

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: P821388

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

Issue Date: 7/23/2020



Test Information

Test Method: LM-79-08
Report Number: P821388
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-MQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT WITH UPLIGHT
5000K, 70 CRI LEDS AND MEDIUM DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

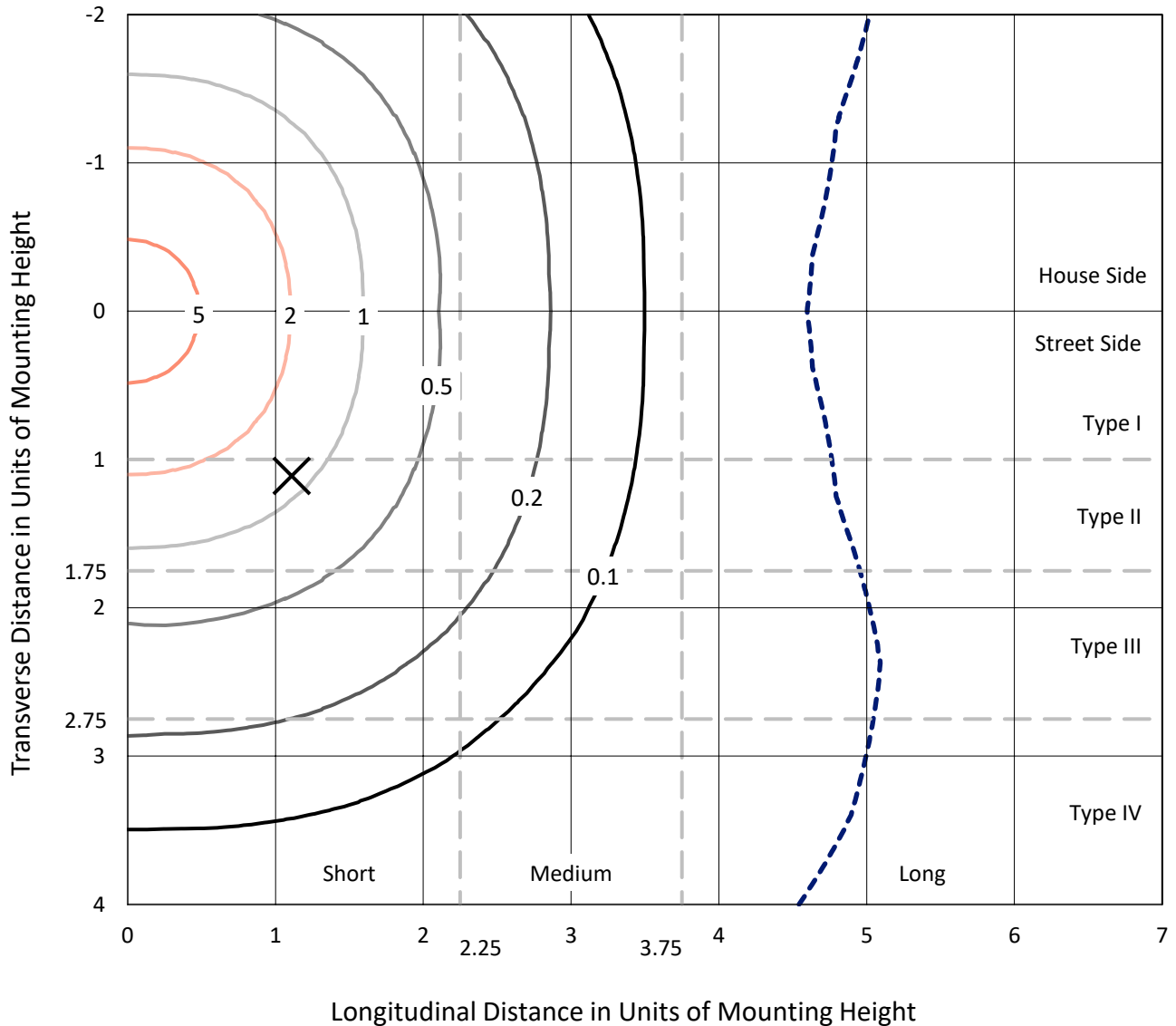
Lumens per Lamp: N/A
Luminaire Lumens: 8906.3 lumens
Efficiency: N/A
Efficacy: 156.3 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B3 - U4 - G2

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

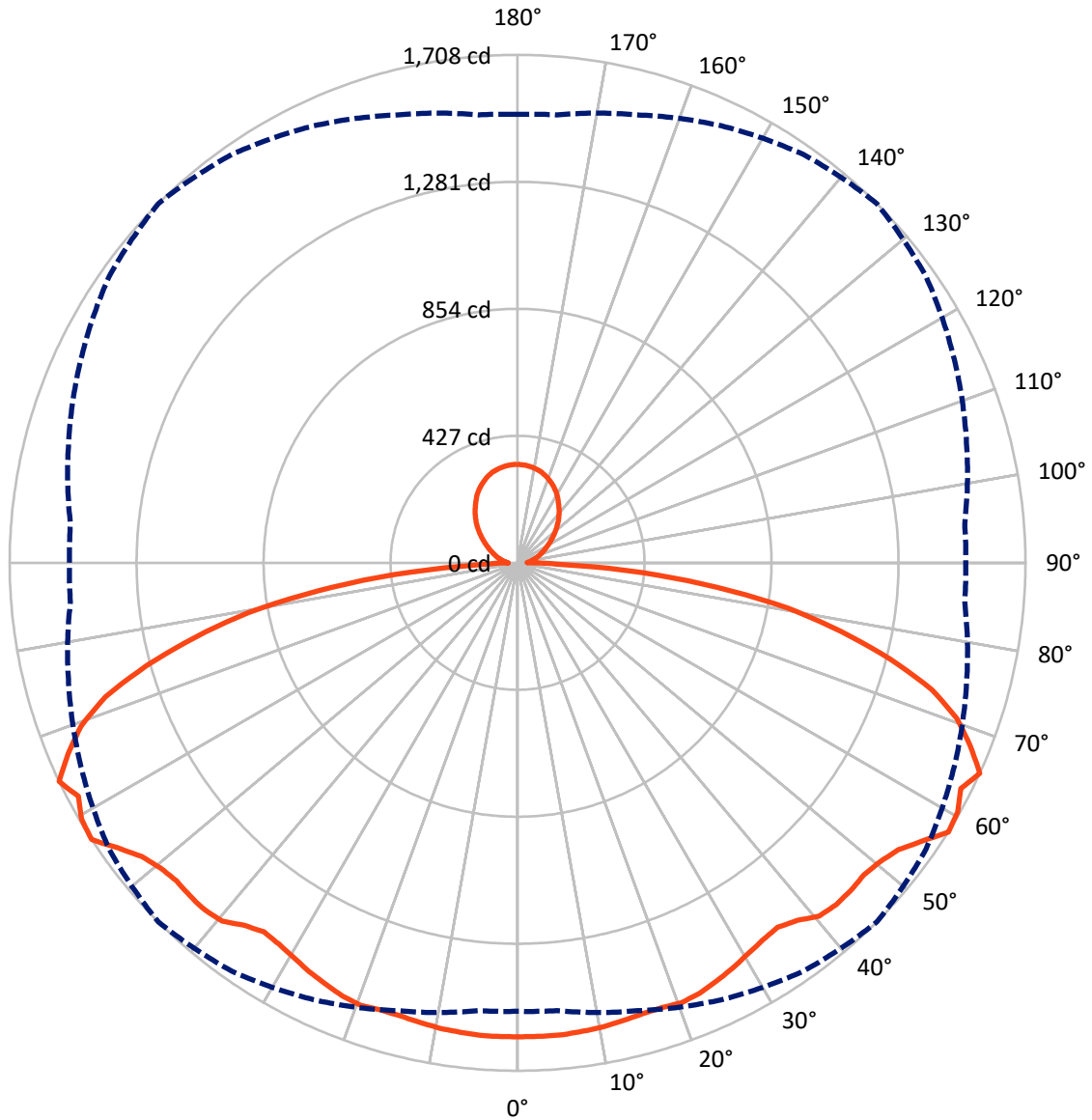
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 7.1 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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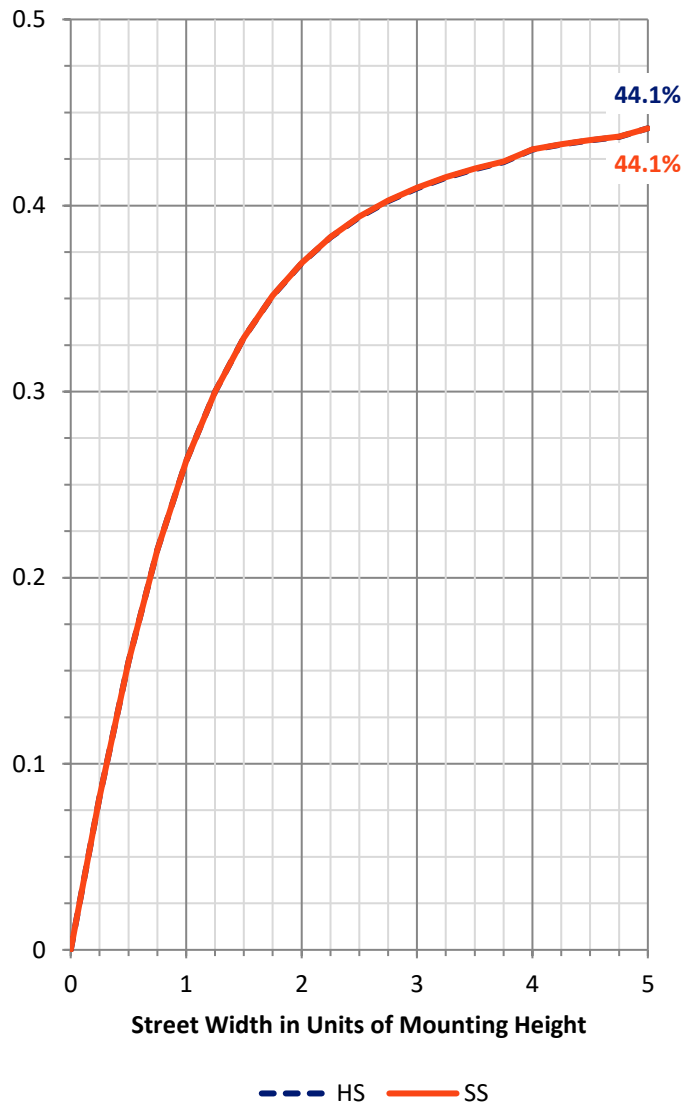
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4003.2	450.0	4453.2
	% Fixture	44.9	5.1	50.0
Street Side	Lumens	4003.2	450.0	4453.2
	% Fixture	44.9	5.1	50.0
Total	Lumens	8006.3	900.0	8906.3
	% Fixture	89.9	10.1	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.9	1.7
10°-20°	446.7	5.0
20°-30°	717.8	8.1
30°-40°	947.6	10.6
40°-50°	1185.5	13.3
50°-60°	1410.1	15.8
60°-70°	1529.4	17.2
70°-80°	1217.3	13.7
80°-90°	400.0	4.5
90°-100°	46.1	0.5
100°-110°	71.4	0.8
110°-120°	99.4	1.1
120°-130°	128.8	1.4
130°-140°	150.0	1.7
140°-150°	152.1	1.7
150°-160°	131.9	1.5
160°-170°	89.0	1.0
170°-180°	31.3	0.4
0°-90°	8006.3	89.9
0°-180°	8906.3	100.0

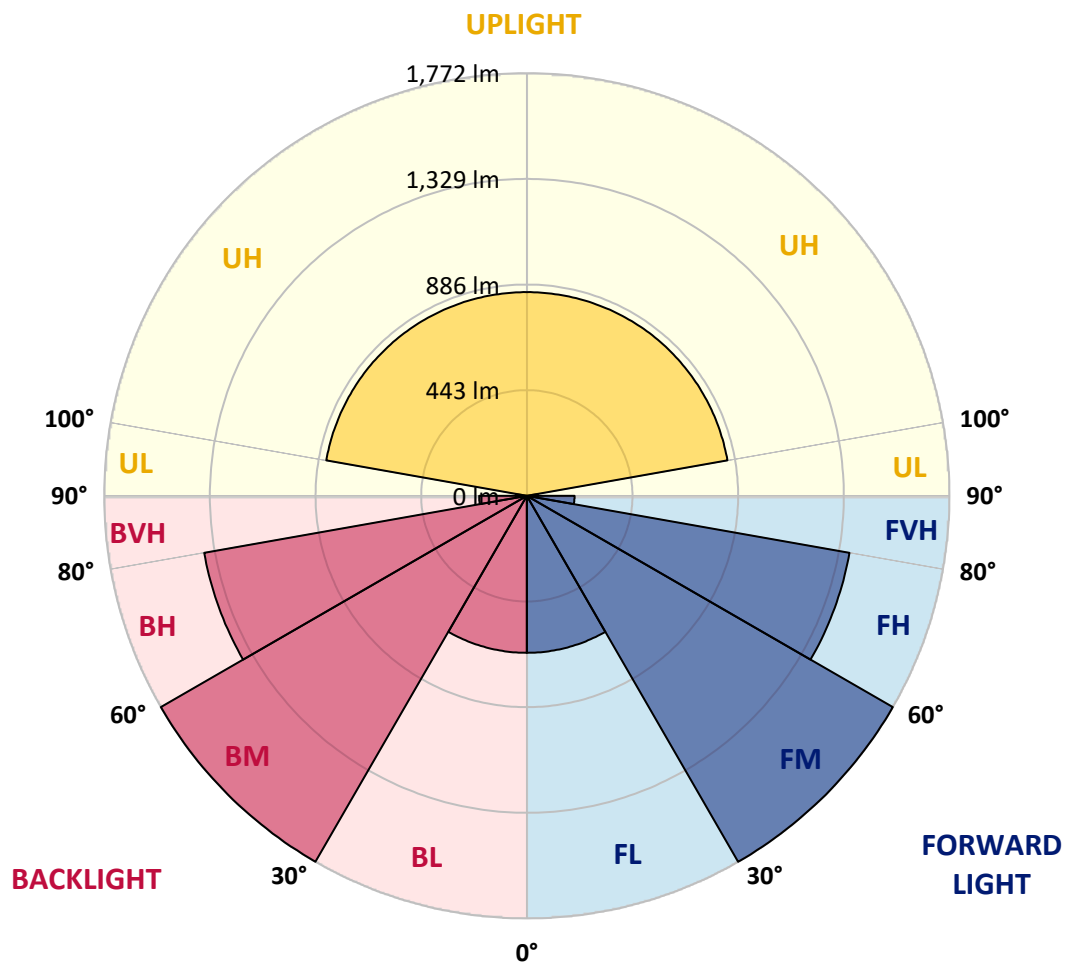


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	658.2	7.4			
FM (30°-60°)	1771.6	19.9			
FH (60°-80°)	1373.4	15.4			G1/1800
FVH (80°-90°)	200.0	2.2			G2/225
BL (0°-30°)	658.2	7.4	B2/1000		
BM (30°-60°)	1771.6	19.9	B2/2500		
BH (60°-80°)	1373.4	15.4	B3/2500		G1/1800
BVH (80°-90°)	200.0	2.2			G2/225
UL (90°-100°)	46.1	0.5		U2/50	
UH (100°-180°)	853.9	9.6		U4/1000	

BUG Rating: B3-U4-G2
 Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8
2.5°	1596.1	1594.9	1596.1	1594.9	1594.9	1593.8	1594.9	1594.9	1594.9	1594.9	1594.9
5°	1594.9	1593.8	1593.8	1594.9	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8
7.5°	1590.2	1590.2	1591.4	1590.2	1590.2	1590.2	1590.2	1590.2	1590.2	1591.4	1591.4
10°	1586.6	1585.4	1586.6	1586.6	1585.4	1586.6	1585.4	1586.6	1586.6	1586.6	1586.6
12.5°	1581.8	1580.7	1581.8	1581.8	1580.7	1579.5	1580.7	1580.7	1581.8	1581.8	1581.8
15°	1573.5	1573.5	1575.9	1574.7	1574.7	1573.5	1575.9	1574.7	1573.5	1574.7	1574.7
17.5°	1567.6	1567.6	1569.9	1572.3	1572.3	1572.3	1572.3	1571.1	1568.8	1569.9	1567.6
20°	1568.8	1569.9	1571.1	1574.7	1577.1	1578.3	1578.3	1574.7	1571.1	1572.3	1571.1
22.5°	1565.2	1564.0	1565.2	1567.6	1571.1	1571.1	1571.1	1566.4	1565.2	1564.0	1564.0
25°	1550.9	1550.9	1553.3	1555.7	1558.0	1556.9	1558.0	1555.7	1553.3	1550.9	1550.9
27.5°	1534.2	1534.2	1537.8	1540.2	1542.6	1542.6	1541.4	1539.0	1537.8	1535.4	1534.2
30°	1517.6	1517.6	1521.1	1523.5	1527.1	1525.9	1525.9	1522.3	1518.8	1516.4	1516.4
32.5°	1499.7	1498.5	1502.1	1508.1	1512.8	1512.8	1512.8	1505.7	1500.9	1498.5	1497.3
35°	1484.2	1484.2	1489.0	1499.7	1505.7	1505.7	1503.3	1498.5	1487.8	1484.2	1484.2
37.5°	1479.5	1483.1	1496.2	1511.6	1523.5	1525.9	1522.3	1509.2	1495.0	1484.2	1480.7
40°	1495.0	1498.5	1515.2	1540.2	1558.0	1561.6	1558.0	1539.0	1514.0	1497.3	1496.2
42.5°	1497.3	1499.7	1520.0	1548.5	1565.2	1571.1	1565.2	1546.1	1518.8	1498.5	1497.3
45°	1489.0	1490.2	1514.0	1543.8	1564.0	1571.1	1564.0	1541.4	1512.8	1490.2	1489.0
47.5°	1478.3	1480.7	1506.9	1537.8	1562.8	1567.6	1561.6	1536.6	1504.5	1481.9	1478.3
50°	1470.0	1477.1	1500.9	1535.4	1565.2	1579.5	1565.2	1531.9	1499.7	1474.7	1470.0
52.5°	1474.7	1477.1	1508.1	1556.9	1597.3	1603.3	1596.1	1556.9	1505.7	1477.1	1473.5
55°	1489.0	1499.7	1533.0	1603.3	1640.2	1650.9	1635.4	1600.9	1534.2	1499.7	1489.0
57.5°	1508.1	1511.6	1559.2	1621.1	1675.9	1708.0	1677.1	1619.9	1562.8	1509.2	1506.9
60°	1492.6	1481.9	1541.4	1614.0	1687.8	1700.9	1683.0	1615.2	1539.0	1480.7	1491.4
62.5°	1450.9	1458.1	1506.9	1606.8	1658.0	1672.3	1653.3	1606.8	1504.5	1464.0	1447.3
65°	1417.6	1460.4	1514.0	1585.4	1667.5	1708.0	1668.7	1583.0	1516.4	1453.3	1414.0
67.5°	1371.2	1379.5	1459.3	1547.3	1621.1	1641.4	1619.9	1548.5	1452.1	1373.6	1379.5
70°	1292.6	1280.7	1361.7	1464.0	1534.2	1566.4	1536.6	1459.3	1358.1	1278.3	1289.0
72.5°	1162.9	1170.0	1245.0	1353.3	1425.9	1456.9	1427.1	1345.0	1242.6	1177.2	1170.0
75°	1027.2	1035.5	1108.1	1206.9	1280.7	1293.8	1285.5	1201.0	1110.5	1034.3	1027.2
77.5°	872.5	880.8	940.3	1048.6	1092.7	1112.9	1095.0	1054.6	937.9	879.6	870.1
80°	701.1	698.7	751.1	843.9	898.6	921.3	898.6	846.3	748.7	703.4	688.0
82.5°	501.1	503.5	552.3	616.6	668.9	676.1	665.4	622.5	547.5	509.4	488.0
85°	278.5	289.2	324.9	372.5	407.1	419.0	401.1	360.6	323.7	294.0	284.5
87.5°	66.7	72.6	84.5	107.1	120.2	132.1	120.2	111.9	79.7	72.6	66.7
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	181.4	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)