

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: P821382

Luminaire Tested: **TT-D4-750-24VDC-CQ-UPL**

Issue Date: 7/23/2020

Test Information

Test Method: LM-79-08
Report Number: P821382
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-3) AND
Test Lab: INNOVATION CENTER
Issue Date: 7/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D4-750-24VDC-CQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT WITH UPLIGHT
5000K, 70 CRI LEDS AND CONCENTRATED DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

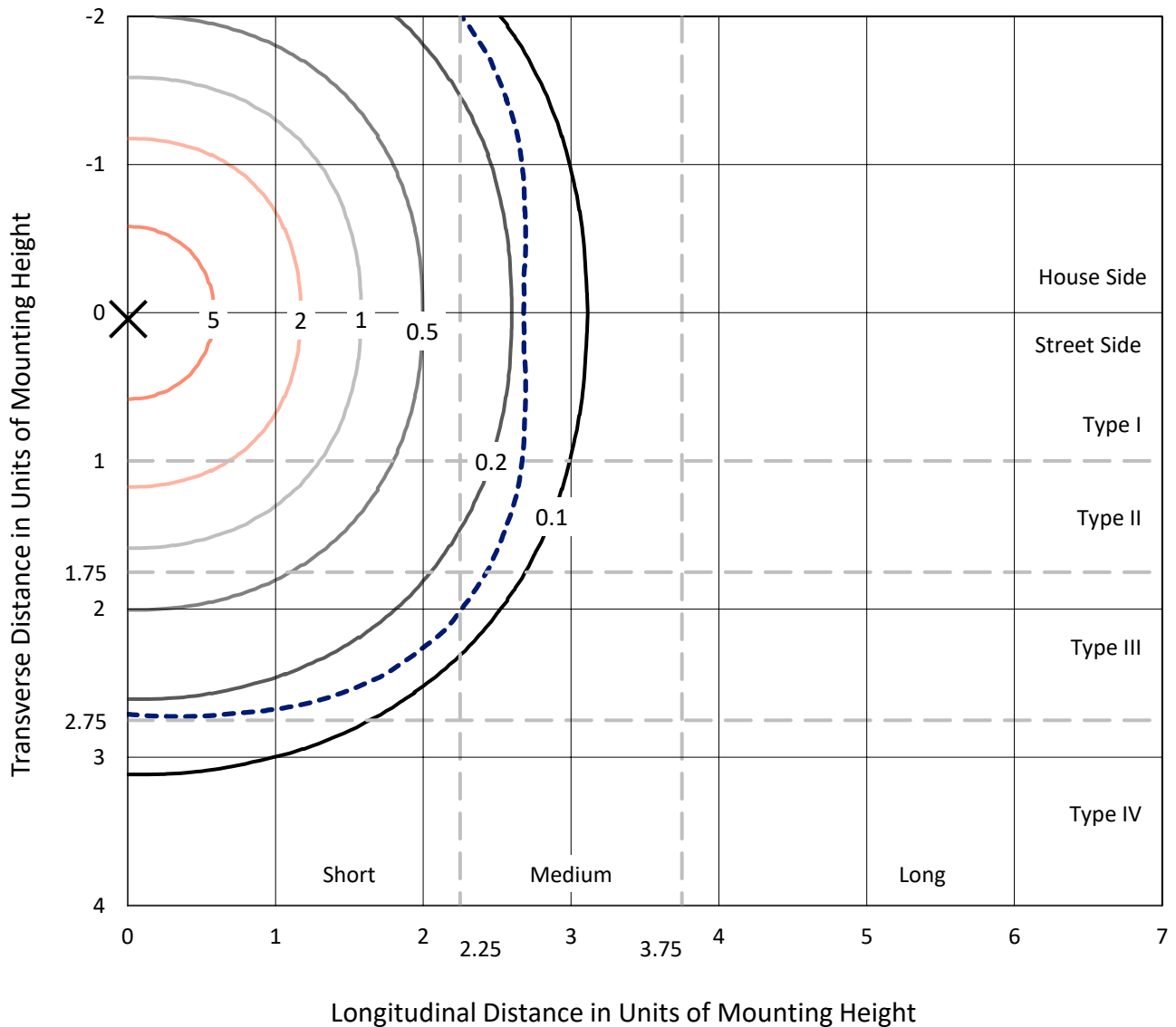
Lumens per Lamp: N/A
Luminaire Lumens: 8384.4 lumens
Efficiency: N/A
Efficacy: 147.1 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B2 - U4 - G1

Input Watts (W): 57
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

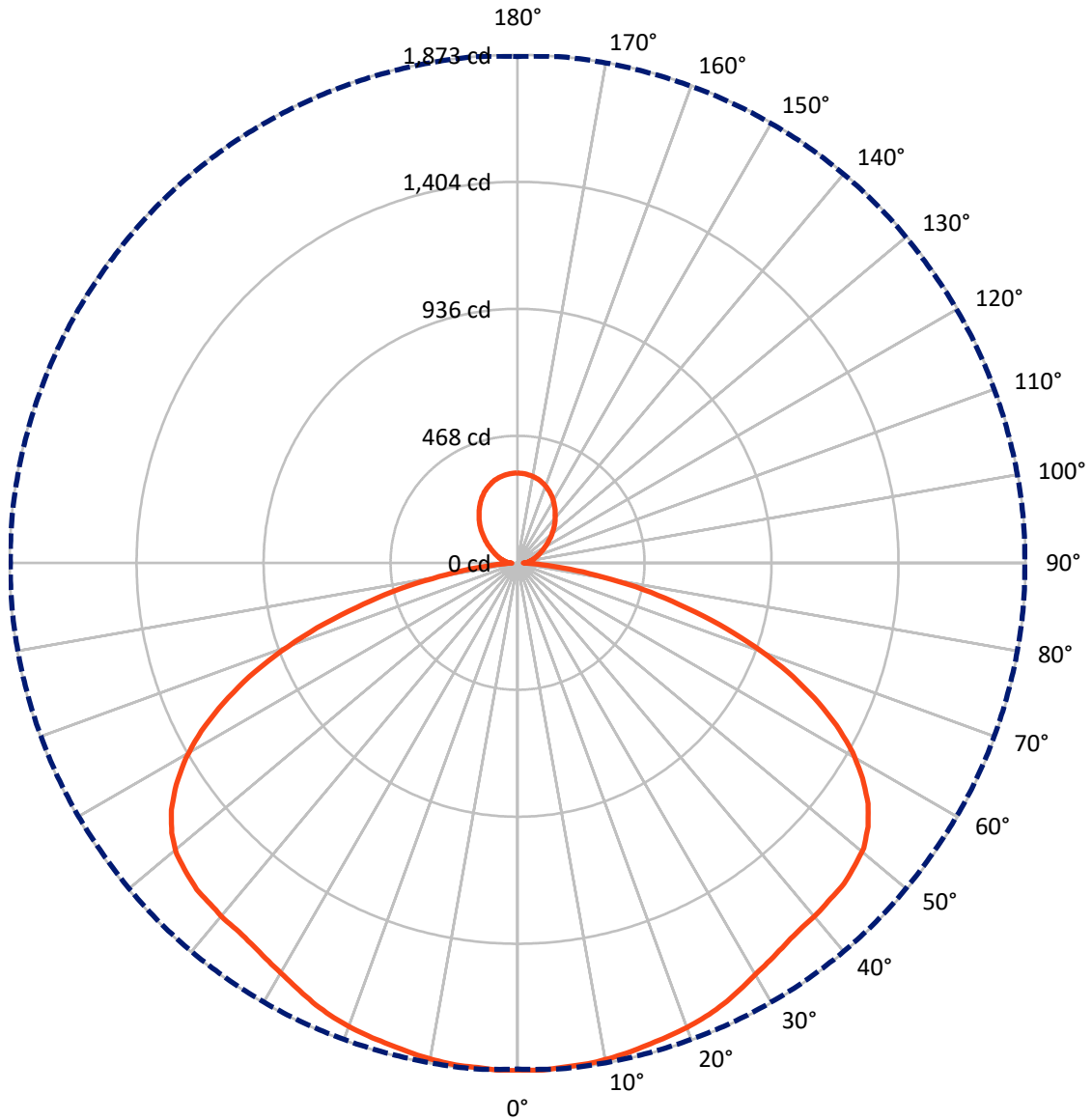
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 8.3 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral - - - Horizontal Cone Through 2.5-Deg Vertical

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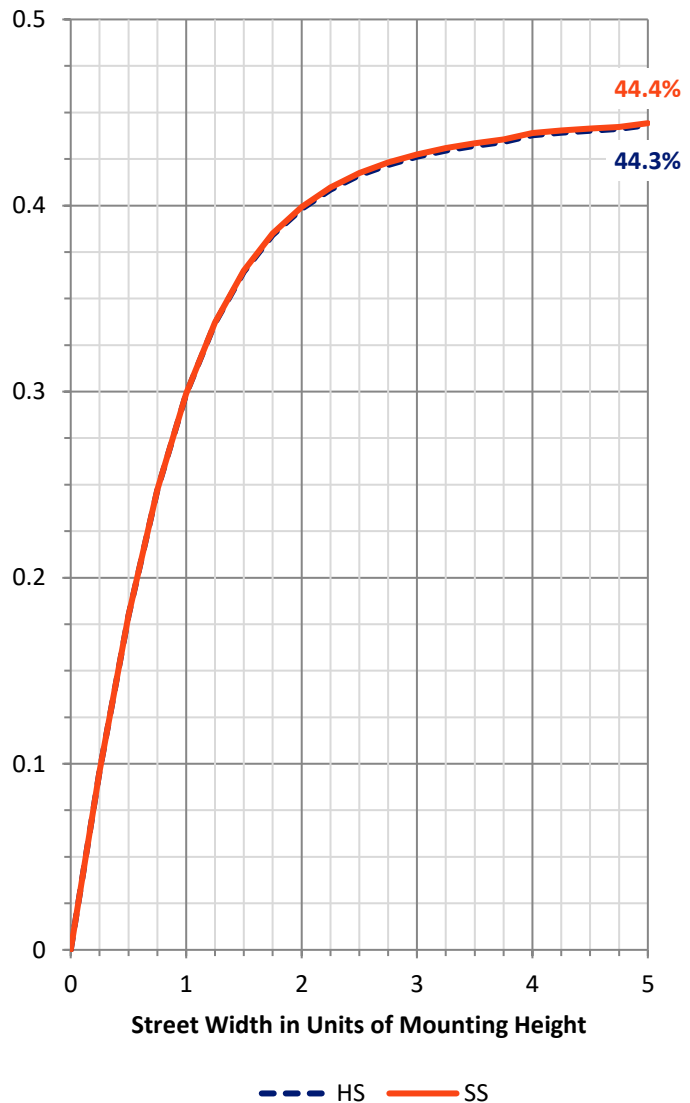
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3742.2	450.0	4192.2
	% Fixture	44.6	5.4	50.0
Street Side	Lumens	3742.2	450.0	4192.2
	% Fixture	44.6	5.4	50.0
Total	Lumens	7484.3	900.0	8384.4
	% Fixture	89.3	10.7	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.0	2.1
10°-20°	521.2	6.2
20°-30°	828.9	9.9
30°-40°	1090.4	13.0
40°-50°	1334.6	15.9
50°-60°	1445.5	17.2
60°-70°	1243.6	14.8
70°-80°	699.1	8.3
80°-90°	142.9	1.7
90°-100°	46.1	0.6
100°-110°	71.4	0.9
110°-120°	99.4	1.2
120°-130°	128.8	1.5
130°-140°	150.0	1.8
140°-150°	152.1	1.8
150°-160°	131.9	1.6
160°-170°	89.0	1.1
170°-180°	31.3	0.4
0°-90°	7484.3	89.3
0°-180°	8384.4	100.0

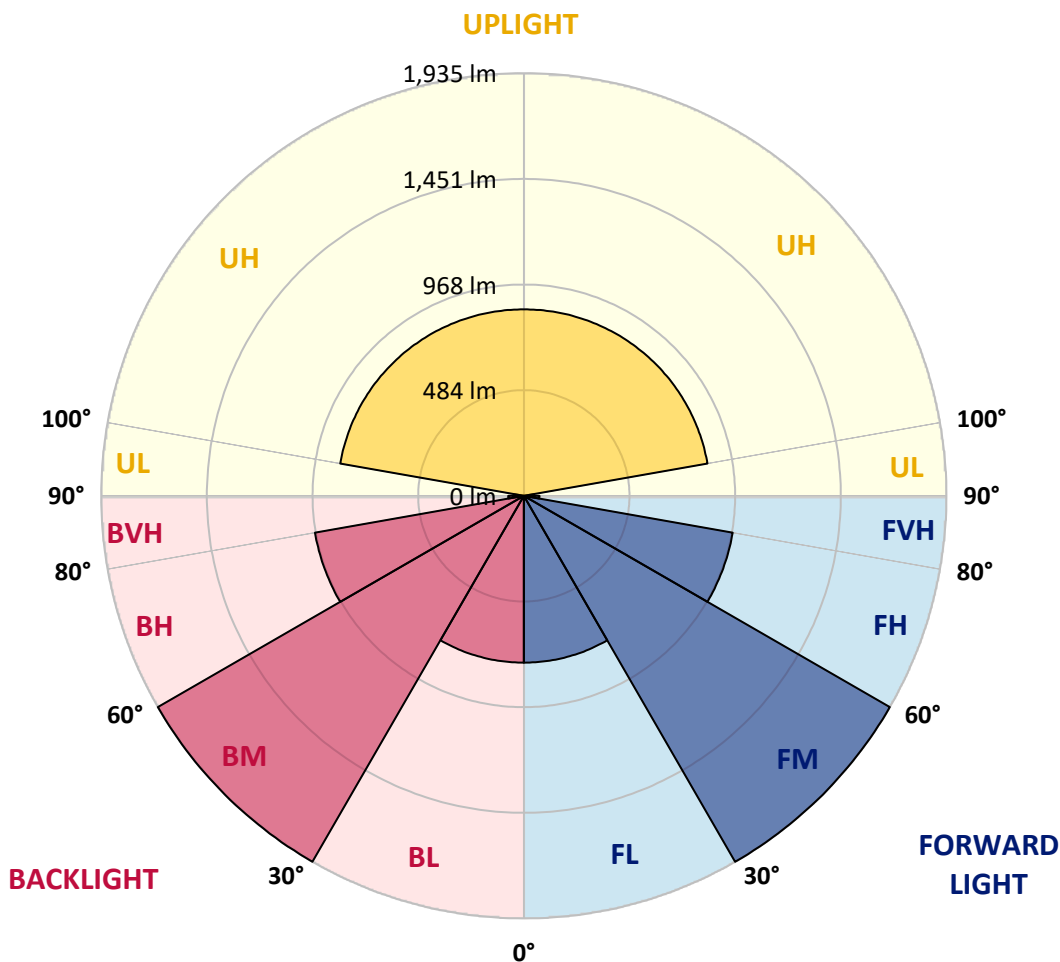


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	764.1	9.1			
FM (30°-60°)	1935.3	23.1			
FH (60°-80°)	971.4	11.6			G1/1800
FVH (80°-90°)	71.5	0.9			G1/100
BL (0°-30°)	764.1	9.1	B2/1000		
BM (30°-60°)	1935.3	23.1	B2/2500		
BH (60°-80°)	971.4	11.6	B2/1000		G1/1800
BVH (80°-90°)	71.5	0.9			G1/100
UL (90°-100°)	46.1	0.6		U2/50	
UH (100°-180°)	853.9	10.2		U4/1000	

BUG Rating: B2-U4-G1
 Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1871.3	1871.3	1871.3	1871.3	1871.3	1871.3	1871.3	1871.3	1871.3	1871.3	1871.3
2.5°	1866.5	1872.5	1870.1	1870.1	1870.1	1870.1	1867.7	1870.1	1870.1	1871.3	1870.1
5°	1867.7	1866.5	1866.5	1867.7	1867.7	1868.9	1866.5	1867.7	1868.9	1868.9	1870.1
7.5°	1864.1	1865.3	1862.9	1865.3	1862.9	1864.1	1864.1	1865.3	1864.1	1865.3	1867.7
10°	1857.0	1858.2	1857.0	1857.0	1857.0	1859.4	1854.6	1858.2	1857.0	1858.2	1857.0
12.5°	1843.9	1849.9	1847.5	1849.9	1849.9	1849.9	1846.3	1848.7	1849.9	1849.9	1849.9
15°	1837.9	1839.1	1835.6	1840.3	1841.5	1842.7	1837.9	1840.3	1840.3	1841.5	1842.7
17.5°	1824.9	1830.8	1829.6	1833.2	1832.0	1835.6	1834.4	1833.2	1832.0	1834.4	1832.0
20°	1815.3	1821.3	1820.1	1823.7	1824.9	1828.4	1824.9	1824.9	1821.3	1822.5	1826.0
22.5°	1805.8	1808.2	1808.2	1811.8	1811.8	1815.3	1811.8	1810.6	1810.6	1809.4	1812.9
25°	1790.3	1791.5	1790.3	1793.9	1796.3	1798.7	1797.5	1795.1	1793.9	1793.9	1792.7
27.5°	1765.3	1770.1	1772.5	1777.2	1778.4	1782.0	1777.2	1777.2	1774.9	1772.5	1773.7
30°	1746.3	1748.7	1748.7	1759.4	1759.4	1765.3	1759.4	1758.2	1757.0	1755.8	1753.4
32.5°	1728.4	1732.0	1735.6	1743.9	1749.9	1752.2	1748.7	1746.3	1740.3	1736.8	1735.6
35°	1714.1	1715.3	1722.5	1734.4	1741.5	1747.5	1742.7	1736.8	1728.4	1722.5	1727.2
37.5°	1703.4	1704.6	1715.3	1730.8	1743.9	1748.7	1741.5	1732.0	1718.9	1711.8	1709.4
40°	1693.9	1701.1	1713.0	1734.4	1748.7	1755.8	1749.9	1736.8	1717.7	1703.4	1702.2
42.5°	1689.1	1692.7	1710.6	1735.6	1755.8	1765.3	1757.0	1739.1	1715.3	1698.7	1697.5
45°	1677.2	1688.0	1704.6	1736.8	1759.4	1771.3	1759.4	1736.8	1708.2	1689.1	1685.6
47.5°	1667.7	1671.3	1697.5	1734.4	1761.8	1771.3	1759.4	1730.8	1695.1	1670.1	1667.7
50°	1645.1	1653.4	1679.6	1718.9	1751.0	1760.6	1746.3	1708.2	1667.7	1640.3	1635.6
52.5°	1610.6	1617.7	1648.7	1697.5	1728.4	1739.1	1717.7	1677.2	1629.6	1596.3	1596.3
55°	1557.0	1567.7	1599.9	1649.9	1689.1	1698.7	1673.7	1630.8	1577.3	1543.9	1542.7
57.5°	1492.7	1499.9	1534.4	1589.2	1627.2	1641.5	1616.5	1568.9	1515.4	1476.1	1472.5
60°	1409.4	1418.9	1455.8	1508.2	1547.5	1559.4	1538.0	1490.4	1435.6	1393.9	1393.9
62.5°	1309.4	1320.1	1357.0	1410.6	1451.1	1468.9	1439.2	1393.9	1336.8	1296.3	1292.8
65°	1192.8	1202.3	1235.6	1291.6	1333.2	1346.3	1323.7	1276.1	1221.3	1183.2	1179.7
67.5°	1061.8	1074.9	1108.2	1155.9	1191.6	1208.2	1194.0	1151.1	1094.0	1054.7	1051.1
70°	920.2	929.7	955.9	999.9	1040.4	1052.3	1030.9	1002.3	948.7	913.0	908.3
72.5°	769.0	777.3	798.7	840.4	869.0	884.5	872.5	835.6	792.8	763.0	767.8
75°	616.6	615.4	639.2	669.0	695.2	705.9	697.6	673.8	634.5	609.5	608.3
77.5°	464.2	476.2	484.5	509.5	530.9	539.2	527.3	508.3	478.5	458.3	461.9
80°	326.2	319.0	334.5	350.0	364.3	372.6	365.4	354.7	334.5	319.0	316.6
82.5°	200.0	194.0	201.2	215.5	225.0	227.4	228.6	215.5	207.1	195.2	197.6
85°	88.1	89.3	95.2	104.8	105.9	107.1	107.1	104.8	95.2	94.0	91.7
87.5°	21.4	21.4	22.6	26.2	26.2	27.4	27.4	23.8	22.6	20.2	21.4
90°	32.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
92.5°	37.6	37.1	37.1	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6
95°	42.7	42.7	42.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7
97.5°	48.3	48.3	48.3	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8
100°	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9
102.5°	60.5	60.5	60.5	60.5	60.5	60.5	60.5	61.0	60.5	60.5	60.5
105°	67.1	67.1	67.1	67.1	67.1	67.1	67.1	68.1	67.1	67.1	67.1
107.5°	74.2	74.2	74.7	74.7	74.7	74.7	74.7	75.2	74.7	74.7	74.7
110°	81.3	81.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	89.9	89.9	90.9	90.9	90.9	90.9	91.4	91.4	90.9	90.9	90.9
115°	98.6	98.6	99.6	99.6	99.6	99.6	100.6	100.6	99.6	99.6	99.6
117.5°	108.8	108.8	109.2	109.8	109.8	109.8	110.8	110.8	109.8	109.8	109.8
120°	118.9	118.9	118.9	119.9	119.9	119.9	121.0	121.0	119.9	119.9	119.9
122.5°	130.6	130.6	131.1	131.6	131.6	131.6	132.6	132.6	132.1	132.1	131.6
125°	142.3	142.3	143.3	143.3	143.3	143.3	144.3	144.3	144.3	144.3	143.3
127.5°	155.0	155.0	156.0	156.0	156.0	156.0	157.0	157.0	157.0	157.0	156.0
130°	167.7	167.7	168.7	168.7	168.7	168.7	169.7	169.7	169.7	169.7	168.7
132.5°	180.9	180.9	181.4	181.4	181.4	181.9	182.4	182.4	182.4	182.4	181.9
135°	194.1	194.1	194.1	194.1	194.1	195.1	195.1	195.1	195.1	195.1	195.1
137.5°	206.8	206.3	206.8	206.3	206.8	207.3	207.3	207.3	207.3	207.3	207.3
140°	219.5	218.5	219.5	218.5	219.5	219.5	219.5	219.5	219.5	219.5	219.5
142.5°	231.2	230.7	231.2	230.2	231.2	231.2	231.2	231.2	231.2	231.2	231.2
145°	242.9	242.9	242.9	241.9	242.9	242.9	242.9	242.9	242.9	242.9	242.9
147.5°	255.1	254.6	255.1	254.1	255.1	255.1	255.1	255.1	255.1	255.1	255.1
150°	267.3	266.3	267.3	266.3	267.3	267.3	267.3	267.3	267.3	267.3	267.3
152.5°	277.0	276.5	277.5	276.5	277.0	277.0	277.5	277.0	277.0	277.0	277.0
155°	286.6	286.6	287.6	286.6	286.6	286.6	287.6	286.6	286.6	286.6	286.6
157.5°	294.8	294.8	295.8	294.8	294.8	294.8	295.8	294.8	294.8	294.8	294.8
160°	302.9	302.9	303.9	302.9	302.9	302.9	303.9	302.9	302.9	302.9	302.9
162.5°	309.5	309.5	310.5	309.5	309.5	309.5	310.5	309.5	309.5	309.5	309.5
165°	316.1	316.1	317.1	316.1	316.1	316.1	317.1	316.1	316.1	316.1	316.1
167.5°	320.2	320.2	321.2	320.2	320.2	320.2	321.2	320.2	320.2	320.2	320.2
170°	324.2	324.2	325.2	324.2	324.2	324.2	325.2	324.2	324.2	324.2	324.2
172.5°	326.8	326.8	327.8	326.8	327.2	326.8	327.8	326.8	326.8	326.8	326.8
175°	329.3	329.3	330.3	329.3	330.3	329.3	330.3	329.3	329.3	329.3	329.3
177.5°	330.3	330.3	330.8	330.3	330.8	330.3	330.8	330.3	330.3	330.3	330.3
180°	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3

(END OF REPORT)