

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: P270356

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270356
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
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-SL3-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8539.9 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-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

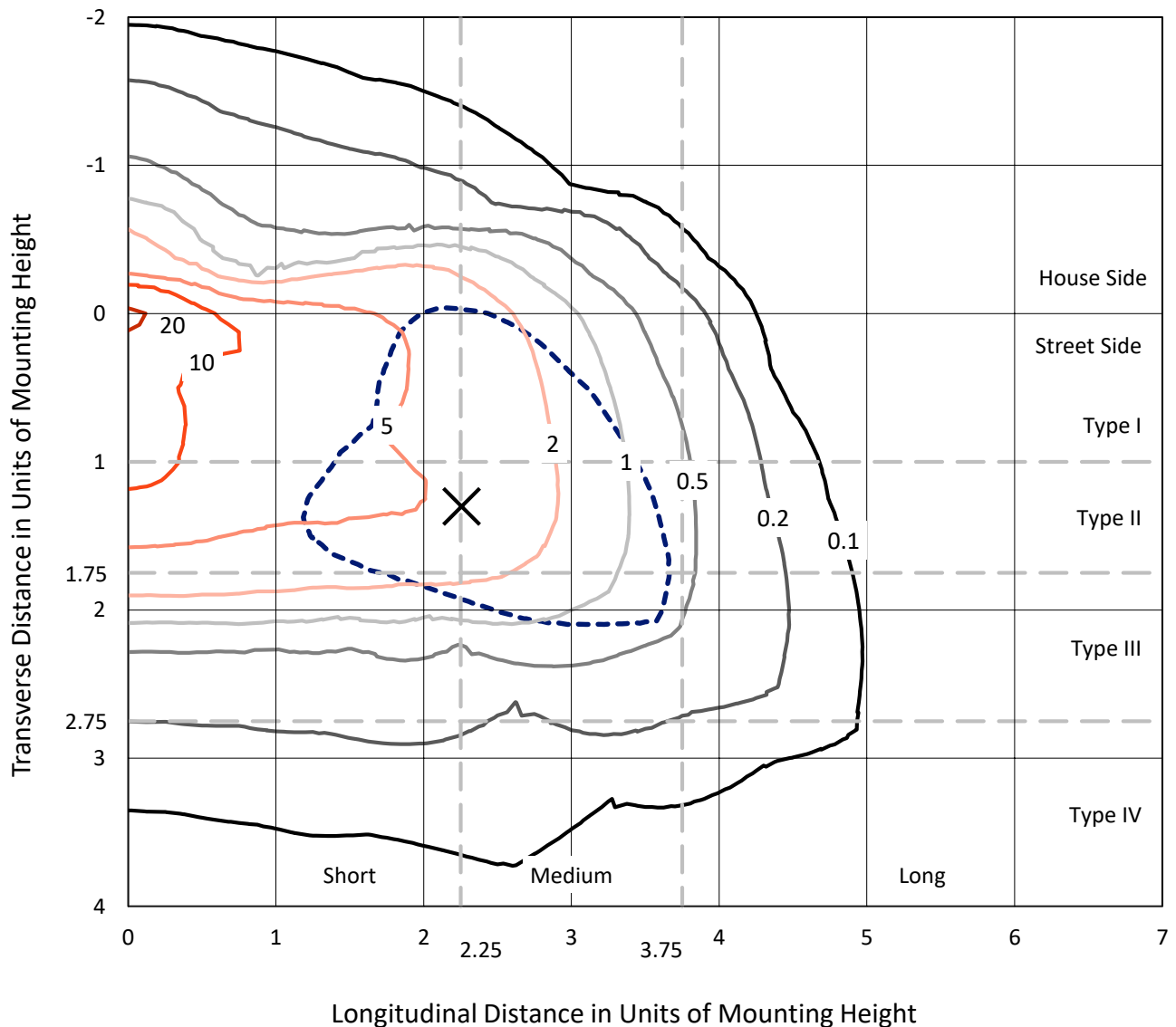


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Iso-Footcandle Lines of Horizontal Illumination

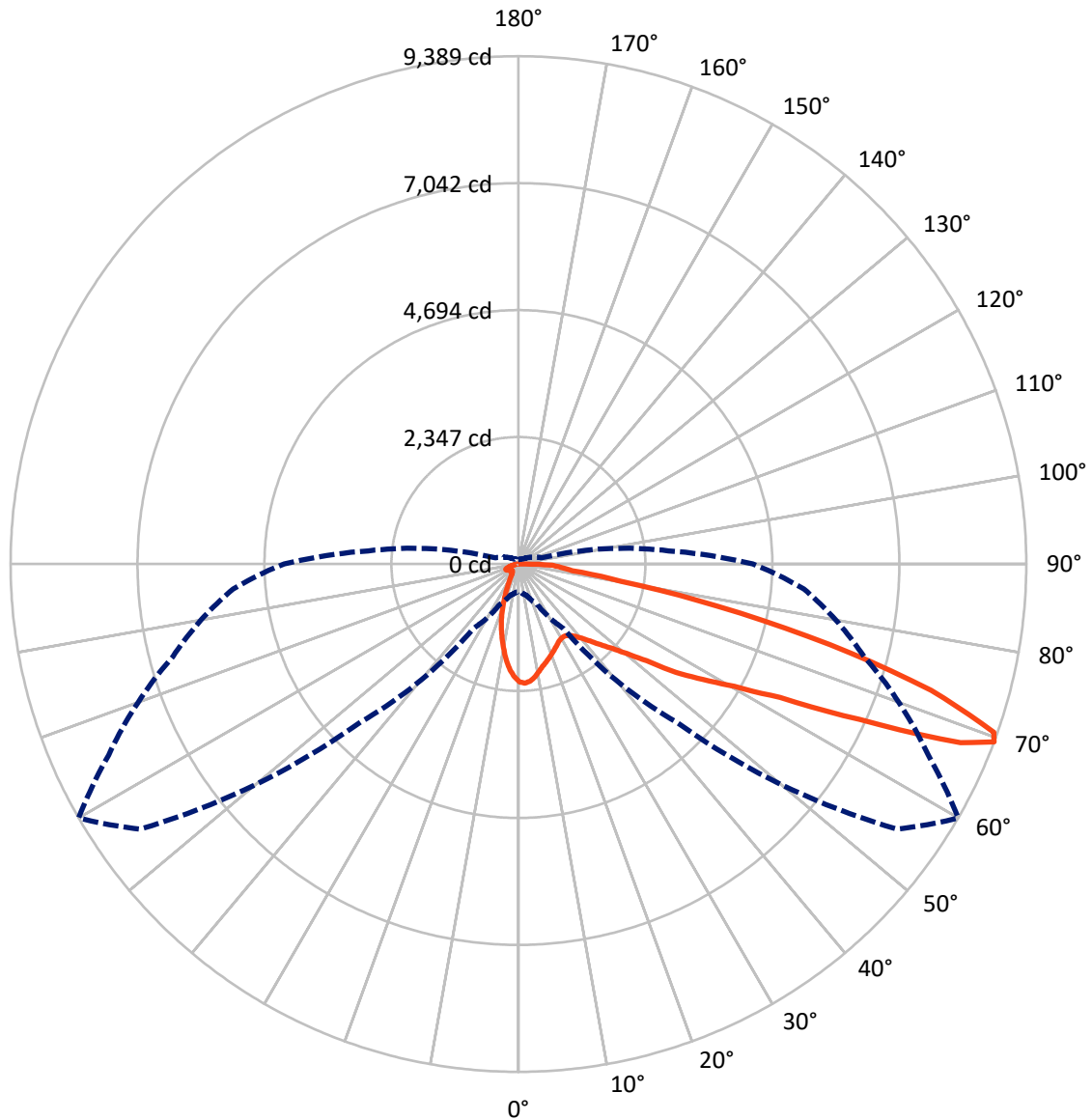
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 21.8 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1218.1	0.0	1218.1
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	7321.8	0.0	7321.8
	% Fixture	85.7	0.0	85.7
Total	Lumens	8539.9	0.0	8539.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.9	2.2
10°-20°	395.8	4.6
20°-30°	504.9	5.9
30°-40°	694.8	8.1
40°-50°	1125.4	13.2
50°-60°	1766.3	20.7
60°-70°	2354.8	27.6
70°-80°	1309.8	15.3
80°-90°	203.1	2.4
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°	8539.9	100.0
0°-180°	8539.9	100.0

Coefficient of Utilization



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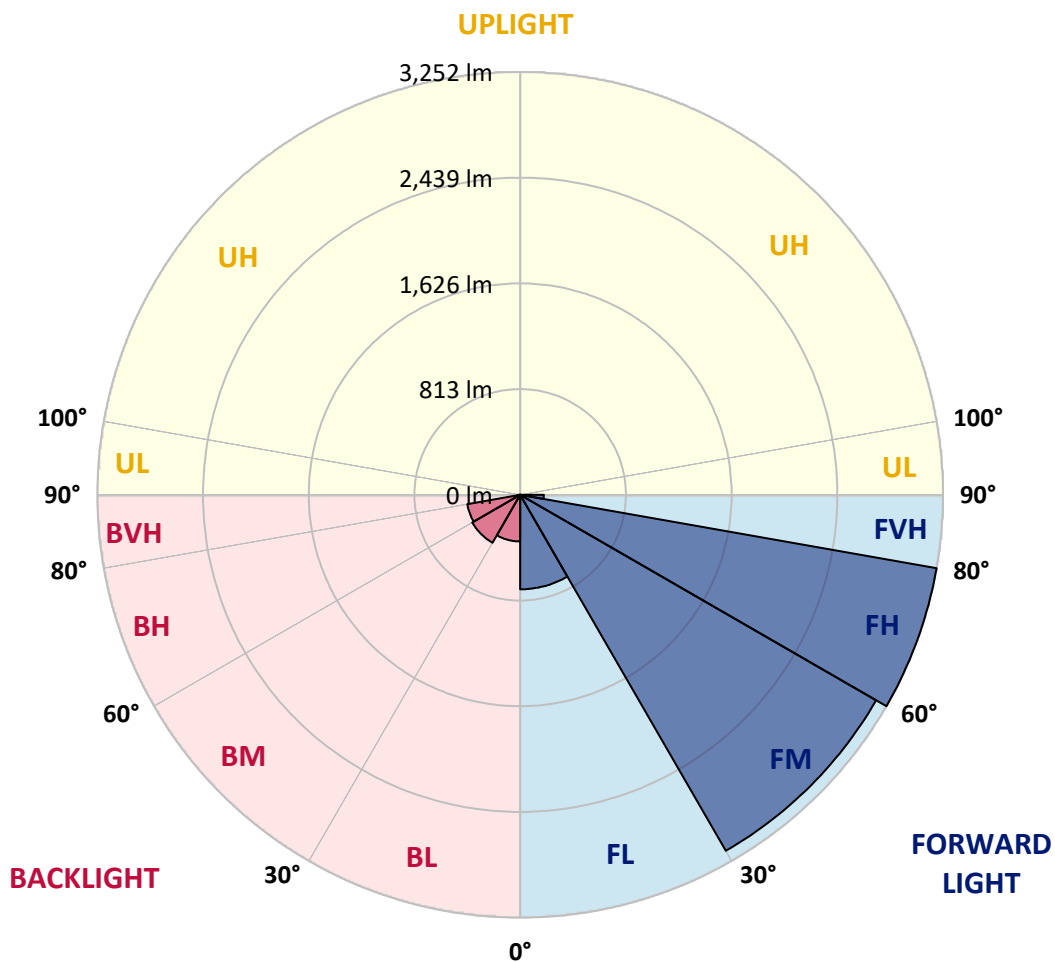
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	726.6	8.5			
FM	(30°-60°)	3161.0	37.0			
FH	(60°-80°)	3251.7	38.1			G2/5000
FVH	(80°-90°)	182.6	2.1			G2/225
BL	(0°-30°)	359.0	4.2	B1/500		
BM	(30°-60°)	425.5	5.0	B1/1000		
BH	(60°-80°)	413.0	4.8	B1/500		G1/500
BVH	(80°-90°)	20.6	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	2179.0	2179.0	2179.0	2179.0	2179.0	2179.0	2179.0	2179.0	2179.0	2179.0	2179.0
2.5°	2237.0	2243.1	2243.1	2238.0	2235.4	2219.5	2210.2	2203.6	2192.1	2170.8	2151.6
5°	2157.1	2168.6	2173.4	2175.7	2189.9	2184.9	2185.5	2181.2	2171.4	2148.2	2117.0
7.5°	2010.2	2012.6	2021.2	2036.1	2070.6	2094.7	2114.3	2118.3	2116.0	2099.0	2055.2
10°	1865.7	1869.6	1880.0	1905.1	1938.1	1972.5	2015.3	2032.8	2045.9	2040.4	1985.2
12.5°	1745.8	1746.3	1757.9	1786.9	1823.6	1866.9	1924.9	1952.2	1983.5	1996.0	1934.2
15°	1630.2	1637.9	1648.8	1684.0	1729.3	1784.2	1851.0	1888.7	1929.7	1965.9	1894.7
17.5°	1542.6	1548.7	1555.2	1584.3	1636.8	1705.3	1787.9	1828.5	1882.7	1938.1	1854.2
20°	1494.4	1496.7	1491.7	1506.0	1550.4	1624.2	1720.1	1768.9	1833.4	1911.1	1812.6
22.5°	1484.5	1484.5	1466.6	1463.8	1483.6	1546.0	1649.9	1709.7	1788.5	1892.5	1775.4
25°	1530.6	1527.3	1493.3	1462.1	1455.1	1486.8	1583.2	1656.6	1750.2	1892.0	1747.5
27.5°	1617.7	1613.3	1571.1	1518.6	1473.1	1459.3	1531.7	1606.7	1720.1	1910.7	1733.2
30°	1726.2	1724.4	1681.7	1616.1	1541.0	1470.3	1511.4	1580.9	1699.9	1945.1	1732.7
32.5°	1844.8	1837.3	1811.0	1745.2	1647.9	1531.2	1523.4	1582.1	1694.4	1995.6	1745.2
35°	1971.4	1965.9	1959.4	1893.1	1783.6	1638.5	1576.5	1619.9	1721.2	2065.7	1780.9
37.5°	2132.4	2126.4	2137.3	2065.1	1945.1	1779.3	1666.4	1695.5	1775.9	2167.5	1847.2
40°	2418.9	2401.3	2370.6	2259.4	2133.6	1951.7	1796.3	1800.6	1869.6	2303.9	1953.4
42.5°	2889.3	2832.8	2681.1	2476.8	2332.3	2152.1	1965.4	1944.7	1998.8	2484.1	2107.9
45°	3360.6	3297.1	3040.9	2714.0	2538.3	2367.4	2174.5	2124.9	2159.9	2693.7	2306.6
47.5°	3665.3	3634.1	3344.8	2951.1	2753.9	2601.8	2413.8	2331.8	2357.0	2931.3	2551.9
50°	3754.5	3727.6	3500.3	3136.7	2957.7	2884.8	2710.1	2601.2	2605.5	3209.0	2846.0
52.5°	3687.6	3676.8	3526.0	3251.8	3145.0	3183.4	3120.4	2968.7	2932.4	3513.5	3164.6
55°	3598.4	3602.3	3544.3	3367.2	3335.5	3461.4	3657.0	3534.9	3381.5	3830.6	3496.6
57.5°	3317.5	3320.2	3472.5	3587.4	3699.2	3851.5	4074.8	4023.4	3844.8	4172.8	3868.5
60°	2671.3	2692.6	3031.6	3541.9	4114.7	4619.8	4674.5	4585.8	4337.6	4567.2	4351.8
62.5°	1908.4	1927.7	2320.2	3074.9	4066.1	5489.4	5781.8	5429.0	5006.3	5156.9	5032.0
65°	1002.7	999.5	1303.4	2124.9	3424.8	5690.9	7526.4	6926.3	6132.8	5968.0	5689.2
67.5°	560.3	578.2	696.0	1071.7	2232.1	5008.5	8640.8	8817.8	7699.0	6611.3	5660.7
69°	518.1	524.2	602.9	828.5	1455.1	4132.4	8545.0	9388.9	8359.4	6614.1	5296.0
70°	503.3	509.9	581.6	763.4	1222.2	3385.9	8196.2	9322.2	8519.9	6467.3	4964.2
72.5°	451.3	460.0	529.6	686.1	1030.0	1745.2	6602.2	7978.7	7717.6	5652.6	3849.1
75°	385.0	399.7	504.8	681.3	975.9	1109.4	4402.9	5944.4	5743.9	4042.6	2183.9
77.5°	159.4	160.9	220.8	498.9	1024.1	1061.8	2366.2	3765.4	3333.3	1772.6	657.6
80°	111.2	109.0	110.0	145.6	826.4	1069.0	1214.1	1915.0	1488.4	467.7	307.8
82.5°	93.7	92.5	96.9	91.4	279.8	1213.0	1015.3	998.2	700.9	252.0	146.8
85°	61.9	60.2	79.4	83.3	133.0	963.3	1092.0	784.7	522.5	134.7	62.4
87.5°	30.2	30.6	45.5	56.5	70.6	305.1	1045.9	620.5	403.6	58.6	25.2
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°	2179.0	2179.0	2179.0	2179.0	2179.0	2179.0	2179.0	2179.0	2179.0	2179.0	2179.0
2.5°	2144.0	2127.5	2112.8	2094.0	2079.8	2067.8	2051.4	2050.8	2048.0	2051.9	2053.0
5°	2096.3	2068.8	2027.3	1980.8	1947.9	1904.6	1862.5	1848.3	1832.4	1830.7	1835.6
7.5°	2024.5	1981.8	1910.7	1839.5	1768.3	1695.5	1626.4	1591.3	1557.4	1547.1	1551.9
10°	1944.7	1890.4	1781.3	1665.3	1565.0	1456.7	1351.5	1283.6	1221.8	1195.5	1202.0
12.5°	1882.2	1813.1	1659.9	1509.2	1359.1	1203.6	1065.1	931.0	829.7	784.2	786.9
15°	1828.5	1740.3	1546.0	1345.5	1157.6	944.7	752.4	597.0	508.3	475.4	474.2
17.5°	1770.5	1663.8	1427.0	1193.3	949.6	686.1	503.8	411.9	376.7	365.8	365.8
20°	1708.5	1584.8	1302.8	1027.3	730.5	479.2	378.9	343.3	330.1	327.0	326.4
22.5°	1651.1	1507.5	1177.9	850.4	528.5	363.6	322.5	308.8	306.7	309.3	309.3
25°	1605.6	1439.8	1051.5	664.2	384.5	304.4	287.0	285.3	293.6	303.4	305.1
27.5°	1571.7	1378.9	926.6	485.2	302.3	265.0	259.0	266.2	285.3	305.1	308.8
30°	1548.0	1326.8	777.0	348.8	252.0	232.2	234.9	247.6	276.6	306.7	314.9
32.5°	1537.7	1284.8	626.5	267.8	215.2	204.3	211.5	227.8	258.0	288.0	297.9
35°	1547.6	1254.0	487.4	222.3	188.4	180.2	188.4	205.4	225.0	239.8	245.9
37.5°	1583.2	1243.1	366.9	197.2	170.9	162.7	169.2	180.6	189.5	194.9	197.6
40°	1658.2	1254.7	287.5	184.1	160.9	151.8	153.3	158.8	164.7	169.2	169.8
42.5°	1777.6	1292.4	255.7	179.1	155.0	142.9	140.1	144.0	150.6	156.7	157.7
45°	1936.3	1355.4	252.5	180.6	152.3	135.9	130.3	134.1	142.9	152.8	154.4
47.5°	2141.6	1455.1	267.8	189.5	153.9	132.1	123.7	127.6	139.1	152.3	154.4
50°	2384.9	1593.1	296.4	202.6	161.5	132.1	121.0	124.3	136.4	151.2	153.3
52.5°	2671.3	1785.2	325.8	215.8	172.6	136.9	122.1	121.6	132.5	146.2	148.9
55°	2987.3	2024.1	354.3	227.2	178.6	143.5	124.9	118.2	127.0	138.0	140.1
57.5°	3359.1	2351.0	404.1	238.2	181.7	148.4	128.2	115.1	120.0	127.6	129.3
60°	3863.4	2831.2	501.1	256.8	187.8	150.6	128.6	111.7	111.2	116.6	117.1
62.5°	4521.1	3393.5	593.6	278.7	200.0	151.2	126.5	109.6	104.1	105.7	105.7
65°	4988.7	3600.5	566.8	297.3	210.8	150.6	124.3	107.8	98.5	95.8	95.8
67.5°	4722.7	3180.5	481.3	302.3	211.9	144.5	119.4	104.1	93.7	87.0	87.0
69°	4331.6	2787.9	442.0	293.6	203.1	137.4	113.9	100.3	90.4	82.7	82.7
70°	4013.0	2490.6	417.8	283.1	192.7	131.4	109.0	96.4	87.0	80.5	79.9
72.5°	2996.0	1662.0	357.0	244.2	158.2	111.2	95.3	86.0	78.3	73.9	73.9
75°	1580.9	832.9	292.4	199.3	122.1	88.8	78.3	72.3	67.9	67.4	66.8
77.5°	518.1	376.7	210.4	150.0	89.8	69.0	62.4	58.6	58.0	60.2	60.2
80°	279.8	225.0	135.3	101.2	62.4	51.5	48.1	47.6	49.2	52.6	52.6
82.5°	135.9	111.2	80.5	62.4	42.7	37.8	37.8	38.4	40.6	44.3	44.3
85°	58.6	52.6	46.5	35.0	26.3	23.5	26.8	29.6	31.3	34.0	35.0
87.5°	27.9	24.7	21.4	13.7	11.5	12.0	14.3	17.5	20.8	22.9	23.5
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)