

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: P270348

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270348  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)  
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-SL2-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8381.9 lumens  
Efficiency: N/A  
Efficacy: 98.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

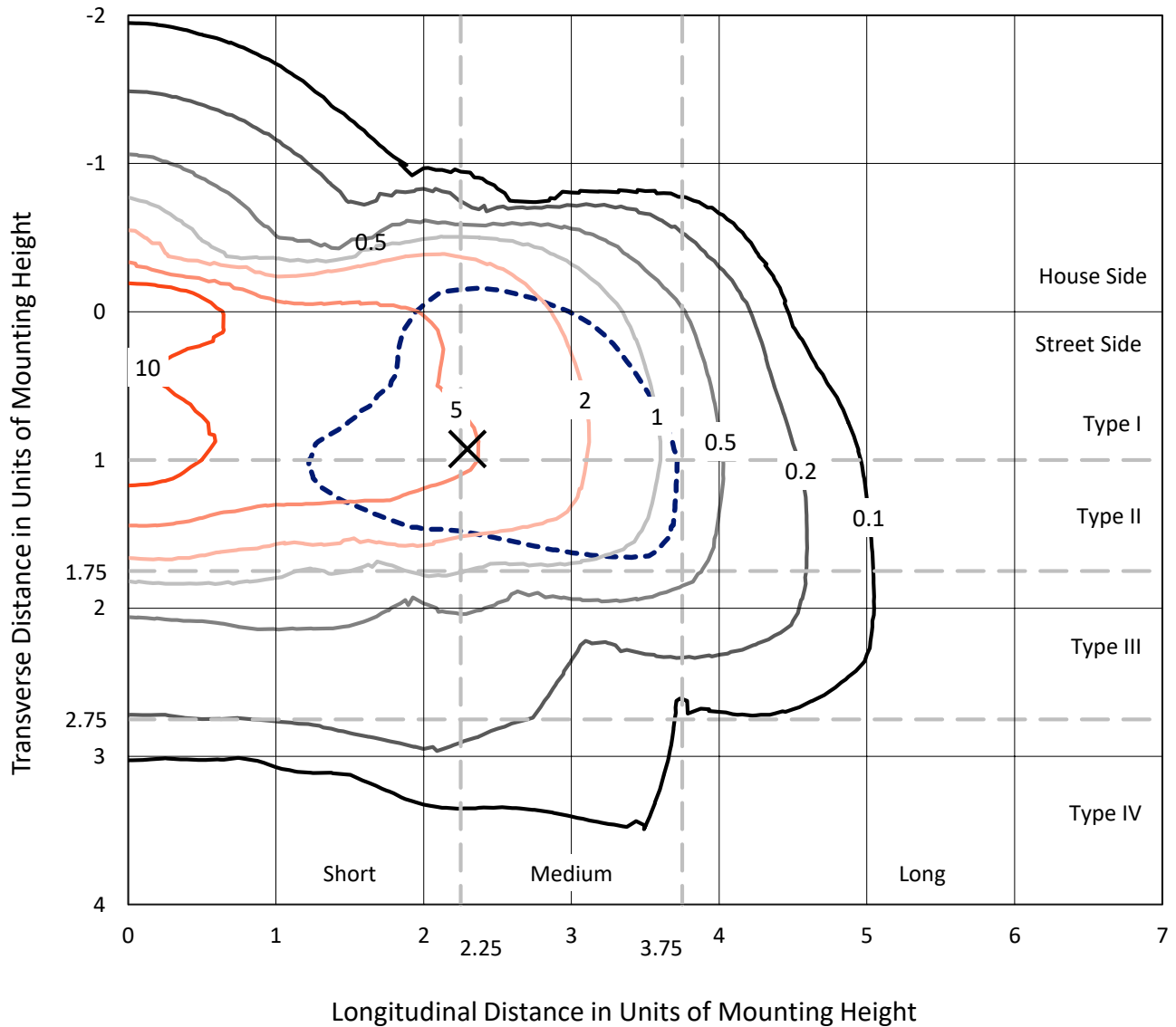
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

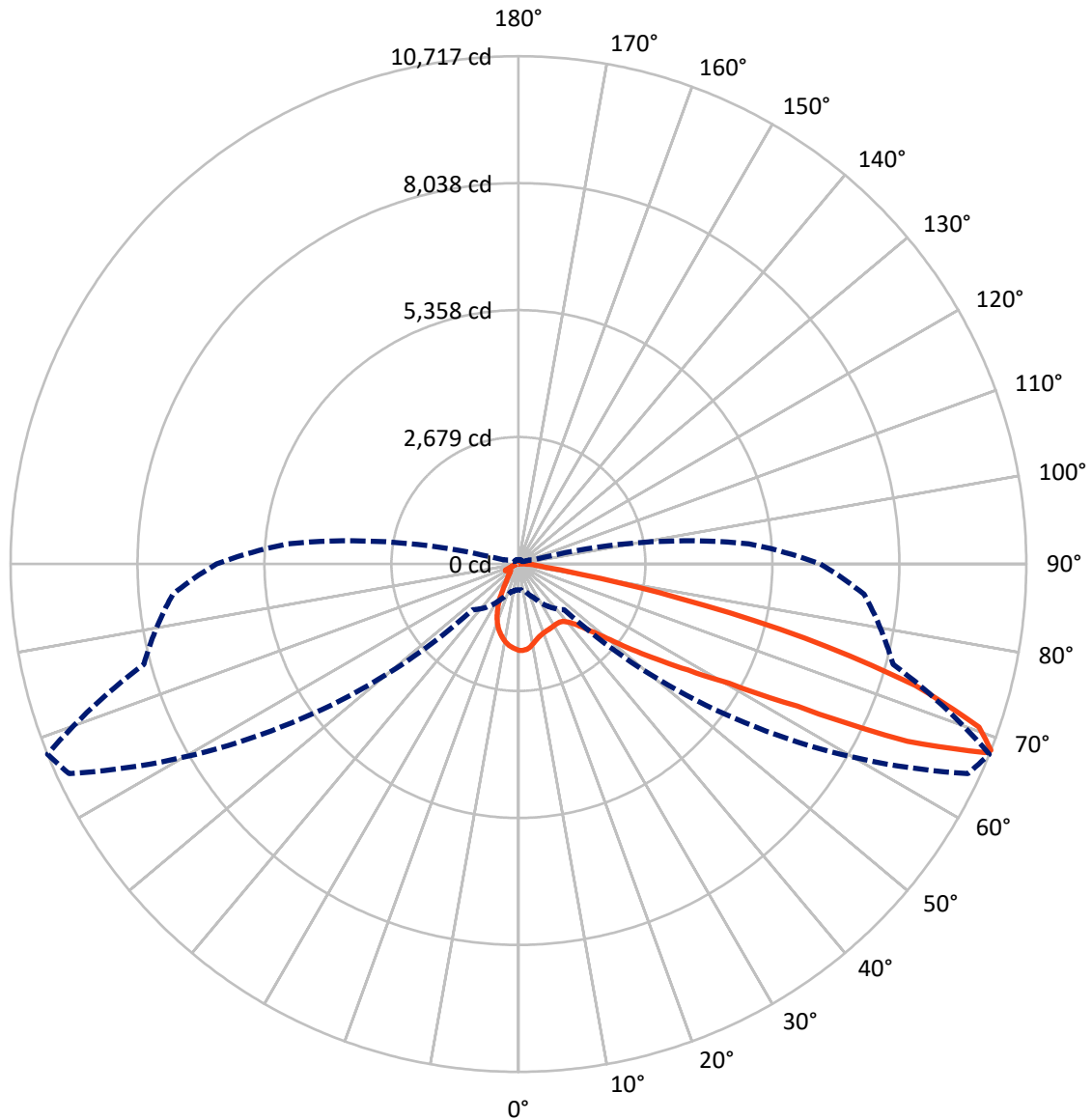
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18.2 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1371.3	0.0	1371.3
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	7010.6	0.0	7010.6
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	8381.9	0.0	8381.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.3	1.9
10°-20°	362.4	4.3
20°-30°	490.2	5.8
30°-40°	691.2	8.2
40°-50°	1136.5	13.6
50°-60°	1761.7	21.0
60°-70°	2284.2	27.3
70°-80°	1310.8	15.6
80°-90°	188.6	2.3
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°	8381.9	100.0
0°-180°	8381.9	100.0



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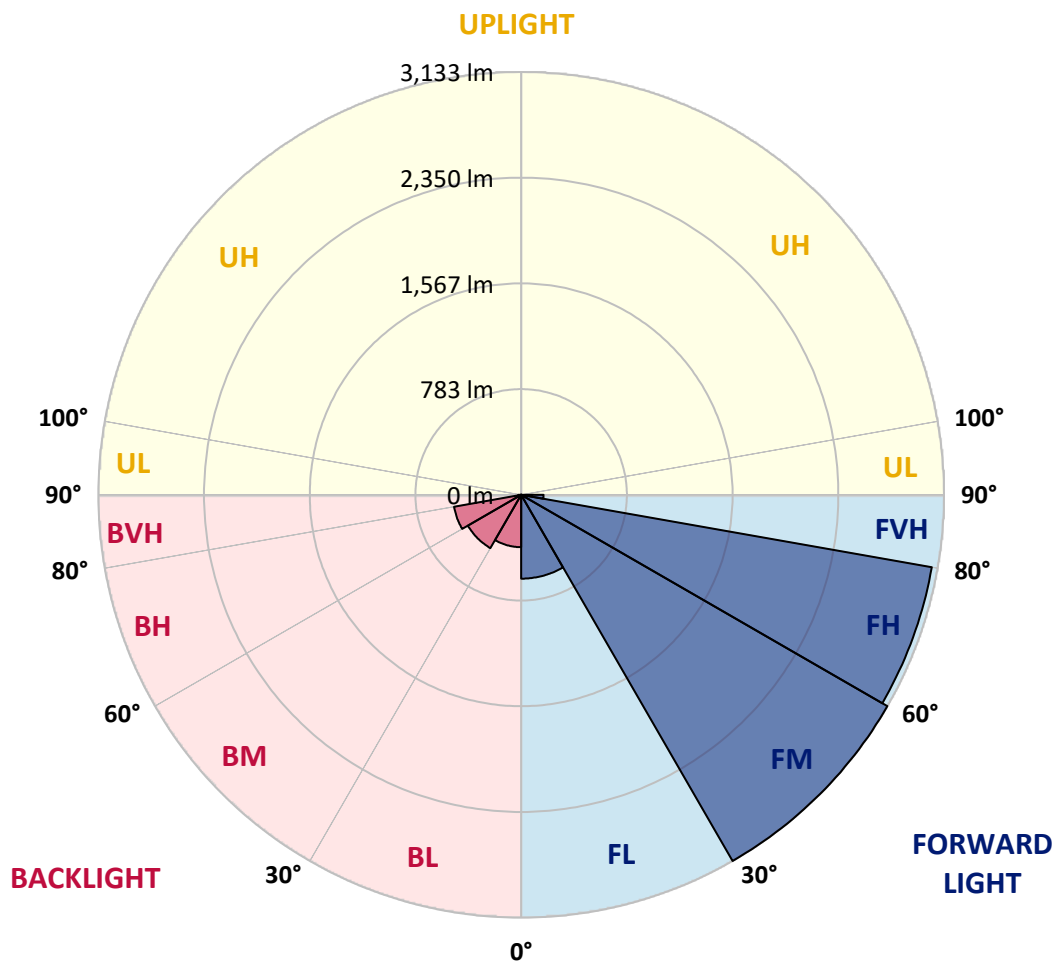
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	621.2	7.4			
FM	(30°-60°)	3133.3	37.4			
FH	(60°-80°)	3089.9	36.9			G2/5000
FVH	(80°-90°)	166.1	2.0			G2/225
BL	(0°-30°)	387.7	4.6	B1/500		
BM	(30°-60°)	456.1	5.4	B1/1000		
BH	(60°-80°)	505.0	6.0	B2/1000		G2/1000
BVH	(80°-90°)	22.5	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1823.7	1823.7	1823.7	1823.7	1823.7	1823.7	1823.7	1823.7	1823.7	1823.7	1823.7
2.5°	1775.1	1789.3	1789.3	1799.8	1809.0	1816.7	1823.3	1823.3	1823.3	1818.9	1815.0
5°	1588.4	1607.5	1610.3	1636.5	1671.0	1713.2	1760.3	1801.9	1810.2	1825.4	1831.5
7.5°	1458.6	1464.6	1475.0	1493.2	1528.1	1580.2	1654.0	1747.2	1769.7	1817.8	1843.1
10°	1366.6	1371.5	1380.3	1398.4	1430.1	1477.3	1550.0	1671.0	1708.2	1793.6	1843.5
12.5°	1299.3	1303.1	1311.3	1327.8	1360.0	1402.3	1476.6	1602.7	1648.6	1769.7	1851.1
15°	1246.7	1253.2	1259.9	1275.8	1308.7	1349.2	1424.6	1552.8	1602.7	1750.4	1865.4
17.5°	1225.8	1229.2	1230.3	1238.6	1268.0	1309.1	1384.6	1517.7	1569.2	1735.2	1876.4
20°	1239.0	1239.7	1228.6	1223.2	1240.2	1277.8	1351.3	1491.5	1544.0	1721.4	1880.7
22.5°	1296.6	1296.6	1268.0	1244.1	1232.5	1256.0	1328.9	1473.4	1530.4	1711.0	1880.7
25°	1406.0	1401.1	1356.8	1309.1	1258.3	1248.4	1314.6	1461.9	1519.9	1705.5	1873.7
27.5°	1550.0	1545.7	1489.3	1418.7	1326.6	1264.9	1309.6	1452.6	1509.5	1697.3	1858.4
30°	1725.3	1721.4	1657.4	1564.8	1429.1	1316.8	1321.1	1446.0	1501.2	1683.7	1832.6
32.5°	1899.9	1897.7	1846.8	1752.1	1570.2	1404.9	1351.3	1445.0	1496.9	1667.3	1801.5
35°	2075.7	2075.7	2044.5	1964.6	1760.3	1537.4	1414.2	1465.1	1505.2	1658.5	1774.5
37.5°	2335.2	2324.9	2266.8	2184.0	1999.5	1709.4	1516.1	1507.8	1536.9	1673.3	1765.8
40°	2737.0	2707.0	2561.8	2422.8	2260.8	1929.5	1665.0	1590.5	1608.1	1723.6	1786.5
42.5°	3157.6	3109.9	2917.8	2695.5	2530.6	2201.0	1860.5	1724.7	1724.1	1821.0	1852.8
45°	3518.4	3493.8	3285.7	3003.8	2839.0	2506.6	2107.5	1924.0	1904.2	1972.1	1980.5
47.5°	3728.1	3711.6	3586.4	3330.0	3204.7	2867.4	2420.7	2200.5	2163.3	2203.8	2191.2
50°	3670.0	3685.9	3649.9	3519.0	3597.8	3374.5	2819.8	2579.5	2508.7	2549.3	2518.7
52.5°	3364.5	3407.4	3439.6	3464.8	3823.9	4052.9	3321.4	3052.5	2994.0	2986.8	2957.2
55°	2814.3	2882.2	2984.0	3169.1	3763.2	4597.5	4197.3	3624.7	3539.2	3494.3	3505.8
57.5°	1915.2	2018.2	2237.8	2589.9	3447.2	4829.7	5492.7	4363.7	4219.2	4059.4	4096.6
60°	1055.1	1141.0	1402.3	1757.1	2726.1	4795.2	6641.0	5565.1	5110.1	4686.3	4763.0
62.5°	682.7	701.3	895.8	1200.1	1673.3	4233.5	7278.8	7572.8	6608.7	5513.1	5621.0
65°	548.7	561.8	657.0	968.1	1165.7	2723.4	7307.4	9655.6	9020.1	6636.6	6639.9
67.5°	536.0	542.0	597.4	814.1	1093.3	1482.7	6316.3	10476.9	10624.3	7962.7	7321.5
68°	543.7	550.8	606.6	789.0	1092.9	1366.6	5837.7	10464.4	10716.8	8184.5	7321.5
70°	479.6	488.4	618.8	816.4	1046.3	1175.1	3997.5	9908.7	10314.9	8694.2	6947.0
72.5°	250.7	243.6	306.1	644.4	1177.8	1224.3	2111.8	8278.2	8752.2	8052.0	6001.9
75°	195.6	178.0	171.3	254.6	1035.9	1269.8	1226.5	5883.8	6241.9	5804.4	4011.7
77.5°	184.0	162.7	150.0	150.6	456.1	1321.1	992.1	3462.5	3462.5	2768.8	1280.2
80°	147.9	128.1	120.0	136.9	220.2	1217.7	1035.3	1578.0	1345.8	715.6	352.7
82.5°	97.5	87.0	87.7	111.1	166.9	813.1	1199.1	779.1	585.3	317.0	207.5
85°	61.9	53.1	59.1	77.8	124.9	362.5	1187.0	541.5	387.7	178.0	103.5
87.5°	31.3	24.1	29.6	40.6	76.0	104.1	977.4	483.5	287.5	73.9	56.5
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°	1823.7	1823.7	1823.7	1823.7	1823.7	1823.7	1823.7	1823.7	1823.7	1823.7	1823.7
2.5°	1815.0	1803.0	1797.0	1787.2	1775.1	1763.1	1754.7	1750.9	1748.8	1749.9	1749.4
5°	1828.2	1812.3	1786.5	1749.9	1712.1	1672.1	1641.6	1617.9	1603.1	1598.8	1597.6
7.5°	1838.0	1815.0	1766.8	1700.1	1635.5	1565.3	1505.6	1458.0	1425.8	1411.0	1410.3
10°	1836.5	1806.9	1730.8	1632.2	1537.4	1434.6	1340.9	1261.0	1202.9	1175.1	1173.8
12.5°	1838.0	1797.6	1686.4	1552.8	1416.9	1269.8	1130.6	1006.3	919.9	878.8	877.1
15°	1844.6	1787.6	1640.9	1464.1	1276.3	1068.3	869.5	713.4	634.7	607.8	607.8
17.5°	1844.1	1771.3	1588.4	1361.1	1109.2	830.7	593.5	497.1	489.4	514.1	518.0
20°	1833.1	1745.0	1520.6	1239.0	913.2	574.9	402.4	388.7	450.1	518.0	525.6
22.5°	1816.2	1711.0	1442.1	1097.2	685.0	374.6	310.5	331.3	414.5	498.7	510.9
25°	1792.6	1669.9	1352.4	932.4	455.5	269.4	259.0	284.8	343.3	399.7	408.5
27.5°	1758.2	1617.9	1254.5	753.9	290.7	221.7	225.6	243.6	268.9	292.9	297.9
30°	1714.9	1557.2	1147.7	556.3	220.7	198.2	204.8	215.8	226.7	242.1	245.2
32.5°	1671.0	1495.3	1036.5	382.1	192.7	185.6	192.1	198.2	207.5	217.8	220.2
35°	1631.6	1437.7	922.0	266.6	180.6	177.3	180.6	184.5	193.9	204.3	205.4
37.5°	1603.1	1390.8	802.6	210.8	173.6	170.3	171.9	173.6	184.5	199.9	201.5
40°	1599.3	1359.6	681.6	189.5	168.2	163.8	162.7	163.8	178.0	195.6	197.1
42.5°	1636.5	1361.1	563.3	180.6	163.8	158.8	154.4	156.6	169.2	182.8	184.0
45°	1724.7	1399.5	461.0	176.8	159.9	156.0	149.5	150.6	156.6	163.8	164.7
47.5°	1880.2	1483.2	382.7	174.7	156.6	153.3	145.0	141.8	142.3	146.2	146.2
50°	2128.9	1623.4	335.1	172.5	153.9	147.9	138.5	132.0	130.3	132.5	133.0
52.5°	2499.4	1863.9	312.2	168.2	148.8	140.8	130.3	123.7	121.0	123.2	123.2
55°	3000.5	2247.6	301.1	162.1	142.9	132.0	122.7	117.1	115.1	116.6	116.6
57.5°	3571.5	2746.4	319.7	153.9	135.3	122.7	116.2	112.3	110.6	112.3	112.7
60°	4249.9	3399.0	447.9	143.5	127.0	114.4	110.6	108.4	107.3	109.0	109.0
62.5°	5151.7	4267.5	693.1	135.3	118.2	106.8	105.7	104.7	103.5	105.1	105.1
65°	6125.3	5057.5	713.4	130.3	110.6	100.3	100.7	100.7	99.6	101.2	101.2
67.5°	6435.1	4989.0	398.6	124.2	101.2	93.7	95.8	95.8	95.3	96.8	96.4
68°	6369.4	4880.8	347.1	122.7	99.6	91.9	94.2	94.7	94.2	95.8	95.3
70°	5879.9	4284.9	228.3	113.4	92.5	86.4	89.8	90.3	89.8	91.9	91.4
72.5°	4853.8	3214.0	168.6	99.2	83.8	79.4	82.6	83.3	83.8	86.0	85.3
75°	3082.5	1775.1	133.0	84.4	75.0	71.1	74.5	76.0	77.3	80.5	78.8
77.5°	844.2	538.8	107.8	71.8	64.6	63.1	65.1	67.4	68.5	72.3	69.4
80°	295.6	238.2	89.8	60.7	53.7	53.1	55.2	57.5	58.6	61.9	58.6
82.5°	179.7	155.4	71.8	47.6	42.2	41.6	44.3	46.5	47.6	47.6	45.5
85°	93.7	82.1	52.6	33.3	29.0	27.4	32.2	35.0	35.7	35.0	33.3
87.5°	52.6	46.5	27.9	15.9	13.1	13.7	17.0	20.8	22.5	21.9	20.8
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)