

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: P197030

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197030
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-SL2-8030-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 1050mA 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: 8109 lumens
Efficiency: N/A
Efficacy: 71.8 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

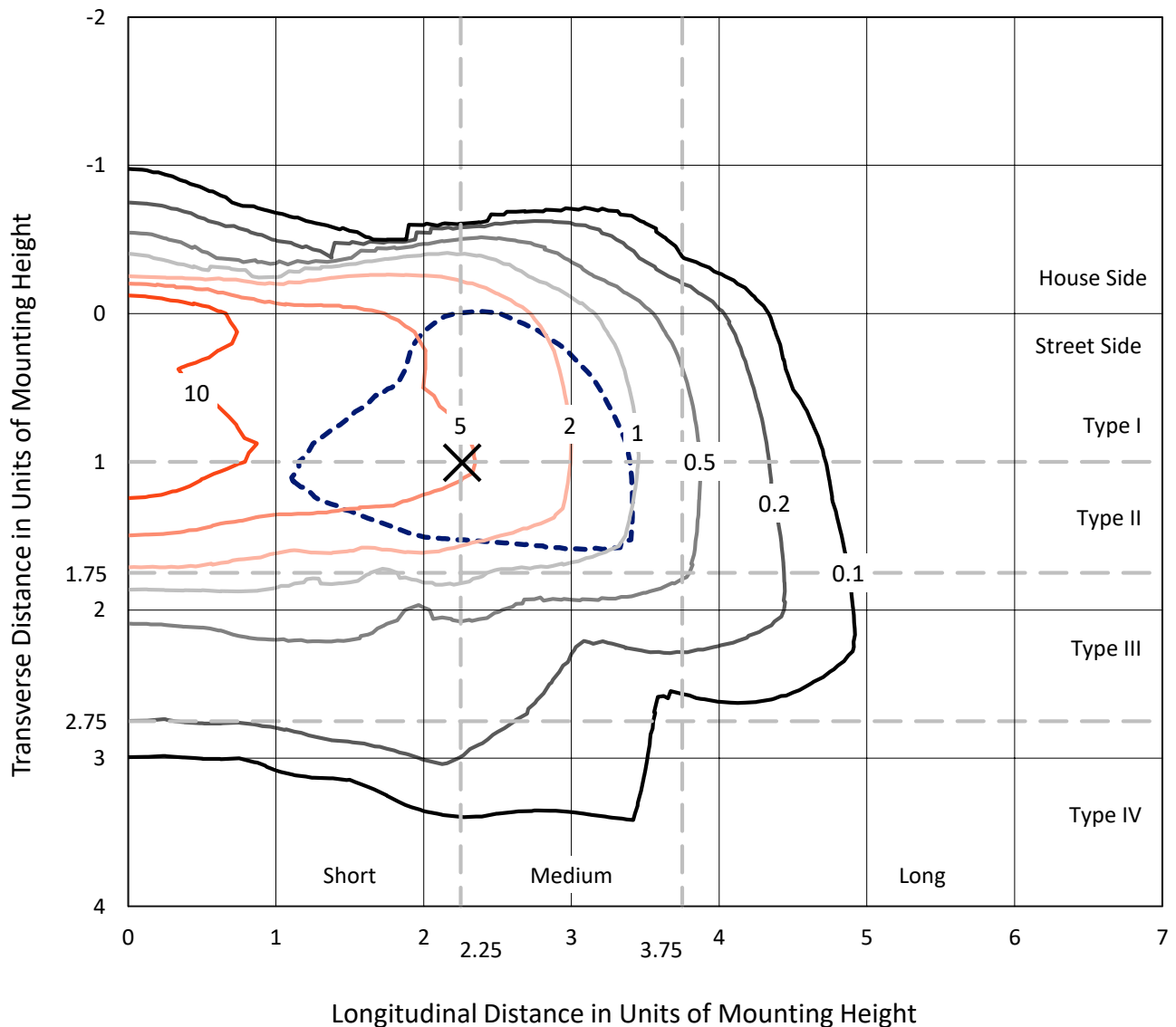
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

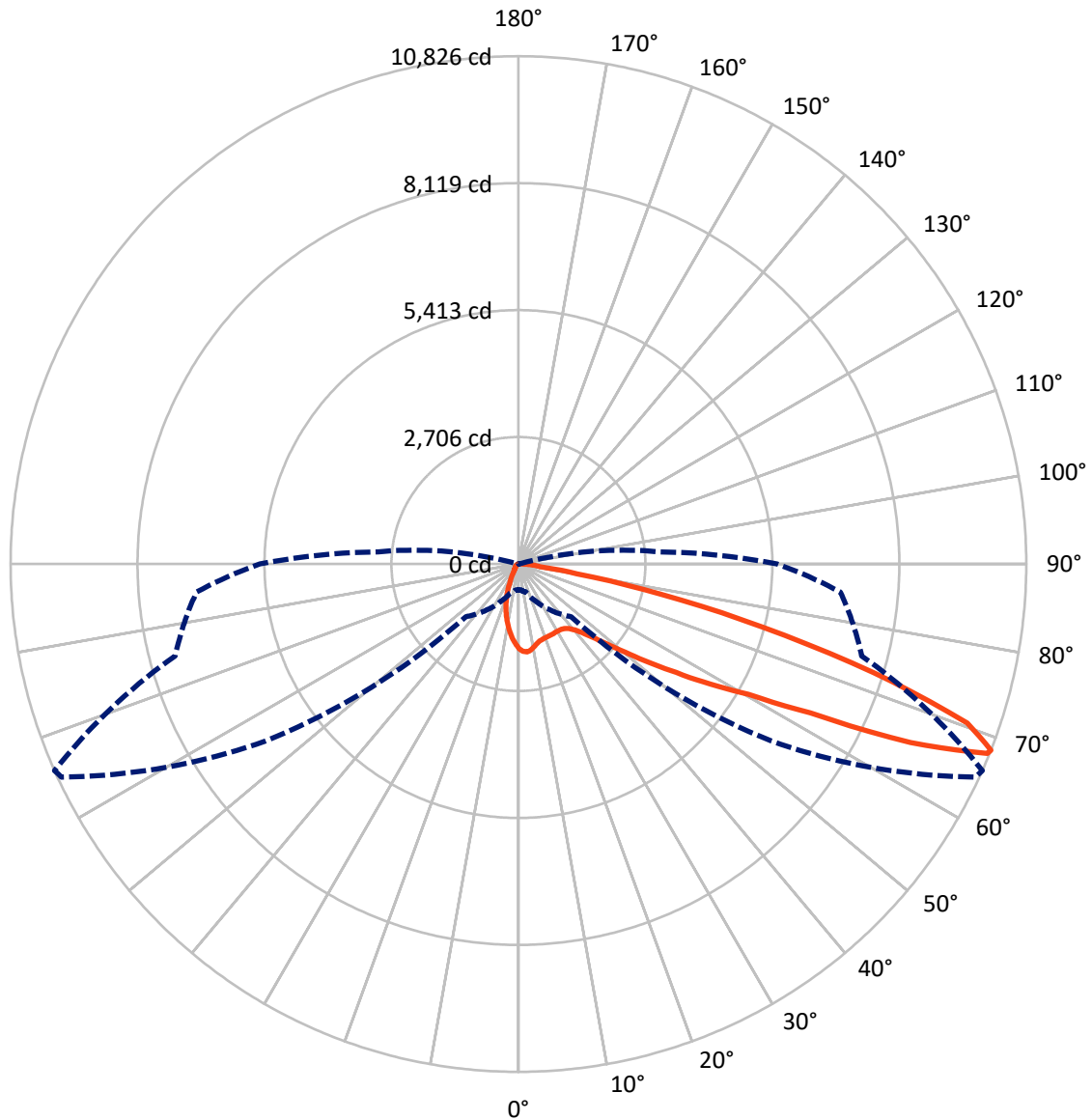
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18.1 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	821.4	0.0	821.4
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	7287.6	0.0	7287.6
	% Fixture	89.9	0.0	89.9
Total	Lumens	8109.0	0.0	8109.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.1	1.8
10°-20°	318.7	3.9
20°-30°	461.8	5.7
30°-40°	706.9	8.7
40°-50°	1209.1	14.9
50°-60°	1891.3	23.3
60°-70°	2177.8	26.9
70°-80°	1089.8	13.4
80°-90°	105.5	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°	8109.0	100.0
0°-180°	8109.0	100.0



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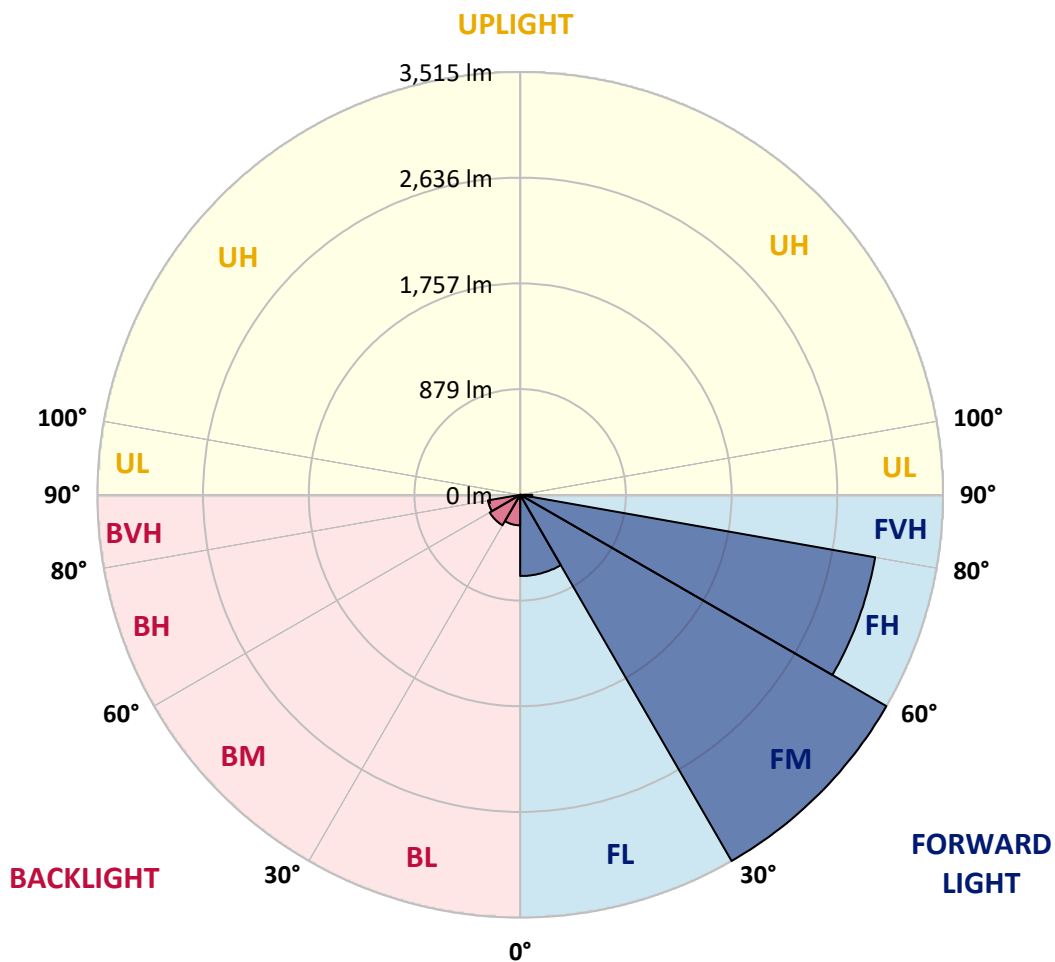
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	675.0	8.3			
FM (30°-60°)	3514.8	43.3			
FH (60°-80°)	2996.2	36.9			G2/5000
FVH (80°-90°)	101.5	1.3			G2/225
BL (0°-30°)	253.5	3.1	B1/500		
BM (30°-60°)	292.5	3.6	B1/1000		
BH (60°-80°)	271.4	3.3	B1/500		G1/500
BVH (80°-90°)	4.0	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°	1806.6	1806.6	1806.6	1806.6	1806.6	1806.6	1806.6	1806.6	1806.6	1806.6	1806.6
2.5°	1900.2	1901.5	1900.8	1902.7	1901.5	1891.9	1881.7	1860.1	1862.0	1834.0	1802.8
5°	1766.5	1777.3	1788.1	1799.0	1825.1	1848.0	1875.4	1881.7	1881.7	1857.5	1811.7
7.5°	1630.3	1630.9	1643.0	1657.6	1692.7	1734.7	1798.3	1855.6	1856.9	1863.3	1813.0
10°	1527.8	1531.0	1539.2	1555.2	1590.2	1631.5	1702.8	1792.6	1799.6	1846.7	1800.2
12.5°	1448.2	1452.0	1460.9	1479.4	1511.2	1553.9	1629.0	1731.5	1741.0	1830.8	1796.4
15°	1387.1	1392.2	1399.2	1417.7	1452.0	1497.2	1579.4	1690.8	1702.2	1824.4	1808.5
17.5°	1361.6	1361.6	1361.0	1373.7	1408.1	1453.9	1539.9	1669.1	1683.7	1829.5	1828.9
20°	1372.5	1370.6	1357.2	1354.0	1375.0	1420.8	1508.7	1655.1	1671.7	1839.1	1853.7
22.5°	1429.8	1425.9	1396.0	1371.2	1364.8	1395.4	1487.7	1645.6	1665.3	1858.8	1886.8
25°	1551.3	1539.9	1498.5	1442.5	1392.2	1389.0	1473.0	1640.5	1661.5	1881.7	1923.1
27.5°	1709.2	1706.0	1639.8	1564.7	1467.9	1410.0	1468.6	1636.6	1657.6	1898.3	1952.4
30°	1905.3	1906.6	1830.2	1732.1	1585.7	1469.2	1482.6	1634.7	1656.4	1899.5	1965.1
32.5°	2107.7	2109.0	2045.3	1940.3	1746.8	1571.1	1522.1	1643.6	1663.4	1894.5	1964.5
35°	2302.5	2304.4	2266.2	2181.6	1961.9	1712.4	1596.5	1674.2	1688.2	1897.6	1963.2
37.5°	2548.9	2556.5	2509.4	2430.5	2231.8	1919.9	1718.1	1735.9	1747.4	1923.7	1972.8
40°	2969.0	2958.8	2823.9	2690.2	2524.7	2172.6	1893.8	1842.3	1846.1	1991.2	2009.0
42.5°	3458.5	3445.8	3214.7	2984.3	2825.8	2477.6	2118.5	2005.2	2004.6	2104.5	2088.0
45°	3879.9	3872.3	3629.1	3321.7	3159.3	2814.3	2395.4	2240.1	2232.5	2300.6	2231.8
47.5°	4179.1	4172.8	3988.8	3680.7	3545.1	3184.8	2741.1	2560.3	2544.4	2557.1	2465.5
50°	4208.4	4201.4	4137.1	3939.1	3995.8	3728.4	3168.2	2979.8	2959.5	2939.7	2818.8
52.5°	3934.7	3934.1	3967.8	3955.1	4311.5	4428.0	3692.2	3498.6	3474.4	3424.2	3303.8
55°	3375.1	3372.0	3499.9	3685.8	4304.5	5149.9	4491.1	4116.1	4084.3	3983.7	3825.8
57.5°	2466.1	2449.6	2716.9	3111.0	4002.2	5465.7	5759.8	4883.2	4830.4	4511.4	4268.3
60°	1361.6	1368.0	1711.8	2178.4	3286.0	5403.3	6927.2	5777.6	5638.8	4966.6	4721.5
62.5°	763.3	779.2	1035.1	1415.7	2095.0	4897.2	7553.6	7316.8	6982.6	5497.5	5294.4
65°	577.4	586.9	715.5	1092.4	1320.9	3422.2	7653.6	9469.1	9180.7	6302.1	6206.6
67.5°	543.6	551.3	614.3	905.9	1203.1	1774.8	6901.1	10742.3	10778.5	7399.6	6913.2
68°	547.5	557.0	620.0	871.5	1201.2	1587.6	6580.3	10748.6	10825.6	7576.6	6889.0
70°	502.9	505.4	655.7	854.9	1164.3	1250.9	4760.3	10012.1	10150.2	7787.3	6253.7
72.5°	192.2	192.9	294.1	740.3	1219.7	1257.9	2398.0	7913.3	7920.3	6777.0	4875.6
75°	99.9	84.0	92.3	231.7	1164.9	1226.0	1203.1	5403.3	5369.5	4583.4	2987.5
77.5°	68.8	58.6	61.7	80.2	484.4	1225.4	868.9	3107.1	3100.1	1949.8	852.4
80°	38.8	33.7	36.9	67.5	170.0	1150.3	809.7	1335.5	1258.5	342.5	138.1
82.5°	19.7	16.6	19.7	56.7	105.7	723.8	787.4	523.9	466.6	81.5	89.8
85°	5.1	5.1	9.5	39.5	65.6	237.4	706.0	378.1	339.9	35.6	63.7
87.5°	1.3	0.6	3.8	14.6	23.6	51.6	391.5	210.7	181.4	18.5	36.9
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°	1806.6	1806.6	1806.6	1806.6	1806.6	1806.6	1806.6	1806.6	1806.6	1806.6	1806.6
2.5°	1790.1	1772.2	1737.2	1697.8	1669.7	1639.2	1621.4	1599.7	1583.2	1568.5	1579.4
5°	1783.7	1749.3	1671.7	1584.4	1511.2	1441.2	1389.0	1339.4	1301.8	1278.2	1287.8
7.5°	1767.1	1716.2	1590.2	1453.9	1334.3	1221.6	1129.9	1047.8	984.1	949.8	960.6
10°	1739.1	1667.2	1497.9	1308.8	1141.4	982.2	846.0	723.8	631.5	588.2	598.4
12.5°	1718.8	1623.9	1402.4	1168.8	948.5	722.5	541.7	401.7	329.7	286.5	290.3
15°	1709.8	1590.2	1313.3	1021.1	737.8	464.1	292.8	212.0	187.2	178.2	178.9
17.5°	1711.1	1563.4	1228.6	867.7	525.2	266.7	179.5	161.7	157.9	156.0	156.0
20°	1714.3	1536.7	1140.7	707.9	336.1	171.9	149.6	143.9	142.0	139.4	140.0
22.5°	1723.9	1516.3	1052.3	547.5	206.9	140.0	132.4	127.3	124.1	120.3	120.9
25°	1738.5	1501.1	965.1	394.0	145.8	122.2	115.2	108.2	102.5	98.0	98.7
27.5°	1747.4	1479.4	872.1	268.6	120.9	106.9	97.4	87.8	81.5	77.7	77.0
30°	1741.0	1444.4	766.4	176.3	106.9	92.3	80.8	70.0	63.7	60.5	60.5
32.5°	1723.9	1399.2	649.9	128.6	94.9	79.6	65.6	56.0	51.6	49.7	50.3
35°	1704.1	1352.1	525.8	108.9	85.3	67.5	53.5	45.8	43.9	43.3	43.3
37.5°	1693.3	1311.4	406.8	98.7	76.4	56.0	43.9	39.5	37.6	37.6	37.6
40°	1705.4	1280.2	301.1	91.0	67.5	46.5	36.9	33.7	33.1	33.1	33.1
42.5°	1757.0	1269.3	220.3	84.7	58.6	38.8	31.8	29.3	28.6	29.3	29.3
45°	1857.5	1292.9	166.8	78.3	50.3	31.8	27.4	25.5	25.5	26.1	26.1
47.5°	2028.1	1353.4	136.9	71.9	42.0	26.7	23.6	22.3	22.3	22.9	22.9
50°	2293.0	1465.4	122.9	64.9	35.0	22.9	19.7	19.1	19.1	19.7	20.4
52.5°	2695.3	1678.7	115.9	57.9	28.6	19.1	16.6	15.9	16.6	17.2	17.2
55°	3142.8	1951.7	107.6	50.9	24.2	15.9	13.4	13.4	14.0	15.3	15.3
57.5°	3559.7	2215.3	99.9	42.0	21.0	12.7	10.8	10.8	12.1	13.4	13.4
60°	4000.3	2473.7	89.8	33.7	17.8	10.2	8.9	8.9	10.8	12.1	12.7
62.5°	4544.5	2774.2	76.4	26.7	14.0	7.6	6.4	8.3	10.2	12.1	12.1
65°	5331.3	3147.9	59.8	21.0	10.8	5.7	5.1	7.6	9.5	11.5	12.1
67.5°	5617.2	3100.1	45.2	17.2	8.3	4.5	4.5	7.0	9.5	11.5	11.5
68°	5512.8	2995.7	43.3	16.6	7.6	4.5	4.5	7.0	9.5	11.5	11.5
70°	4803.6	2448.9	35.6	12.7	6.4	3.8	3.8	6.4	9.5	10.8	11.5
72.5°	3596.7	1627.1	30.6	8.3	5.7	3.8	3.2	6.4	8.9	10.8	10.8
75°	2063.1	675.4	26.1	6.4	5.1	3.2	3.2	5.7	8.9	10.8	10.8
77.5°	583.1	157.9	21.0	5.1	4.5	3.2	2.5	5.7	8.3	10.2	10.2
80°	106.9	47.1	16.6	4.5	3.8	3.2	2.5	5.7	8.3	10.2	10.2
82.5°	70.7	22.3	12.1	4.5	3.8	3.2	2.5	5.1	7.6	9.5	9.5
85°	52.8	15.9	7.6	4.5	3.8	3.2	2.5	5.1	7.6	9.5	9.5
87.5°	29.3	7.0	5.7	5.1	4.5	3.2	2.5	4.5	7.0	8.9	8.9
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)