

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: P196544

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-7030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196544
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-02-D-UNV-SL2-7030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 800mA 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: 7764 lumens
Efficiency: N/A
Efficacy: 91.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

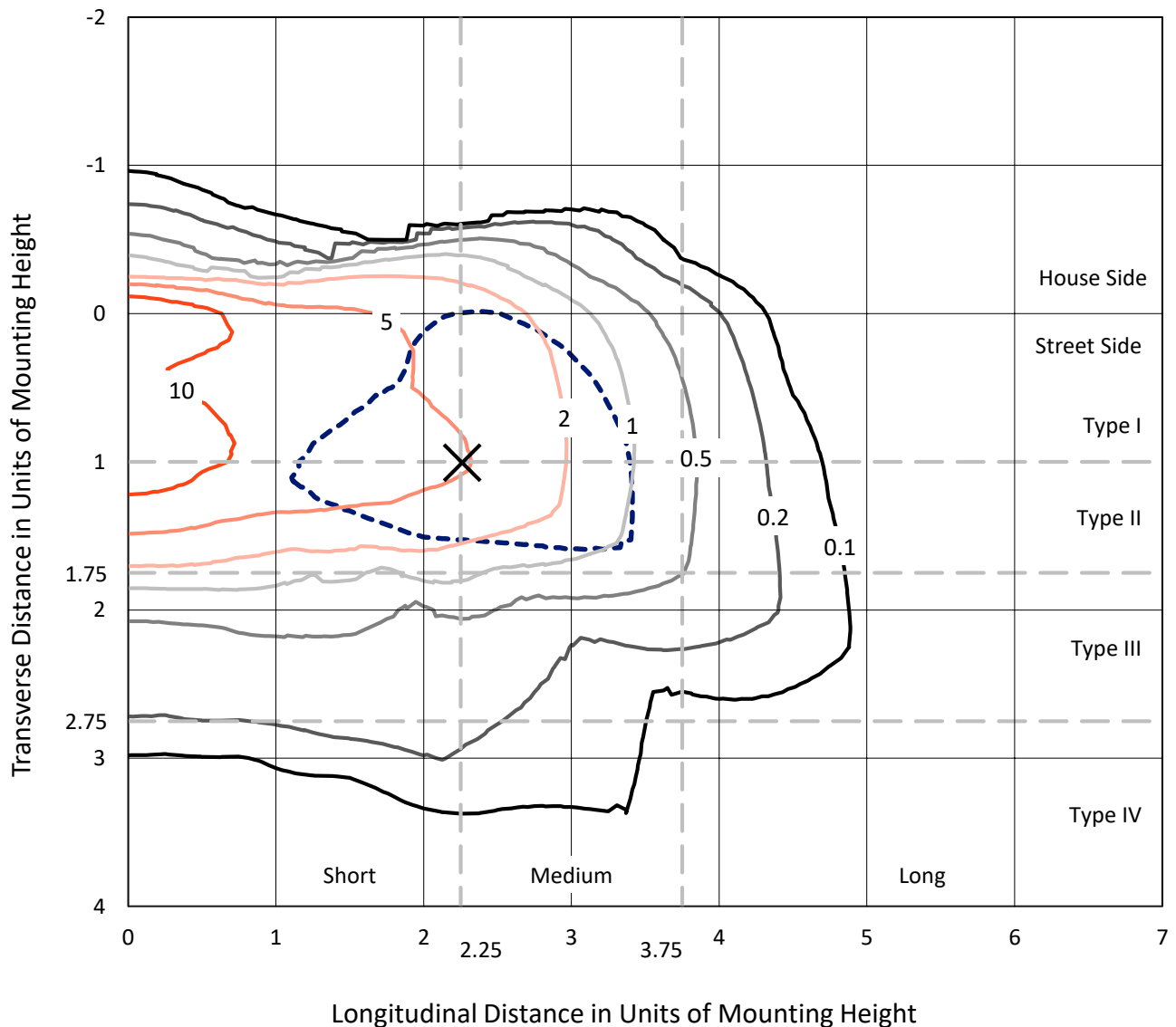
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

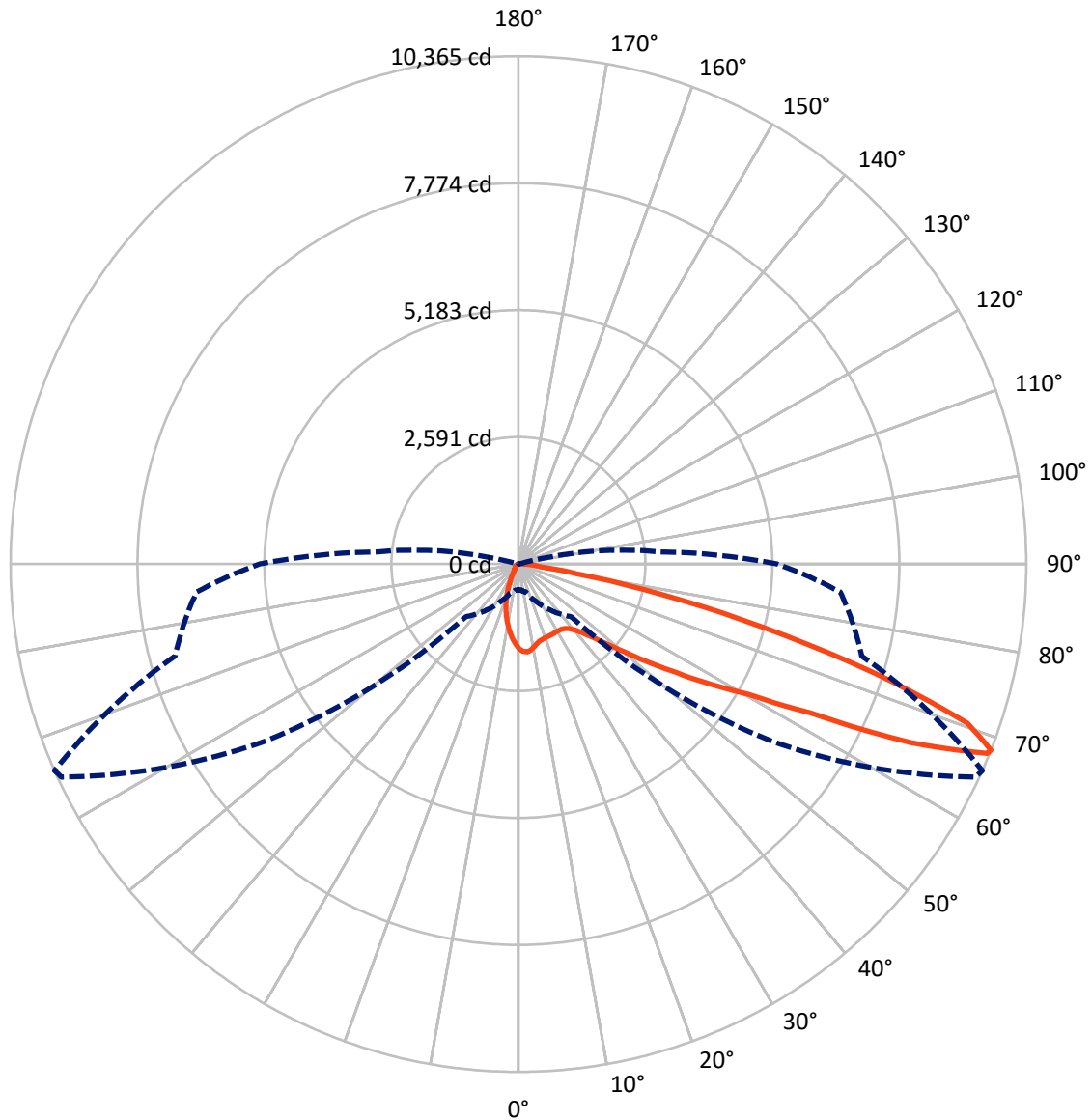


Based on 10 foot mounting height. Maximum calculated value = 17.3 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	786.4	0.0	786.4
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	6977.6	0.0	6977.6
	% Fixture	89.9	0.0	89.9
Total	Lumens	7764.0	0.0	7764.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.8	1.8
10°-20°	305.1	3.9
20°-30°	442.1	5.7
30°-40°	676.8	8.7
40°-50°	1157.6	14.9
50°-60°	1810.9	23.3
60°-70°	2085.1	26.9
70°-80°	1043.4	13.4
80°-90°	101.1	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°	7764.0	100.0
0°-180°	7764.0	100.0

Coefficient of Utilization



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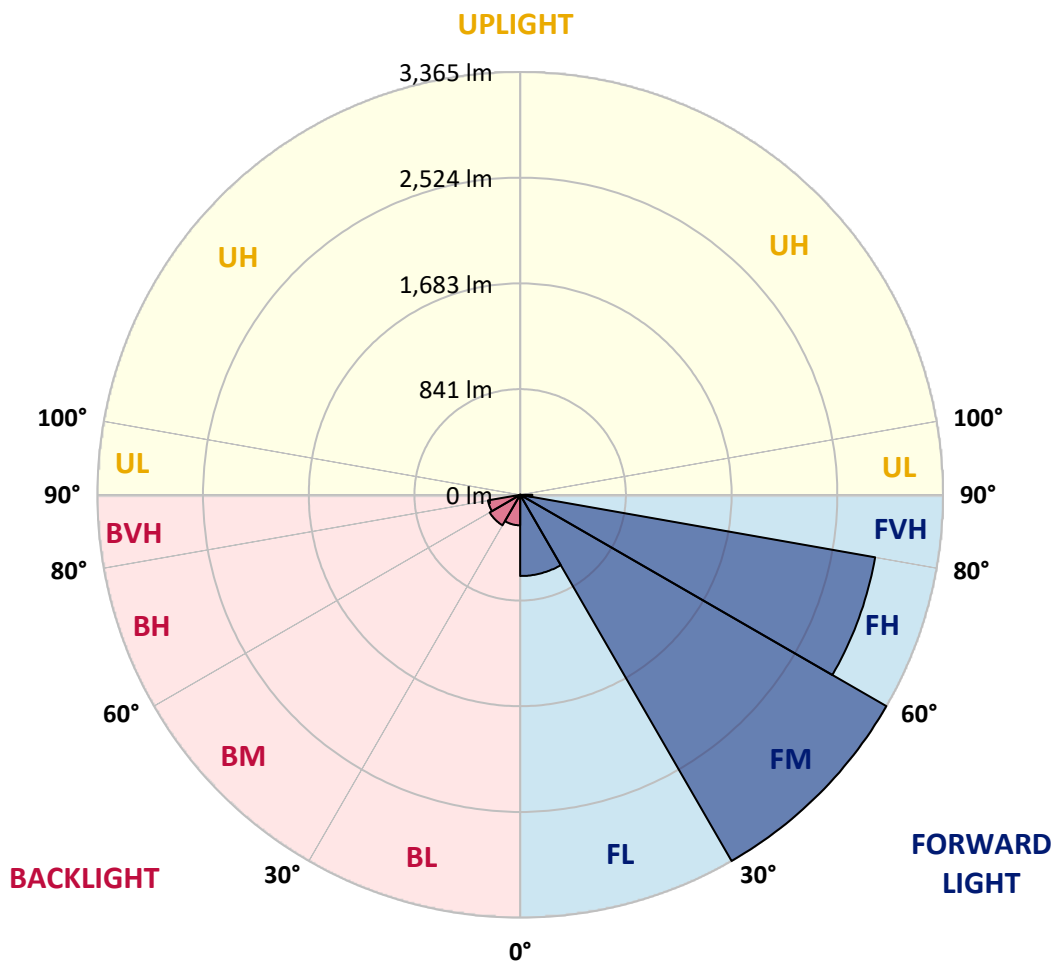
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	646.3	8.3			
FM (30°-60°)	3365.3	43.3			
FH (60°-80°)	2868.8	36.9			G2/5000
FVH (80°-90°)	97.2	1.3			G1/100
BL (0°-30°)	242.7	3.1	B1/500		
BM (30°-60°)	280.0	3.6	B1/1000		
BH (60°-80°)	259.8	3.3	B1/500		G1/500
BVH (80°-90°)	3.8	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	1729.7	1729.7	1729.7	1729.7	1729.7	1729.7	1729.7	1729.7	1729.7	1729.7	1729.7
2.5°	1819.3	1820.6	1819.9	1821.8	1820.6	1811.4	1801.6	1780.9	1782.8	1755.9	1726.1
5°	1691.4	1701.7	1712.1	1722.5	1747.4	1769.4	1795.5	1801.6	1801.6	1778.5	1734.6
7.5°	1560.9	1561.6	1573.2	1587.1	1620.7	1660.8	1721.8	1776.7	1777.8	1783.9	1735.8
10°	1462.8	1465.8	1473.8	1488.9	1522.5	1562.1	1630.3	1716.4	1723.0	1768.2	1723.7
12.5°	1386.6	1390.3	1398.7	1416.4	1446.9	1487.8	1559.6	1657.8	1667.0	1752.8	1720.0
15°	1328.0	1333.0	1339.6	1357.3	1390.3	1433.5	1512.1	1618.7	1629.8	1746.8	1731.5
17.5°	1303.7	1303.7	1303.1	1315.3	1348.1	1392.1	1474.4	1598.1	1612.1	1751.7	1751.1
20°	1314.1	1312.2	1299.4	1296.4	1316.5	1360.4	1444.5	1584.7	1600.5	1760.8	1774.8
22.5°	1368.9	1365.3	1336.6	1312.9	1306.7	1336.0	1424.4	1575.5	1594.4	1779.8	1806.5
25°	1485.4	1474.4	1434.8	1381.1	1333.0	1329.9	1410.3	1570.7	1590.9	1801.6	1841.2
27.5°	1636.4	1633.4	1570.0	1498.2	1405.5	1350.0	1406.0	1567.0	1587.1	1817.5	1869.3
30°	1824.2	1825.4	1752.3	1658.4	1518.2	1406.7	1419.5	1565.1	1585.9	1818.7	1881.6
32.5°	2018.0	2019.2	1958.3	1857.7	1672.4	1504.2	1457.3	1573.7	1592.6	1813.8	1880.9
35°	2204.6	2206.4	2169.8	2088.7	1878.5	1639.6	1528.6	1603.0	1616.4	1816.9	1879.7
37.5°	2440.5	2447.7	2402.6	2327.0	2136.9	1838.2	1645.0	1662.1	1673.1	1841.9	1888.8
40°	2842.7	2832.9	2703.7	2575.7	2417.3	2080.2	1813.2	1763.9	1767.5	1906.5	1923.5
42.5°	3311.3	3299.2	3078.0	2857.3	2705.6	2372.1	2028.4	1919.9	1919.2	2015.0	1999.1
45°	3714.9	3707.5	3474.7	3180.3	3025.0	2694.6	2293.6	2144.8	2137.4	2202.6	2136.9
47.5°	4001.3	3995.2	3819.0	3524.0	3394.2	3049.3	2624.5	2451.3	2436.2	2448.3	2360.5
50°	4029.4	4022.6	3961.0	3771.5	3825.8	3569.8	3033.5	2853.0	2833.5	2814.6	2698.8
52.5°	3767.3	3766.7	3799.0	3786.8	4128.1	4239.6	3535.1	3349.8	3326.6	3278.5	3163.3
55°	3231.6	3228.5	3351.0	3529.0	4121.4	4930.8	4300.0	3941.0	3910.5	3814.2	3663.0
57.5°	2361.2	2345.4	2601.4	2978.6	3831.8	5233.1	5514.7	4675.4	4624.8	4319.4	4086.7
60°	1303.7	1309.8	1638.9	2085.6	3146.2	5173.3	6632.5	5531.8	5398.8	4755.3	4520.6
62.5°	730.8	746.0	991.0	1355.5	2005.9	4688.9	7232.2	7005.4	6685.5	5263.6	5069.2
65°	552.9	561.9	685.0	1045.9	1264.6	3276.5	7327.9	9066.3	8790.1	6034.0	5942.5
67.5°	520.5	527.8	588.2	867.3	1151.9	1699.3	6607.5	10285.1	10319.9	7084.7	6619.0
68°	524.1	533.3	593.6	834.4	1150.1	1520.2	6300.3	10291.2	10365.0	7254.2	6595.9
70°	481.5	483.9	627.8	818.6	1114.8	1197.7	4557.8	9586.1	9718.4	7456.0	5987.6
72.5°	184.1	184.6	281.6	708.9	1167.8	1204.4	2296.0	7576.6	7583.2	6488.7	4668.1
75°	95.7	80.5	88.4	221.9	1115.3	1173.9	1151.9	5173.3	5141.0	4388.3	2860.3
77.5°	65.8	56.0	59.1	76.8	463.8	1173.2	832.0	2974.9	2968.2	1866.9	816.0
80°	37.1	32.3	35.4	64.6	162.7	1101.4	775.3	1278.7	1204.9	327.9	132.3
82.5°	18.9	15.9	18.9	54.2	101.2	693.0	753.9	501.6	446.8	78.0	86.0
85°	4.9	4.9	9.2	37.8	62.9	227.4	675.9	362.0	325.5	34.1	60.9
87.5°	1.2	0.6	3.6	13.9	22.5	49.3	374.9	201.7	173.7	17.7	35.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	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°
0°	1729.7	1729.7	1729.7	1729.7	1729.7	1729.7	1729.7	1729.7	1729.7	1729.7	1729.7
2.5°	1713.8	1696.8	1663.3	1625.6	1598.7	1569.4	1552.3	1531.7	1515.8	1501.8	1512.1
5°	1707.8	1674.8	1600.5	1517.1	1446.9	1379.8	1329.9	1282.3	1246.4	1223.8	1233.0
7.5°	1692.0	1643.2	1522.5	1392.1	1277.5	1169.6	1081.8	1003.2	942.3	909.4	919.8
10°	1665.1	1596.3	1434.1	1253.1	1092.8	940.4	810.0	693.0	604.6	563.1	572.9
12.5°	1645.7	1554.8	1342.7	1119.1	908.2	691.7	518.7	384.6	315.8	274.2	277.9
15°	1637.1	1522.5	1257.3	977.7	706.4	444.3	280.4	203.0	179.1	170.7	171.3
17.5°	1638.4	1497.0	1176.2	830.7	502.8	255.3	171.9	154.8	151.1	149.3	149.3
20°	1641.4	1471.2	1092.1	677.7	321.8	164.6	143.2	137.7	135.9	133.6	134.1
22.5°	1650.5	1451.8	1007.5	524.1	198.1	134.1	126.7	122.0	118.9	115.2	115.9
25°	1664.6	1437.2	924.0	377.3	139.6	117.0	110.4	103.6	98.2	93.9	94.5
27.5°	1673.1	1416.4	835.0	257.2	115.9	102.3	93.2	84.1	78.0	74.4	73.8
30°	1667.0	1382.9	733.7	168.8	102.3	88.4	77.3	67.0	60.9	57.9	57.9
32.5°	1650.5	1339.6	622.3	123.1	90.8	76.2	62.9	53.6	49.3	47.5	48.2
35°	1631.6	1294.6	503.4	104.3	81.7	64.6	51.3	43.9	42.1	41.4	41.4
37.5°	1621.3	1255.6	389.5	94.5	73.1	53.6	42.1	37.8	35.9	35.9	35.9
40°	1632.9	1225.7	288.3	87.2	64.6	44.5	35.4	32.3	31.6	31.6	31.6
42.5°	1682.1	1215.3	210.9	81.1	56.0	37.1	30.5	28.1	27.5	28.1	28.1
45°	1778.5	1237.9	159.7	75.0	48.2	30.5	26.2	24.4	24.4	25.0	25.0
47.5°	1941.9	1295.9	131.0	68.9	40.2	25.5	22.5	21.3	21.3	22.0	22.0
50°	2195.3	1403.0	117.7	62.2	33.6	22.0	18.9	18.2	18.2	18.9	19.5
52.5°	2580.6	1607.2	110.9	55.5	27.5	18.2	15.9	15.2	15.9	16.5	16.5
55°	3009.1	1868.7	103.0	48.7	23.2	15.2	12.8	12.8	13.4	14.6	14.6
57.5°	3408.3	2121.0	95.7	40.2	20.1	12.2	10.4	10.4	11.6	12.8	12.8
60°	3830.1	2368.5	86.0	32.3	17.1	9.8	8.5	8.5	10.4	11.6	12.2
62.5°	4351.1	2656.2	73.1	25.5	13.4	7.3	6.1	7.9	9.8	11.6	11.6
65°	5104.5	3013.9	57.3	20.1	10.4	5.5	4.9	7.3	9.2	10.9	11.6
67.5°	5378.2	2968.2	43.2	16.5	7.9	4.3	4.3	6.7	9.2	10.9	10.9
68°	5278.2	2868.3	41.4	15.9	7.3	4.3	4.3	6.7	9.2	10.9	10.9
70°	4599.3	2344.7	34.1	12.2	6.1	3.6	3.6	6.1	9.2	10.4	10.9
72.5°	3443.7	1557.8	29.3	7.9	5.5	3.6	3.1	6.1	8.5	10.4	10.4
75°	1975.4	646.7	25.0	6.1	4.9	3.1	3.1	5.5	8.5	10.4	10.4
77.5°	558.4	151.1	20.1	4.9	4.3	3.1	2.4	5.5	7.9	9.8	9.8
80°	102.3	45.2	15.9	4.3	3.6	3.1	2.4	5.5	7.9	9.8	9.8
82.5°	67.6	21.3	11.6	4.3	3.6	3.1	2.4	4.9	7.3	9.2	9.2
85°	50.6	15.2	7.3	4.3	3.6	3.1	2.4	4.9	7.3	9.2	9.2
87.5°	28.1	6.7	5.5	4.9	4.3	3.1	2.4	4.3	6.7	8.5	8.5
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)