

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: P821240

Luminaire Tested: **TT-D4-735-24VDC-MQ-UPL**

Issue Date: 7/23/2020

Test Information

Test Method: LM-79-08
Report Number: P821240
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-2) AND
Test Lab: INNOVATION CENTER
Issue Date: 7/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D4-735-24VDC-MQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3500K, 70 CRI LEDS AND MEDIUM DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

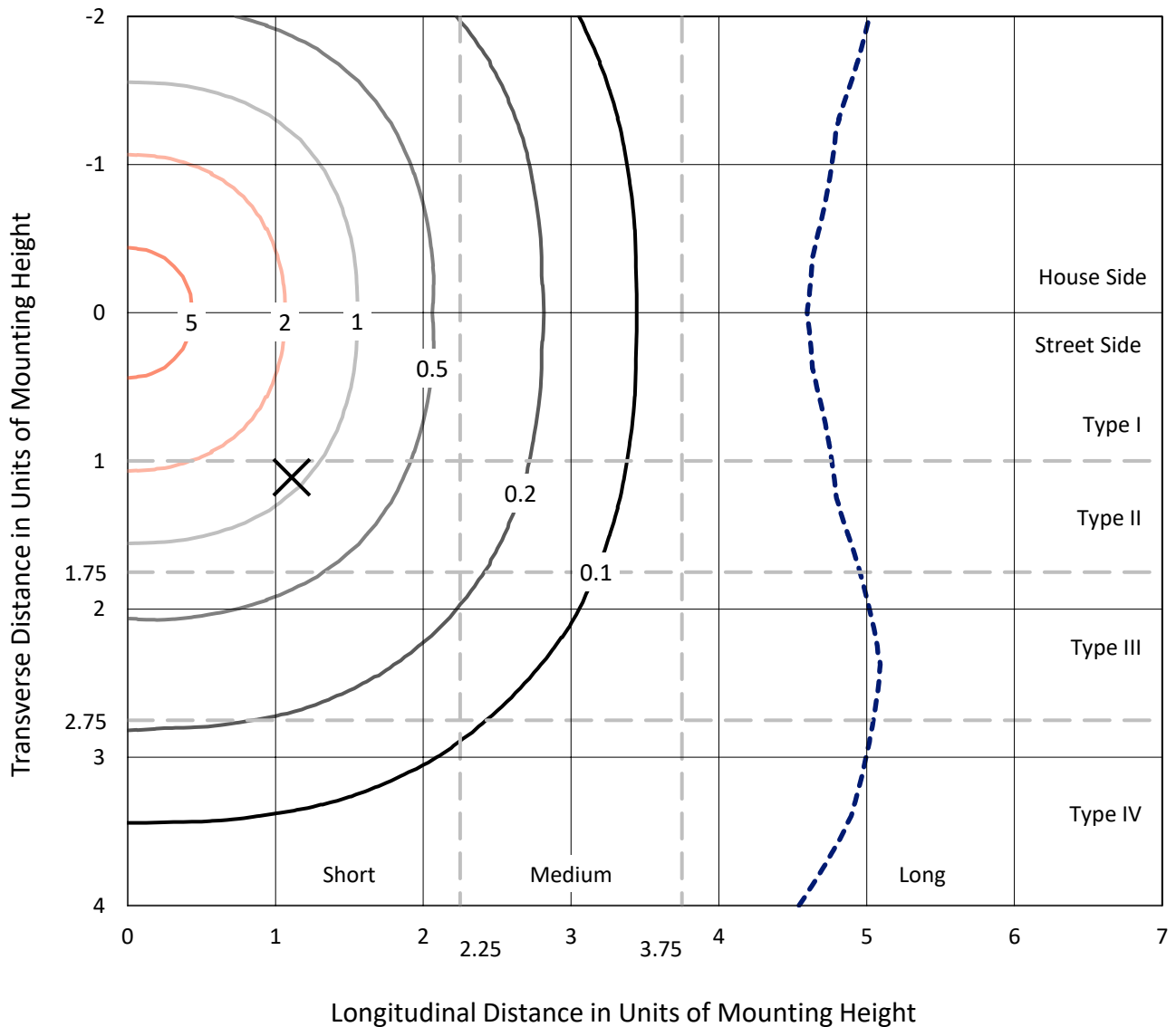
Lumens per Lamp: N/A
Luminaire Lumens: 8399.7 lumens
Efficiency: N/A
Efficacy: 147.4 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B3 - U4 - G2

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

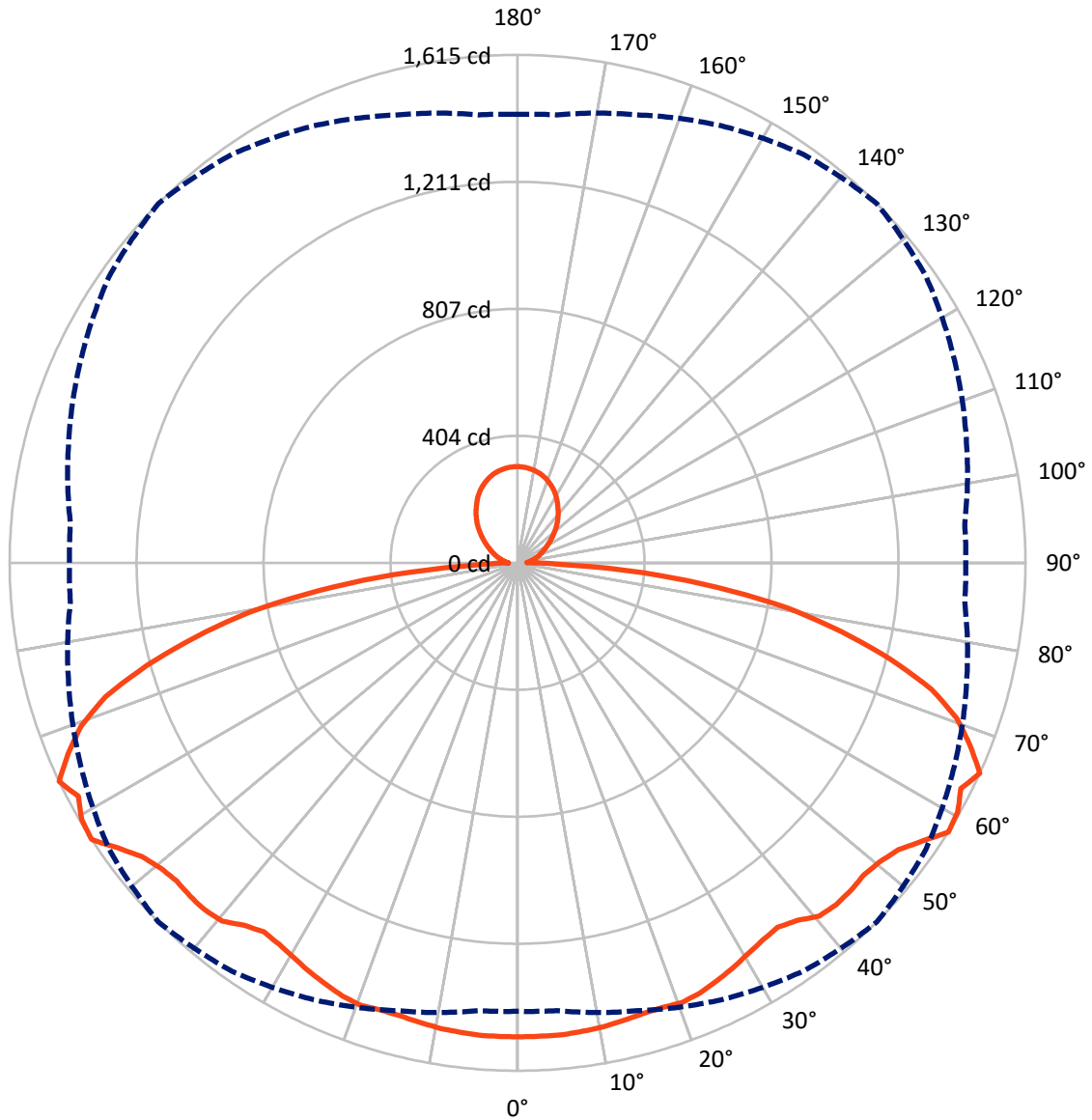
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 6.7 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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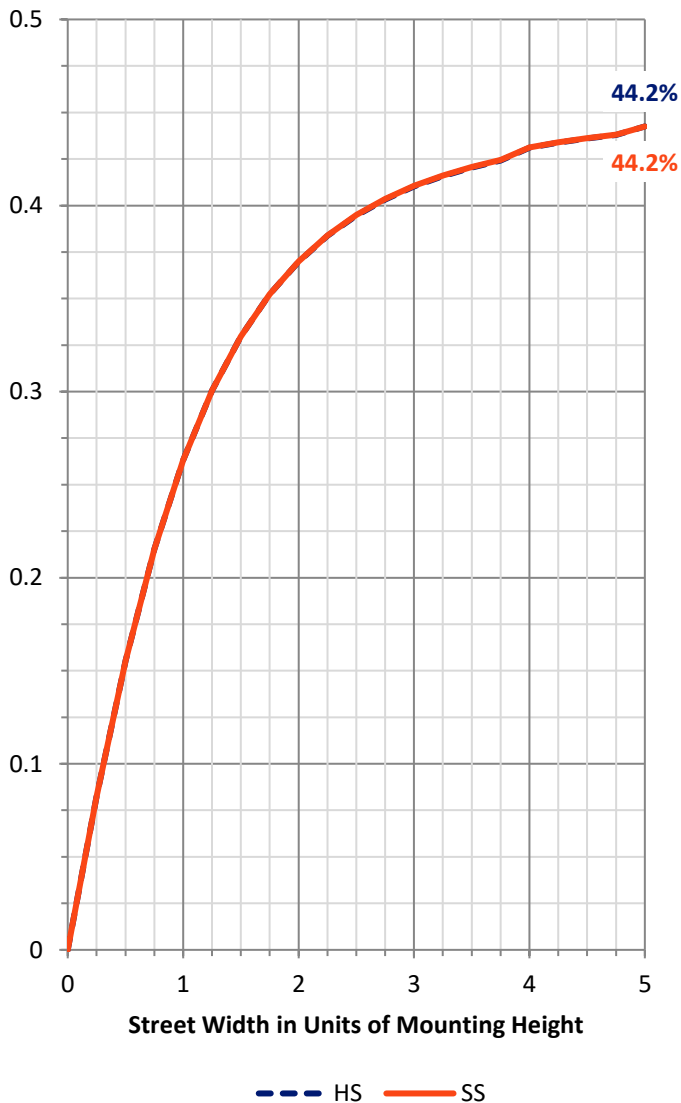
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3784.0	415.9	4199.9
	% Fixture	45.0	5.0	50.0
Street Side	Lumens	3784.0	415.9	4199.9
	% Fixture	45.0	5.0	50.0
Total	Lumens	7568.0	831.7	8399.7
	% Fixture	90.1	9.9	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.6	1.7
10°-20°	422.2	5.0
20°-30°	678.5	8.1
30°-40°	895.7	10.7
40°-50°	1120.6	13.3
50°-60°	1332.9	15.9
60°-70°	1445.7	17.2
70°-80°	1150.7	13.7
80°-90°	378.0	4.5
90°-100°	42.6	0.5
100°-110°	66.0	0.8
110°-120°	91.9	1.1
120°-130°	119.0	1.4
130°-140°	138.7	1.7
140°-150°	140.5	1.7
150°-160°	121.9	1.5
160°-170°	82.2	1.0
170°-180°	28.9	0.3
0°-90°	7568.0	90.1
0°-180°	8399.7	100.0

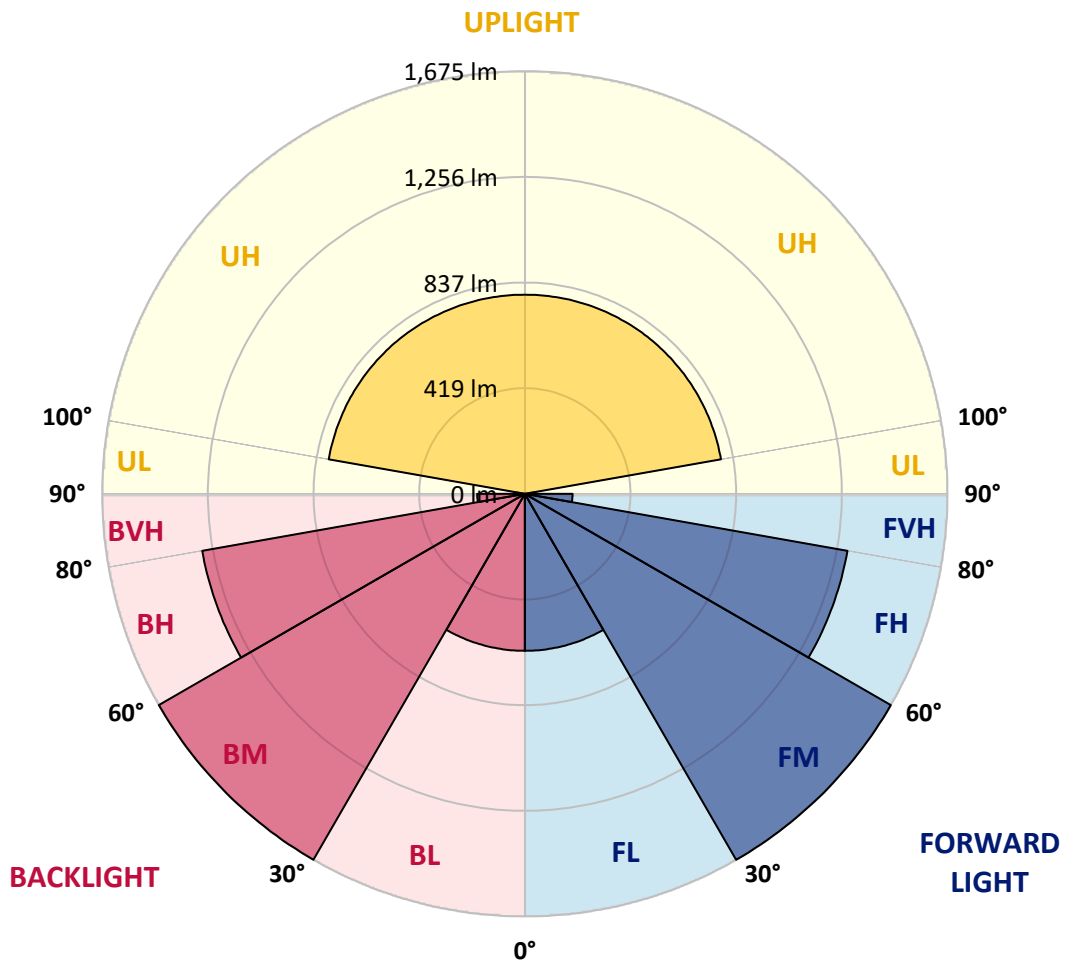


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	622.1	7.4			
FM (30°-60°)	1674.6	19.9			
FH (60°-80°)	1298.2	15.5			G1/1800
FVH (80°-90°)	189.0	2.3			G2/225
BL (0°-30°)	622.1	7.4	B2/1000		
BM (30°-60°)	1674.6	19.9	B2/2500		
BH (60°-80°)	1298.2	15.5	B3/2500		G1/1800
BVH (80°-90°)	189.0	2.3			G2/225
UL (90°-100°)	42.6	0.5		U2/50	
UH (100°-180°)	789.1	9.4		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°	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5
2.5°	1508.8	1507.6	1508.8	1507.6	1507.6	1506.5	1507.6	1507.6	1507.6	1507.6	1507.6
5°	1507.6	1506.5	1506.5	1507.6	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5
7.5°	1503.1	1503.1	1504.3	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1504.3	1504.3
10°	1499.8	1498.6	1499.8	1499.8	1498.6	1499.8	1498.6	1499.8	1499.8	1499.8	1499.8
12.5°	1495.3	1494.1	1495.3	1495.3	1494.1	1493.0	1494.1	1494.1	1495.3	1495.3	1495.3
15°	1487.4	1487.4	1489.6	1488.5	1488.5	1487.4	1489.6	1488.5	1487.4	1488.5	1488.5
17.5°	1481.8	1481.8	1484.0	1486.3	1486.3	1486.3	1486.3	1485.1	1482.9	1484.0	1481.8
20°	1482.9	1484.0	1485.1	1488.5	1490.8	1491.9	1491.9	1488.5	1485.1	1486.3	1485.1
22.5°	1479.5	1478.4	1479.5	1481.8	1485.1	1485.1	1485.1	1480.6	1479.5	1478.4	1478.4
25°	1466.0	1466.0	1468.3	1470.5	1472.8	1471.6	1472.8	1470.5	1468.3	1466.0	1466.0
27.5°	1450.3	1450.3	1453.6	1455.9	1458.1	1458.1	1457.0	1454.8	1453.6	1451.4	1450.3
30°	1434.5	1434.5	1437.9	1440.1	1443.5	1442.4	1442.4	1439.0	1435.6	1433.4	1433.4
32.5°	1417.6	1416.5	1419.9	1425.5	1430.0	1430.0	1430.0	1423.3	1418.8	1416.5	1415.4
35°	1403.0	1403.0	1407.5	1417.6	1423.3	1423.3	1421.0	1416.5	1406.4	1403.0	1403.0
37.5°	1398.5	1401.9	1414.3	1428.9	1440.1	1442.4	1439.0	1426.6	1413.1	1403.0	1399.6
40°	1413.1	1416.5	1432.3	1455.9	1472.8	1476.1	1472.8	1454.8	1431.1	1415.4	1414.3
42.5°	1415.4	1417.6	1436.8	1463.8	1479.5	1485.1	1479.5	1461.5	1435.6	1416.5	1415.4
45°	1407.5	1408.6	1431.1	1459.3	1478.4	1485.1	1478.4	1457.0	1430.0	1408.6	1407.5
47.5°	1397.4	1399.6	1424.4	1453.6	1477.3	1481.8	1476.1	1452.5	1422.1	1400.8	1397.4
50°	1389.5	1396.3	1418.8	1451.4	1479.5	1493.0	1479.5	1448.0	1417.6	1394.0	1389.5
52.5°	1394.0	1396.3	1425.5	1471.6	1509.9	1515.5	1508.8	1471.6	1423.3	1396.3	1392.9
55°	1407.5	1417.6	1449.1	1515.5	1550.4	1560.5	1545.9	1513.3	1450.3	1417.6	1407.5
57.5°	1425.5	1428.9	1473.9	1532.4	1584.1	1614.5	1585.3	1531.3	1477.3	1426.6	1424.4
60°	1410.9	1400.8	1457.0	1525.6	1595.4	1607.8	1590.9	1526.8	1454.8	1399.6	1409.8
62.5°	1371.5	1378.3	1424.4	1518.9	1567.3	1580.8	1562.8	1518.9	1422.1	1383.9	1368.1
65°	1340.0	1380.5	1431.1	1498.6	1576.3	1614.5	1577.4	1496.4	1433.4	1373.8	1336.6
67.5°	1296.1	1304.0	1379.4	1462.6	1532.4	1551.5	1531.3	1463.8	1372.6	1298.4	1304.0
70°	1221.9	1210.6	1287.1	1383.9	1450.3	1480.6	1452.5	1379.4	1283.7	1208.4	1218.5
72.5°	1099.2	1106.0	1176.9	1279.2	1347.9	1377.1	1349.0	1271.4	1174.6	1112.7	1106.0
75°	971.0	978.8	1047.5	1140.9	1210.6	1223.0	1215.1	1135.2	1049.7	977.7	971.0
77.5°	824.7	832.6	888.8	991.2	1032.8	1052.0	1035.1	996.8	886.6	831.5	822.5
80°	662.7	660.4	709.9	797.7	849.5	870.8	849.5	799.9	707.7	664.9	650.3
82.5°	473.7	475.9	522.0	582.8	632.3	639.1	628.9	588.4	517.5	481.5	461.3
85°	263.3	273.4	307.2	352.2	384.8	396.0	379.2	340.9	306.0	277.9	268.9
87.5°	63.0	68.6	79.9	101.3	113.6	124.9	113.6	105.8	75.4	68.6	63.0
90°	30.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
92.5°	34.8	34.2	34.2	33.8	33.8	33.8	33.8	33.8	33.8	33.8	33.8
95°	39.4	39.4	39.4	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
97.5°	44.6	44.6	44.6	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2
100°	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8
102.5°	55.9	55.9	55.9	55.9	55.9	55.9	55.9	56.4	55.9	55.9	55.9
105°	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.9	62.0	62.0	62.0
107.5°	68.6	68.6	69.0	69.0	69.0	69.0	69.0	69.5	69.0	69.0	69.0
110°	75.1	75.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	83.1	83.1	84.0	84.0	84.0	84.0	84.6	84.6	84.0	84.0	84.0
115°	91.1	91.1	92.0	92.0	92.0	92.0	93.0	93.0	92.0	92.0	92.0
117.5°	100.5	100.5	101.0	101.4	101.4	101.4	102.4	102.4	101.4	101.4	101.4
120°	109.9	109.9	109.9	110.8	110.8	110.8	111.8	111.8	110.8	110.8	110.8
122.5°	120.7	120.7	121.2	121.6	121.6	121.6	122.6	122.6	122.1	122.1	121.6
125°	131.5	131.5	132.4	132.4	132.4	132.4	133.4	133.4	133.4	133.4	132.4
127.5°	143.2	143.2	144.2	144.2	144.2	144.2	145.1	145.1	145.1	145.1	144.2
130°	155.0	155.0	155.9	155.9	155.9	155.9	156.8	156.8	156.8	156.8	155.9
132.5°	167.2	167.2	167.6	167.6	167.6	167.6	168.6	168.6	168.6	168.6	168.1
135°	179.4	179.4	179.4	179.4	179.4	179.4	180.3	180.3	180.3	180.3	180.3
137.5°	191.2	190.6	191.2	190.6	191.2	191.6	191.6	191.6	191.6	191.6	191.6
140°	202.9	201.9	202.9	201.9	202.9	202.9	202.9	202.9	202.9	202.9	202.9
142.5°	213.7	213.2	213.7	212.7	213.7	213.7	213.7	213.7	213.7	213.7	213.7
145°	224.5	224.5	224.5	223.5	224.5	224.5	224.5	224.5	224.5	224.5	224.5
147.5°	235.8	235.3	235.8	234.8	235.8	235.8	235.8	235.8	235.8	235.8	235.8
150°	247.0	246.1	247.0	246.1	247.0	247.0	247.0	247.0	247.0	247.0	247.0
152.5°	256.0	255.5	256.4	255.5	256.0	256.0	256.4	256.0	256.0	256.0	256.0
155°	264.9	264.9	265.8	264.9	264.9	264.9	265.8	264.9	264.9	264.9	264.9
157.5°	272.4	272.4	273.3	272.4	272.4	272.4	273.3	272.4	272.4	272.4	272.4
160°	279.9	279.9	280.8	279.9	279.9	279.9	280.8	279.9	279.9	279.9	279.9
162.5°	286.0	286.0	286.9	286.0	286.0	286.0	286.9	286.0	286.0	286.0	286.0
165°	292.1	292.1	293.0	292.1	292.1	292.1	293.0	292.1	292.1	292.1	292.1
167.5°	295.8	295.8	296.8	295.8	295.8	295.8	296.8	295.8	295.8	295.8	295.8
170°	299.6	299.6	300.5	299.6	299.6	299.6	300.5	299.6	299.6	299.6	299.6
172.5°	302.0	302.0	302.8	302.0	302.4	302.0	302.8	302.0	302.0	302.0	302.0
175°	304.3	304.3	305.2	304.3	305.2	304.3	305.2	304.3	304.3	304.3	304.3
177.5°	305.2	305.2	305.7	305.2	305.7	305.2	305.7	305.2	305.2	305.2	305.2
180°	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2

(END OF REPORT)