

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: P270366

Luminaire Tested: **NAV-AF-02-D-UNV-SL4-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270366
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)
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-SL4-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11075 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 129
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

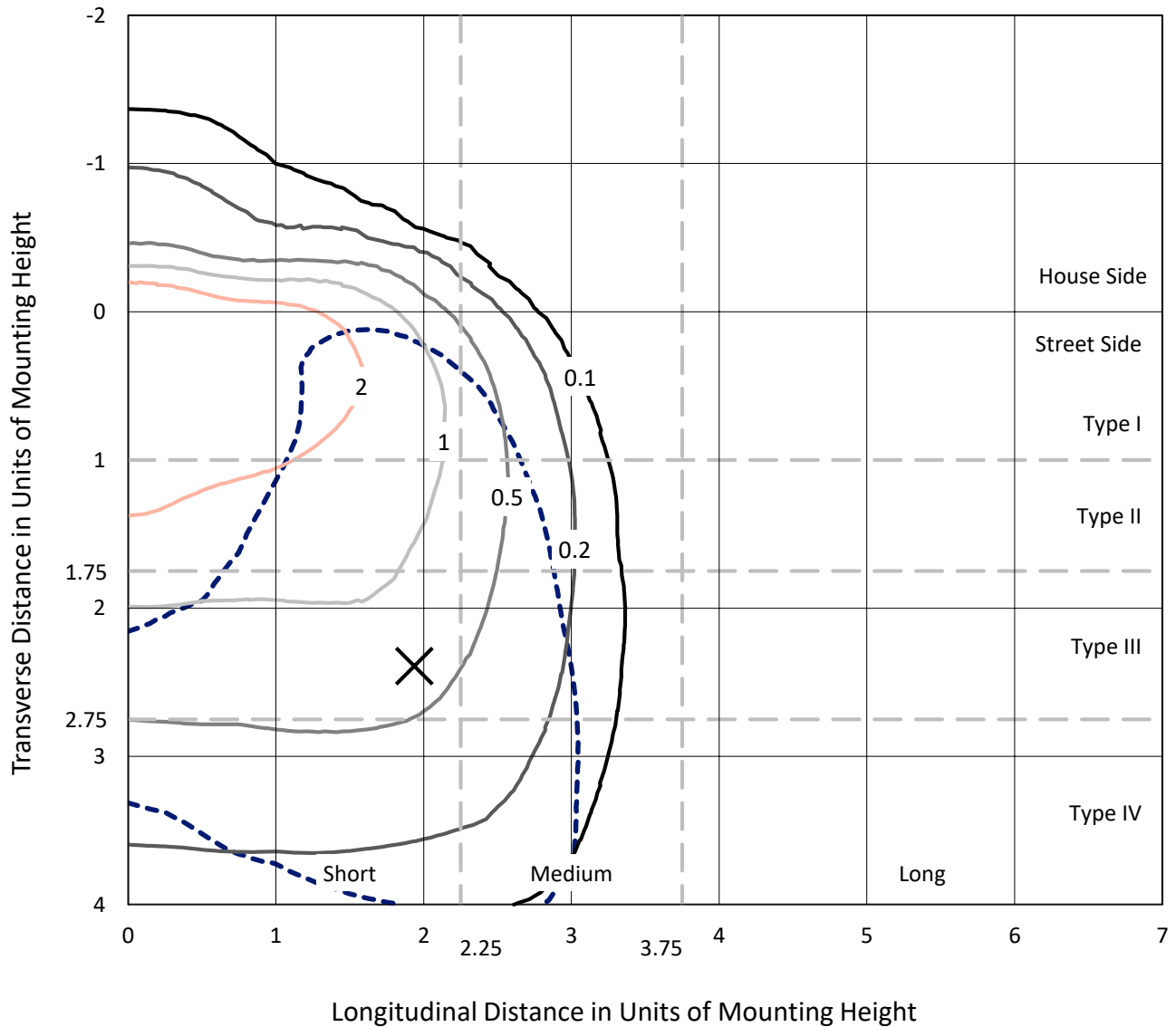


REPORT NUMBER: P270366

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7027-1200

Iso-Footcandle Lines of Horizontal Illumination

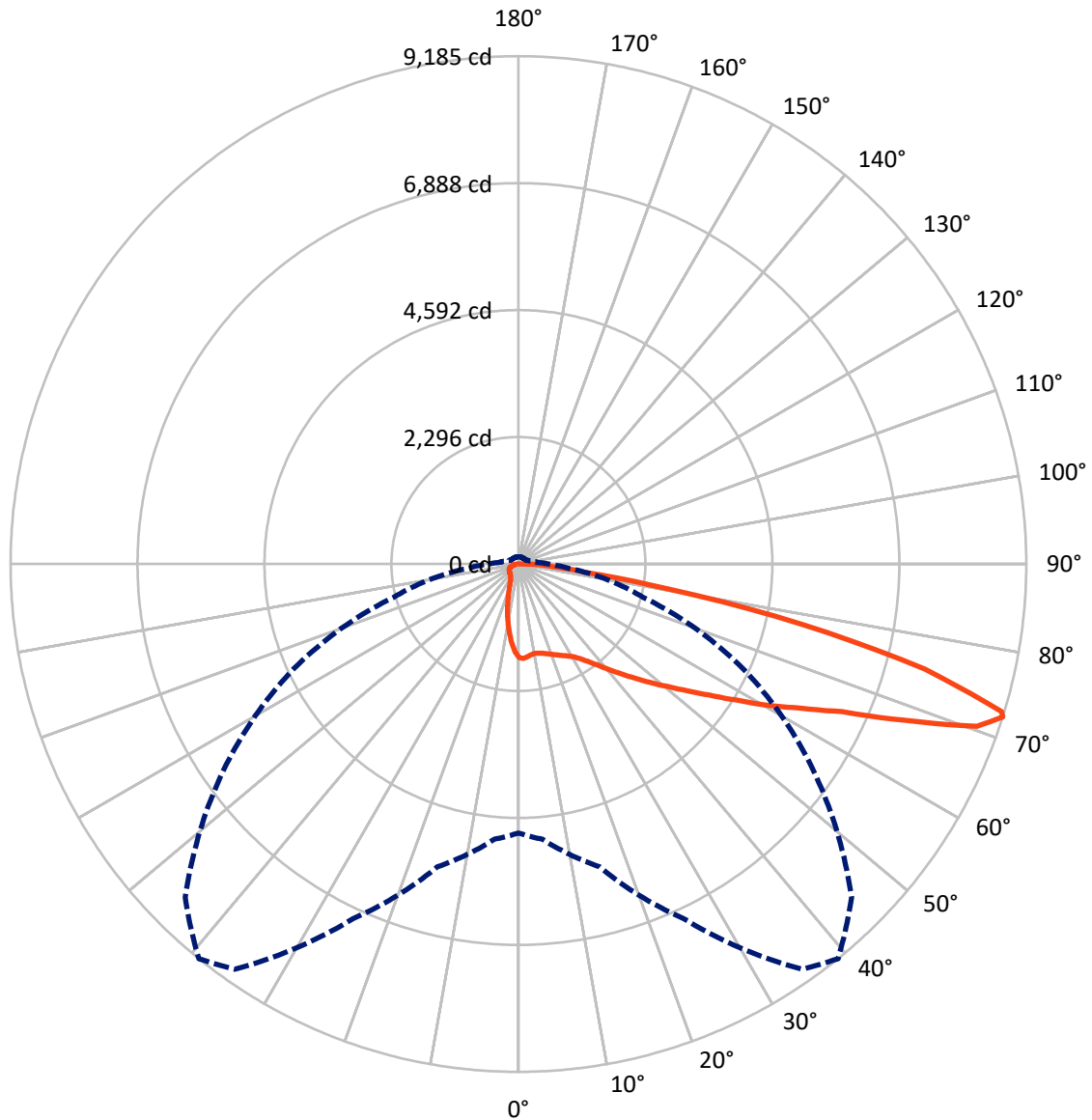
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.2 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270366
CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7027-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

REPORT NUMBER: P270366

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7027-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1269.9	0.0	1269.9
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	9805.1	0.0	9805.1
	% Fixture	88.5	0.0	88.5
Total	Lumens	11075.0	0.0	11075.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.3	1.3
10°-20°	365.2	3.3
20°-30°	569.2	5.1
30°-40°	876.3	7.9
40°-50°	1428.6	12.9
50°-60°	2220.0	20.0
60°-70°	2971.3	26.8
70°-80°	2136.8	19.3
80°-90°	362.2	3.3
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°	11075.0	100.0
0°-180°	11075.0	100.0



REPORT NUMBER: P270366

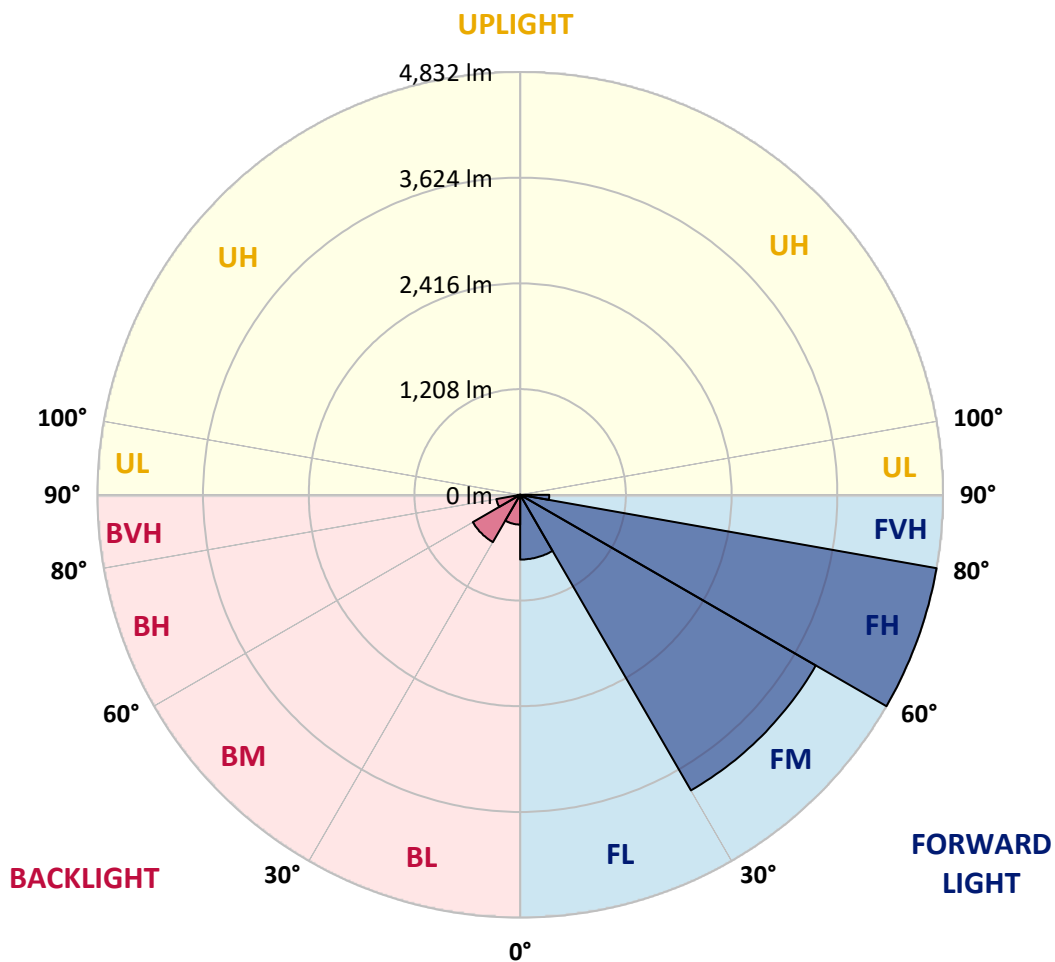
CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7027-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	739.8	6.7			
FM	(30°-60°)	3900.8	35.2			
FH	(60°-80°)	4832.2	43.6			G2/5000
FVH	(80°-90°)	332.3	3.0			G3/500
BL	(0°-30°)	340.0	3.1	B1/500		
BM	(30°-60°)	624.1	5.6	B1/1000		
BH	(60°-80°)	275.9	2.5	B1/500		G1/500
BVH	(80°-90°)	29.9	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





REPORT NUMBER: P270366

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7027-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	1691.4	1691.4	1691.4	1691.4	1691.4	1691.4	1691.4	1691.4	1691.4	1691.4	1691.4
2.5°	1727.8	1728.5	1726.4	1719.6	1713.6	1710.7	1705.5	1696.5	1684.7	1676.4	1669.8
5°	1711.5	1713.6	1712.2	1701.0	1690.6	1684.7	1676.4	1663.8	1648.2	1641.6	1625.9
7.5°	1698.8	1700.3	1695.8	1683.2	1663.1	1655.7	1640.8	1624.5	1610.3	1600.7	1582.1
10°	1689.9	1691.4	1687.6	1675.0	1652.7	1643.8	1625.9	1608.1	1589.6	1577.7	1556.9
12.5°	1677.2	1680.2	1680.2	1674.3	1659.3	1653.4	1635.6	1616.3	1599.2	1586.5	1560.5
15°	1675.0	1678.8	1685.4	1684.7	1680.2	1675.8	1661.7	1642.3	1627.4	1612.5	1580.6
17.5°	1693.6	1701.7	1715.1	1719.6	1716.7	1707.0	1690.6	1672.7	1656.5	1642.3	1602.8
20°	1740.5	1744.9	1765.0	1773.9	1759.1	1744.9	1723.3	1700.3	1685.4	1674.3	1623.6
22.5°	1811.1	1817.0	1833.4	1834.1	1802.9	1785.8	1758.3	1730.0	1715.9	1711.5	1652.0
25°	1924.1	1922.6	1927.0	1908.4	1851.9	1831.9	1798.3	1765.7	1756.0	1765.0	1693.6
27.5°	2059.4	2055.6	2041.5	1993.2	1907.7	1881.7	1841.5	1812.5	1812.5	1833.4	1750.1
30°	2215.5	2211.7	2165.6	2084.6	1973.8	1944.1	1901.7	1871.3	1886.9	1927.0	1826.7
32.5°	2380.6	2367.2	2302.4	2193.9	2068.3	2035.6	1994.6	1963.4	1993.2	2061.6	1936.7
35°	2535.9	2528.5	2448.9	2320.3	2190.2	2162.7	2134.5	2095.7	2143.4	2249.6	2092.2
37.5°	2696.5	2690.6	2593.1	2456.3	2338.8	2320.3	2296.5	2269.7	2346.4	2486.1	2302.4
40°	2875.7	2863.7	2741.1	2604.4	2512.1	2503.1	2490.6	2483.2	2606.5	2814.7	2568.7
42.5°	3078.6	3055.6	2897.3	2767.0	2700.9	2708.4	2701.7	2731.4	2920.3	3193.8	2885.4
45°	3310.7	3264.5	3052.6	2940.3	2909.9	2939.7	2953.7	3029.5	3291.3	3631.8	3239.2
47.5°	3527.6	3468.1	3222.8	3128.4	3145.5	3196.9	3237.0	3370.8	3698.0	4064.4	3600.5
50°	3727.6	3660.8	3405.0	3323.2	3406.6	3479.3	3562.6	3751.4	4130.6	4509.9	3932.2
52.5°	3875.6	3827.3	3587.1	3535.9	3706.0	3802.7	3935.8	4174.6	4567.8	4934.3	4228.1
55°	3990.1	3964.1	3764.8	3779.7	4045.2	4183.3	4344.7	4619.1	5030.1	5314.9	4466.0
57.5°	4122.4	4103.1	3967.9	4074.2	4466.0	4639.8	4830.2	5135.0	5470.3	5650.2	4652.5
60°	4262.2	4262.2	4193.8	4428.7	4992.3	5191.6	5381.0	5618.3	5909.1	5952.1	4728.4
62.5°	4367.7	4395.2	4419.8	4806.4	5491.9	5739.5	5947.6	6175.0	6363.2	6100.7	4549.9
65°	4520.9	4579.6	4718.0	5242.9	6110.5	6434.6	6715.5	6906.7	6731.2	5982.6	3967.9
67.5°	4784.2	4871.1	5165.6	5892.6	7057.7	7543.1	7816.0	7485.8	6659.1	5238.3	3039.2
70°	5021.3	5144.0	5647.3	6717.0	8288.8	8792.8	8667.1	7351.3	5799.6	3840.0	1869.8
72°	4863.7	4997.5	5669.7	7076.2	8946.7	9184.6	8522.2	6514.9	4481.6	2343.4	921.9
72.5°	4760.4	4899.4	5597.5	7067.2	8964.5	9134.9	8320.7	6182.6	4068.2	2050.4	745.8
75°	3976.7	4095.7	4813.1	6263.6	7900.0	7587.8	6493.3	4001.3	1869.8	662.4	383.7
77.5°	2596.9	2687.5	3318.8	4339.5	5533.5	5233.2	3952.3	1873.5	701.0	402.3	288.4
80°	1304.8	1369.5	1776.0	2281.7	2986.4	2747.7	1824.5	906.3	469.2	290.7	226.7
82.5°	907.7	967.3	1223.0	1165.0	1248.3	1208.1	857.9	756.2	350.9	183.7	118.9
85°	761.4	822.9	1011.9	830.5	679.5	619.3	614.8	714.4	231.9	90.6	100.4
87.5°	663.8	757.6	835.0	606.6	466.1	411.2	452.7	655.0	73.7	49.9	30.5
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: P270366
 CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7027-1200

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1691.4	1691.4	1691.4	1691.4	1691.4	1691.4	1691.4	1691.4	1691.4	1691.4	1691.4
2.5°	1658.6	1656.5	1645.2	1628.2	1615.5	1607.3	1591.7	1591.0	1592.4	1579.1	1584.3
5°	1611.7	1602.8	1573.9	1534.5	1502.5	1472.1	1438.5	1427.4	1417.7	1397.8	1399.9
7.5°	1562.7	1547.2	1496.5	1431.9	1370.2	1313.7	1257.9	1230.4	1209.6	1183.5	1183.5
10°	1533.8	1509.2	1431.9	1337.4	1239.3	1156.7	1073.6	1023.8	987.2	953.8	951.7
12.5°	1532.2	1495.0	1387.3	1257.2	1122.6	1006.6	892.8	816.3	762.0	722.6	719.0
15°	1544.1	1492.2	1350.2	1182.1	1012.6	861.7	721.2	623.8	554.7	510.7	506.3
17.5°	1554.5	1488.4	1310.0	1103.3	905.5	721.9	565.8	464.7	399.2	363.5	359.9
20°	1564.2	1480.1	1258.6	1020.0	787.4	591.1	442.3	360.6	317.5	297.3	295.2
22.5°	1578.3	1472.9	1205.2	926.3	671.4	481.0	365.0	306.3	283.2	273.7	272.0
25°	1601.4	1473.5	1153.2	830.5	565.0	400.7	315.9	279.6	266.8	260.1	260.1
27.5°	1634.8	1482.5	1101.9	733.0	475.1	345.7	287.0	265.4	257.3	252.1	250.5
30°	1684.0	1498.8	1047.6	640.9	403.7	307.8	269.9	256.5	249.8	245.3	244.6
32.5°	1755.3	1527.7	990.3	556.9	349.4	281.0	257.3	249.1	243.9	240.1	239.4
35°	1861.6	1579.1	934.5	485.4	310.8	261.6	246.9	240.1	237.2	235.6	234.9
37.5°	2017.8	1661.7	881.7	429.7	285.5	249.1	236.4	232.8	231.3	231.3	231.3
40°	2214.1	1770.2	834.2	390.4	271.4	239.4	229.0	226.1	226.1	226.7	226.7
42.5°	2452.6	1906.3	793.3	363.5	263.2	232.8	223.8	222.3	221.5	221.5	222.3
45°	2729.9	2066.8	768.1	342.8	257.3	229.0	220.1	219.4	216.3	214.9	214.9
47.5°	3008.8	2238.5	766.6	330.8	249.8	224.5	216.3	216.3	210.5	207.4	208.1
50°	3268.9	2392.5	782.9	327.8	245.3	217.7	212.5	213.3	205.3	201.5	200.7
52.5°	3478.6	2510.0	802.9	331.6	245.3	211.9	205.9	209.7	200.7	196.3	195.6
55°	3640.7	2591.7	810.5	339.7	248.3	206.7	200.1	205.9	199.2	193.2	193.2
57.5°	3756.7	2617.8	778.4	343.5	252.8	205.9	194.0	205.3	201.5	194.0	194.0
60°	3714.3	2466.7	659.4	329.4	252.1	204.5	189.6	206.7	208.9	200.7	200.7
62.5°	3383.5	2063.9	529.3	297.3	239.4	199.2	184.4	205.3	214.2	211.1	209.7
65°	2754.6	1513.6	410.3	259.5	217.7	188.0	173.3	191.8	202.2	205.3	205.9
67.5°	1941.1	958.3	319.0	220.9	191.1	171.8	160.5	169.5	173.3	174.7	177.7
70°	1061.6	519.0	253.5	185.9	163.5	155.3	147.2	148.0	146.5	144.9	146.5
72°	533.1	339.0	214.2	161.3	144.9	139.7	136.1	133.8	133.8	131.6	132.3
72.5°	458.8	315.2	206.7	155.3	140.6	136.1	133.0	130.9	130.2	128.5	129.4
75°	305.6	249.8	172.5	130.2	119.7	116.7	118.1	116.1	116.7	115.3	116.1
77.5°	246.9	214.9	146.5	110.0	102.5	98.2	101.1	101.9	103.3	101.9	101.1
80°	206.7	182.8	122.7	90.6	85.5	81.7	83.3	88.5	89.2	84.8	84.0
82.5°	133.8	147.2	96.7	70.6	65.4	63.9	67.6	72.9	74.3	68.5	67.0
85°	112.3	118.1	69.9	48.2	43.1	41.6	49.0	54.3	58.0	52.0	50.6
87.5°	31.3	58.0	34.1	23.0	19.4	19.4	23.7	28.2	33.4	34.1	34.1
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)