1831.1
20°	1841.0	1841.0	1841.0	1839.6	1838.2	1836.8	1835.4	1833.9	1832.5	1831.1	1829.7
22.5°	1833.9	1832.5	1829.7	1821.2	1811.3	1804.2	1802.8	1805.6	1805.6	1805.6	1801.4
25°	1821.2	1816.9	1805.6	1790.0	1773.0	1761.7	1754.6	1754.6	1753.2	1750.4	1749.0
27.5°	1805.6	1797.1	1777.3	1757.5	1733.4	1719.2	1702.2	1692.3	1688.1	1686.7	1683.8
30°	1784.4	1771.6	1746.1	1720.6	1690.9	1671.1	1644.2	1627.2	1617.3	1613.0	1610.2
32.5°	1758.9	1746.1	1716.4	1685.2	1649.8	1621.5	1587.5	1560.6	1542.2	1533.7	1529.5
35°	1741.9	1723.5	1689.5	1652.7	1617.3	1576.2	1535.1	1498.3	1470.0	1460.1	1454.4
37.5°	1734.8	1717.8	1681.0	1644.2	1604.5	1555.0	1506.8	1454.4	1416.2	1399.2	1393.5
40°	1739.1	1717.8	1676.7	1637.1	1590.4	1535.1	1471.4	1406.3	1356.7	1332.6	1327.0
42.5°	1729.1	1705.1	1656.9	1614.4	1556.4	1494.1	1416.2	1341.1	1274.6	1254.7	1246.2
45°	1712.2	1682.4	1630.0	1576.2	1515.3	1438.8	1358.1	1261.8	1182.5	1158.4	1151.3
47.5°	1695.2	1654.1	1591.8	1542.2	1468.6	1379.4	1284.5	1176.8	1077.7	1053.6	1049.4
50°	1669.7	1631.4	1564.9	1506.8	1431.8	1328.4	1220.7	1086.2	974.3	933.3	921.9
52.5°	1658.3	1608.8	1545.0	1499.7	1409.1	1291.5	1155.6	1011.1	849.7	798.7	787.4
55°	1669.7	1607.4	1539.4	1495.5	1390.7	1244.8	1077.7	893.6	706.7	652.9	637.3
57.5°	1649.8	1596.0	1528.0	1478.5	1342.5	1148.5	964.4	727.9	533.9	464.5	458.8
60°	1624.3	1547.9	1484.1	1438.8	1242.0	967.2	750.6	518.3	321.5	262.0	250.7
62.5°	1614.4	1535.1	1461.5	1406.3	1107.4	710.9	457.4	262.0	133.1	93.5	85.0
65°	1583.3	1512.5	1460.1	1382.2	967.2	439.0	196.8	77.9	5.7	4.2	4.2
67.5°	1523.8	1451.6	1416.2	1370.9	953.1	419.2	178.4	70.8	2.8	0.0	0.0
70°	1421.8	1365.2	1341.1	1317.0	912.0	388.0	162.9	63.7	1.4	0.0	0.0
72.5°	1287.3	1249.1	1244.8	1242.0	852.5	358.3	145.9	56.6	1.4	0.0	0.0
75°	1152.8	1106.0	1113.1	1130.1	778.9	317.2	126.0	49.6	1.4	0.0	0.0
77.5°	982.8	948.8	965.8	994.2	682.6	269.1	103.4	39.7	1.4	0.0	0.0
80°	773.2	750.6	788.8	814.3	558.0	213.8	77.9	28.3	0.0	0.0	0.0
82.5°	549.5	536.7	572.1	604.7	414.9	151.5	53.8	18.4	0.0	0.0	0.0
85°	296.0	288.9	322.9	358.3	249.2	86.4	26.9	8.5	0.0	0.0	0.0
87.5°	73.6	68.0	69.4	83.6	60.9	18.4	4.2	1.4	0.0	0.0	0.0
90°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
102.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
110°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
115°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
117.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
122.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
125°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
127.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
130°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
135°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
147.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
162.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
165°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
167.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
170°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
172.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
175°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
177.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
180°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4

(END OF REPORT)