

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: LUMARK

Report Number: P197019

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-8030-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197019  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-03-D-UNV-SL2-8030-600-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7944 lumens  
Efficiency: N/A  
Efficacy: 82.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 96  
Input Voltage (V): NR  
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

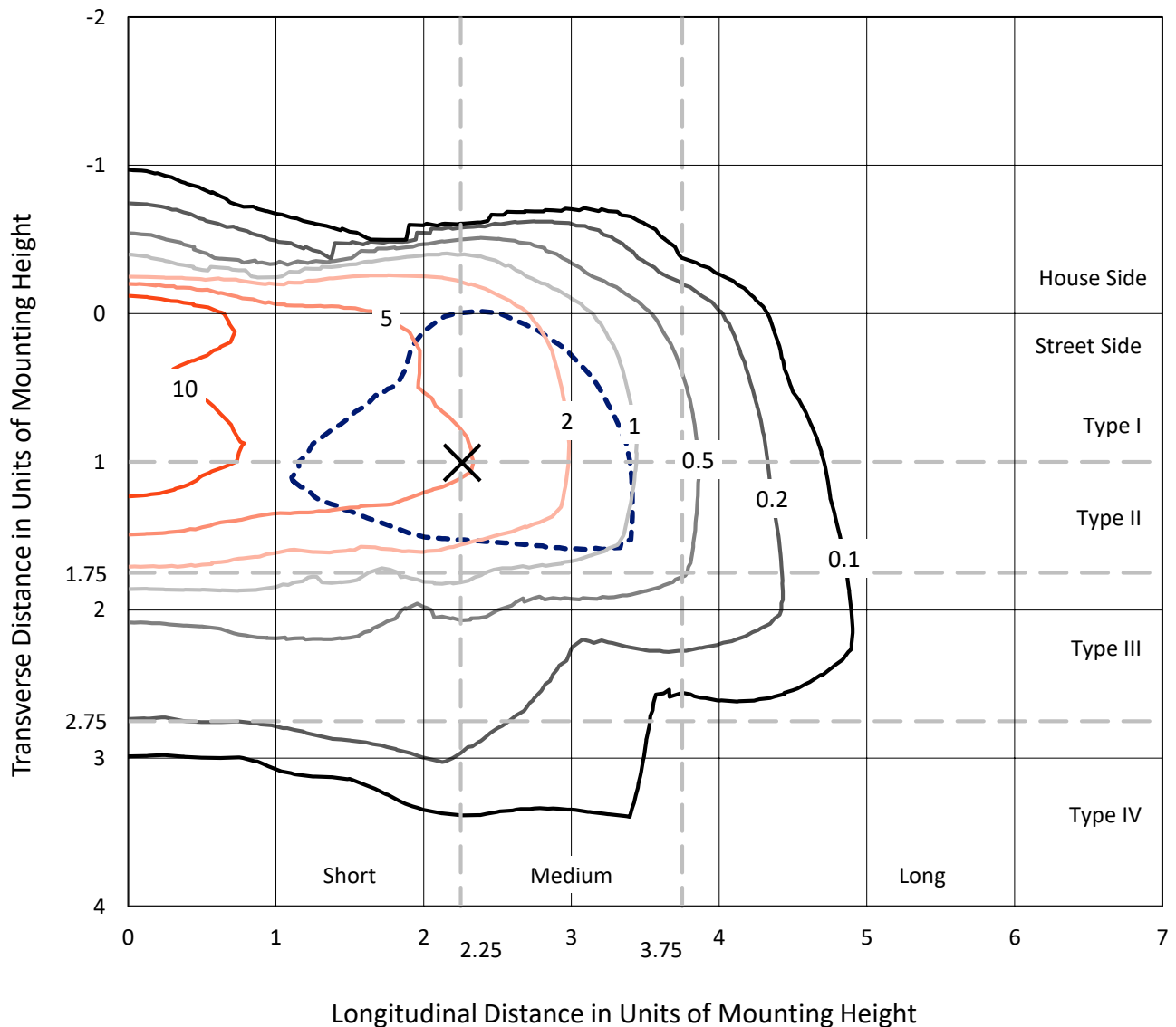


REPORT NUMBER: P197019

CATALOG NUMBER: NAV-AF-03-D-UNV-SL2-8030-600-HSS

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

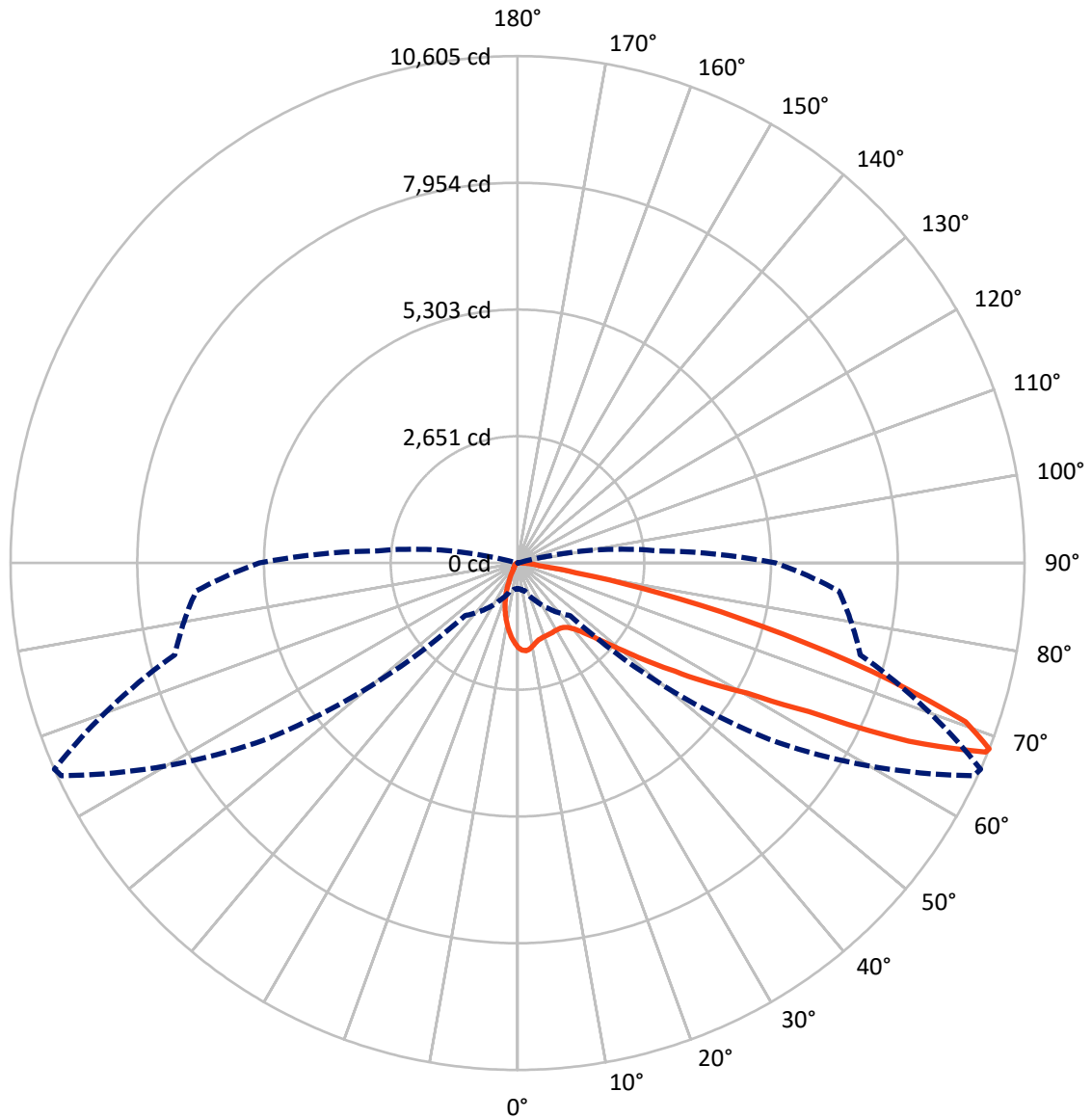


Based on 10 foot mounting height. Maximum calculated value = 17.7 fc  
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P197019

CATALOG NUMBER: NAV-AF-03-D-UNV-SL2-8030-600-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P197019

CATALOG NUMBER: NAV-AF-03-D-UNV-SL2-8030-600-HSS

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	804.6	0.0	804.6
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	7139.4	0.0	7139.4
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	7944.0	0.0	7944.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.1	1.8
10°-20°	312.2	3.9
20°-30°	452.4	5.7
30°-40°	692.5	8.7
40°-50°	1184.5	14.9
50°-60°	1852.9	23.3
60°-70°	2133.5	26.9
70°-80°	1067.6	13.4
80°-90°	103.4	1.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	7944.0	100.0
0°-180°	7944.0	100.0



REPORT NUMBER: P197019

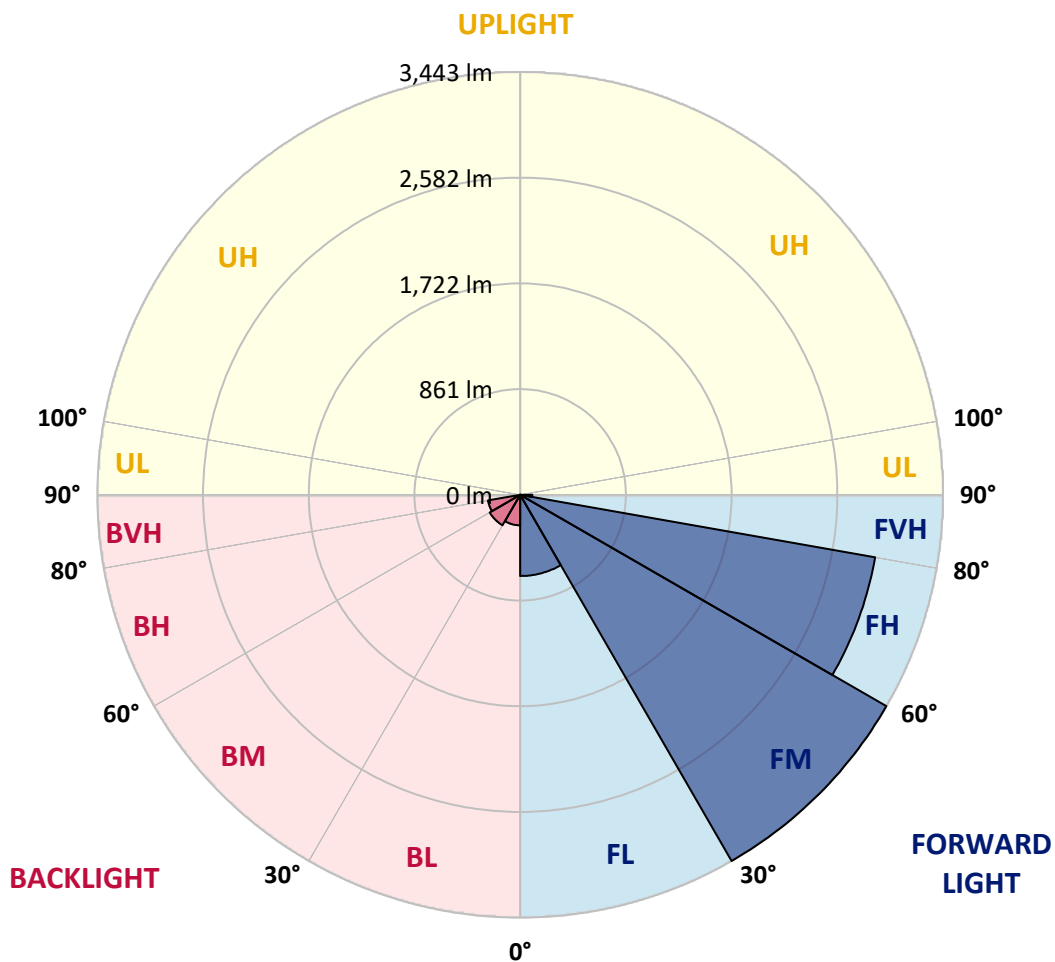
CATALOG NUMBER: NAV-AF-03-D-UNV-SL2-8030-600-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	661.3	8.3			
FM (30°-60°)	3443.3	43.3			
FH (60°-80°)	2935.3	36.9			G2/5000
FVH (80°-90°)	99.5	1.3			G1/100
BL (0°-30°)	248.4	3.1	B1/500		
BM (30°-60°)	286.5	3.6	B1/1000		
BH (60°-80°)	265.8	3.3	B1/500		G1/500
BVH (80°-90°)	3.9	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type II Medium





REPORT NUMBER: P197019

CATALOG NUMBER: NAV-AF-03-D-UNV-SL2-8030-600-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	1769.8	1769.8	1769.8	1769.8	1769.8	1769.8	1769.8	1769.8	1769.8	1769.8	1769.8
2.5°	1861.5	1862.8	1862.1	1864.0	1862.8	1853.4	1843.4	1822.2	1824.1	1796.7	1766.1
5°	1730.6	1741.2	1751.8	1762.4	1787.9	1810.4	1837.2	1843.4	1843.4	1819.7	1774.8
7.5°	1597.1	1597.7	1609.6	1623.9	1658.2	1699.4	1761.7	1817.9	1819.1	1825.4	1776.1
10°	1496.7	1499.8	1507.9	1523.5	1557.8	1598.4	1668.2	1756.1	1763.0	1809.1	1763.6
12.5°	1418.7	1422.5	1431.2	1449.3	1480.5	1522.3	1595.9	1696.3	1705.6	1793.5	1759.9
15°	1358.9	1363.9	1370.7	1388.8	1422.5	1466.8	1547.2	1656.3	1667.6	1787.3	1771.7
17.5°	1333.9	1333.9	1333.3	1345.8	1379.5	1424.4	1508.5	1635.1	1649.5	1792.3	1791.7
20°	1344.5	1342.7	1329.6	1326.5	1347.0	1391.9	1478.0	1621.4	1637.6	1801.7	1816.0
22.5°	1400.7	1396.9	1367.6	1343.3	1337.1	1367.0	1457.4	1612.1	1631.4	1821.0	1848.4
25°	1519.8	1508.5	1468.0	1413.1	1363.9	1360.8	1443.1	1607.1	1627.7	1843.4	1884.0
27.5°	1674.4	1671.3	1606.5	1532.9	1438.1	1381.3	1438.7	1603.3	1623.9	1859.7	1912.7
30°	1866.5	1867.8	1792.9	1696.9	1553.5	1439.3	1452.4	1601.5	1622.7	1860.9	1925.1
32.5°	2064.8	2066.1	2003.7	1900.8	1711.2	1539.1	1491.1	1610.2	1629.5	1855.9	1924.5
35°	2255.7	2257.5	2220.1	2137.2	1922.0	1677.6	1564.1	1640.1	1653.9	1859.0	1923.3
37.5°	2497.0	2504.5	2458.3	2381.0	2186.4	1880.9	1683.2	1700.6	1711.9	1884.6	1932.6
40°	2908.6	2898.6	2766.4	2635.4	2473.3	2128.4	1855.3	1804.8	1808.5	1950.7	1968.2
42.5°	3388.2	3375.7	3149.3	2923.6	2768.3	2427.1	2075.4	1964.4	1963.8	2061.7	2045.5
45°	3801.0	3793.5	3555.3	3254.1	3095.1	2757.0	2346.7	2194.5	2187.1	2253.8	2186.4
47.5°	4094.1	4087.9	3907.6	3605.8	3473.0	3120.0	2685.3	2508.2	2492.6	2505.1	2415.3
50°	4122.8	4115.9	4052.9	3859.0	3914.5	3652.6	3103.8	2919.2	2899.2	2879.9	2761.4
52.5°	3854.6	3854.0	3887.1	3874.6	4223.8	4337.9	3617.0	3427.4	3403.7	3354.5	3236.6
55°	3306.5	3303.3	3428.7	3610.8	4217.0	5045.1	4399.7	4032.4	4001.2	3902.6	3748.0
57.5°	2415.9	2399.7	2661.6	3047.7	3920.7	5354.4	5642.6	4783.8	4732.1	4419.6	4181.4
60°	1333.9	1340.2	1676.9	2134.0	3219.2	5293.3	6786.3	5660.0	5524.1	4865.5	4625.4
62.5°	747.7	763.3	1014.0	1386.9	2052.4	4797.5	7399.9	7167.9	6840.5	5385.6	5186.7
65°	565.6	575.0	701.0	1070.1	1294.0	3352.6	7497.8	9276.4	8993.9	6173.9	6080.3
67.5°	532.6	540.1	601.8	887.4	1178.7	1738.7	6760.7	10523.7	10559.2	7249.0	6772.6
68°	536.3	545.7	607.4	853.7	1176.8	1555.3	6446.4	10529.9	10605.4	7422.4	6748.9
70°	492.7	495.2	642.3	837.5	1140.6	1225.4	4663.5	9808.4	9943.7	7628.8	6126.5
72.5°	188.3	189.0	288.1	725.3	1194.9	1232.3	2349.2	7752.3	7759.1	6639.1	4776.3
75°	97.9	82.3	90.4	227.0	1141.2	1201.1	1178.7	5293.3	5260.3	4490.1	2926.7
77.5°	67.4	57.4	60.5	78.6	474.6	1200.5	851.2	3043.9	3037.1	1910.2	835.0
80°	38.0	33.1	36.2	66.1	166.5	1126.9	793.3	1308.4	1232.9	335.5	135.3
82.5°	19.3	16.2	19.3	55.5	103.5	709.1	771.4	513.2	457.1	79.8	87.9
85°	5.0	5.0	9.4	38.7	64.2	232.6	691.6	370.4	333.0	34.9	62.4
87.5°	1.2	0.6	3.7	14.3	23.1	50.5	383.5	206.4	177.7	18.1	36.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P197019

CATALOG NUMBER: NAV-AF-03-D-UNV-SL2-8030-600-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1769.8	1769.8	1769.8	1769.8	1769.8	1769.8	1769.8	1769.8	1769.8	1769.8	1769.8
2.5°	1753.6	1736.2	1701.9	1663.2	1635.8	1605.8	1588.4	1567.2	1551.0	1536.6	1547.2
5°	1747.4	1713.7	1637.6	1552.2	1480.5	1411.9	1360.8	1312.1	1275.3	1252.2	1261.6
7.5°	1731.2	1681.3	1557.8	1424.4	1307.1	1196.7	1106.9	1026.5	964.1	930.4	941.1
10°	1703.7	1633.3	1467.4	1282.2	1118.2	962.3	828.8	709.1	618.6	576.2	586.2
12.5°	1683.8	1590.9	1373.8	1145.0	929.2	707.8	530.7	393.5	323.0	280.6	284.4
15°	1675.1	1557.8	1286.5	1000.3	722.8	454.6	286.9	207.7	183.3	174.6	175.2
17.5°	1676.3	1531.6	1203.6	850.0	514.5	261.3	175.9	158.4	154.7	152.8	152.8
20°	1679.4	1505.4	1117.5	693.5	329.3	168.4	146.6	140.9	139.1	136.6	137.2
22.5°	1688.8	1485.5	1030.9	536.3	202.7	137.2	129.7	124.7	121.6	117.9	118.5
25°	1703.1	1470.5	945.4	386.0	142.8	119.7	112.9	106.0	100.4	96.0	96.7
27.5°	1711.9	1449.3	854.4	263.2	118.5	104.8	95.4	86.1	79.8	76.1	75.5
30°	1705.6	1415.0	750.8	172.7	104.8	90.4	79.2	68.6	62.4	59.2	59.2
32.5°	1688.8	1370.7	636.7	126.0	92.9	78.0	64.2	54.9	50.5	48.6	49.3
35°	1669.4	1324.6	515.1	106.6	83.6	66.1	52.4	44.9	43.0	42.4	42.4
37.5°	1658.8	1284.7	398.5	96.7	74.8	54.9	43.0	38.7	36.8	36.8	36.8
40°	1670.7	1254.1	295.0	89.2	66.1	45.5	36.2	33.1	32.4	32.4	32.4
42.5°	1721.2	1243.5	215.8	82.9	57.4	38.0	31.2	28.7	28.1	28.7	28.7
45°	1819.7	1266.6	163.4	76.7	49.3	31.2	26.8	24.9	24.9	25.6	25.6
47.5°	1986.9	1325.8	134.1	70.5	41.2	26.2	23.1	21.8	21.8	22.5	22.5
50°	2246.3	1435.6	120.4	63.6	34.3	22.5	19.3	18.7	18.7	19.3	20.0
52.5°	2640.4	1644.5	113.5	56.7	28.1	18.7	16.2	15.6	16.2	16.8	16.8
55°	3078.8	1912.0	105.4	49.9	23.7	15.6	13.1	13.1	13.7	15.0	15.0
57.5°	3487.3	2170.2	97.9	41.2	20.6	12.5	10.6	10.6	11.8	13.1	13.1
60°	3918.9	2423.4	87.9	33.1	17.5	10.0	8.7	8.7	10.6	11.8	12.5
62.5°	4452.1	2717.8	74.8	26.2	13.7	7.5	6.2	8.1	10.0	11.8	11.8
65°	5222.9	3083.8	58.6	20.6	10.6	5.6	5.0	7.5	9.4	11.2	11.8
67.5°	5502.9	3037.1	44.3	16.8	8.1	4.4	4.4	6.9	9.4	11.2	11.2
68°	5400.6	2934.8	42.4	16.2	7.5	4.4	4.4	6.9	9.4	11.2	11.2
70°	4705.9	2399.1	34.9	12.5	6.2	3.7	3.7	6.2	9.4	10.6	11.2
72.5°	3523.5	1594.0	29.9	8.1	5.6	3.7	3.1	6.2	8.7	10.6	10.6
75°	2021.2	661.7	25.6	6.2	5.0	3.1	3.1	5.6	8.7	10.6	10.6
77.5°	571.2	154.7	20.6	5.0	4.4	3.1	2.5	5.6	8.1	10.0	10.0
80°	104.8	46.1	16.2	4.4	3.7	3.1	2.5	5.6	8.1	10.0	10.0
82.5°	69.2	21.8	11.8	4.4	3.7	3.1	2.5	5.0	7.5	9.4	9.4
85°	51.8	15.6	7.5	4.4	3.7	3.1	2.5	5.0	7.5	9.4	9.4
87.5°	28.7	6.9	5.6	5.0	4.4	3.1	2.5	4.4	6.9	8.7	8.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)