

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: P196659

Luminaire Tested: **NAV-AF-03-D-UNV-SL4-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196659  
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-03-D-UNV-SL4-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 3000K, 615mA 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: 11012.2 lumens  
Efficiency: N/A  
Efficacy: 114.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G3

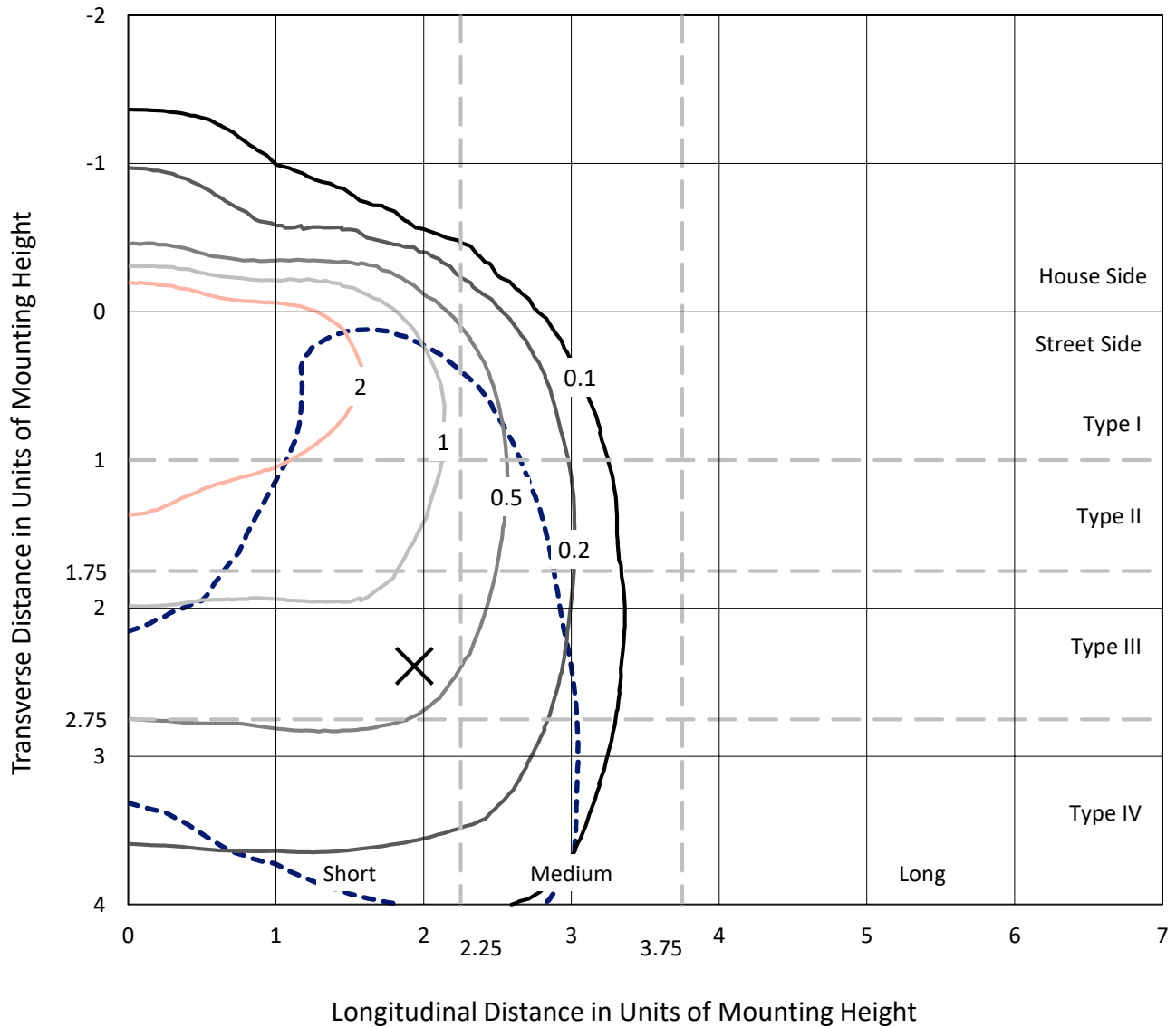
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

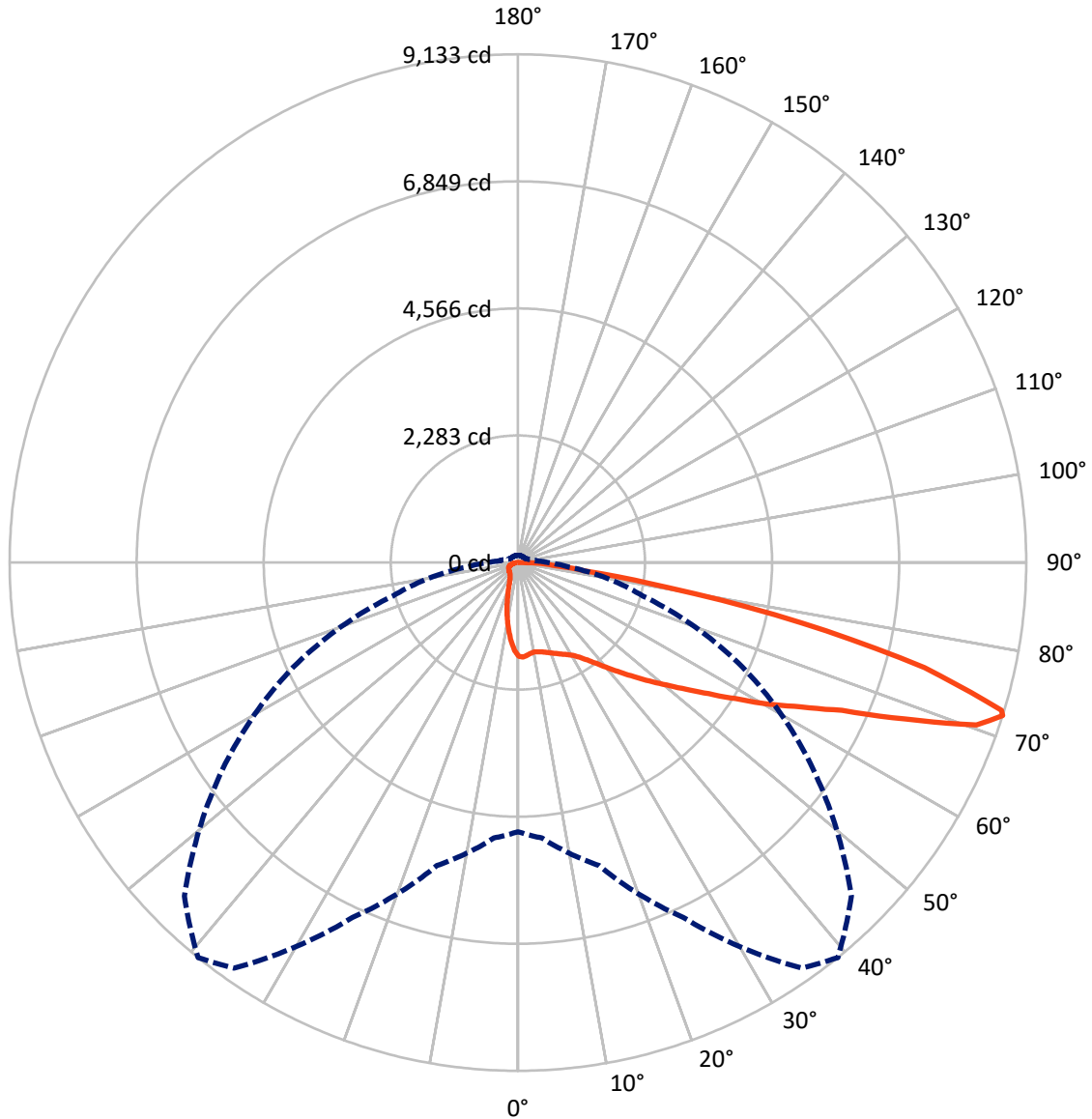
× Max cd  
 - - - 1/2 Max cd



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

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1262.7	0.0	1262.7
	% Fixture	11.5	0.0	11.5
<b>Street Side</b>	Lumens	9749.5	0.0	9749.5
	% Fixture	88.5	0.0	88.5
<b>Total</b>	Lumens	11012.2	0.0	11012.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.5	1.3
10°-20°	363.2	3.3
20°-30°	565.9	5.1
30°-40°	871.4	7.9
40°-50°	1420.5	12.9
50°-60°	2207.4	20.0
60°-70°	2954.5	26.8
70°-80°	2124.7	19.3
80°-90°	360.2	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°	11012.2	100.0
0°-180°	11012.2	100.0



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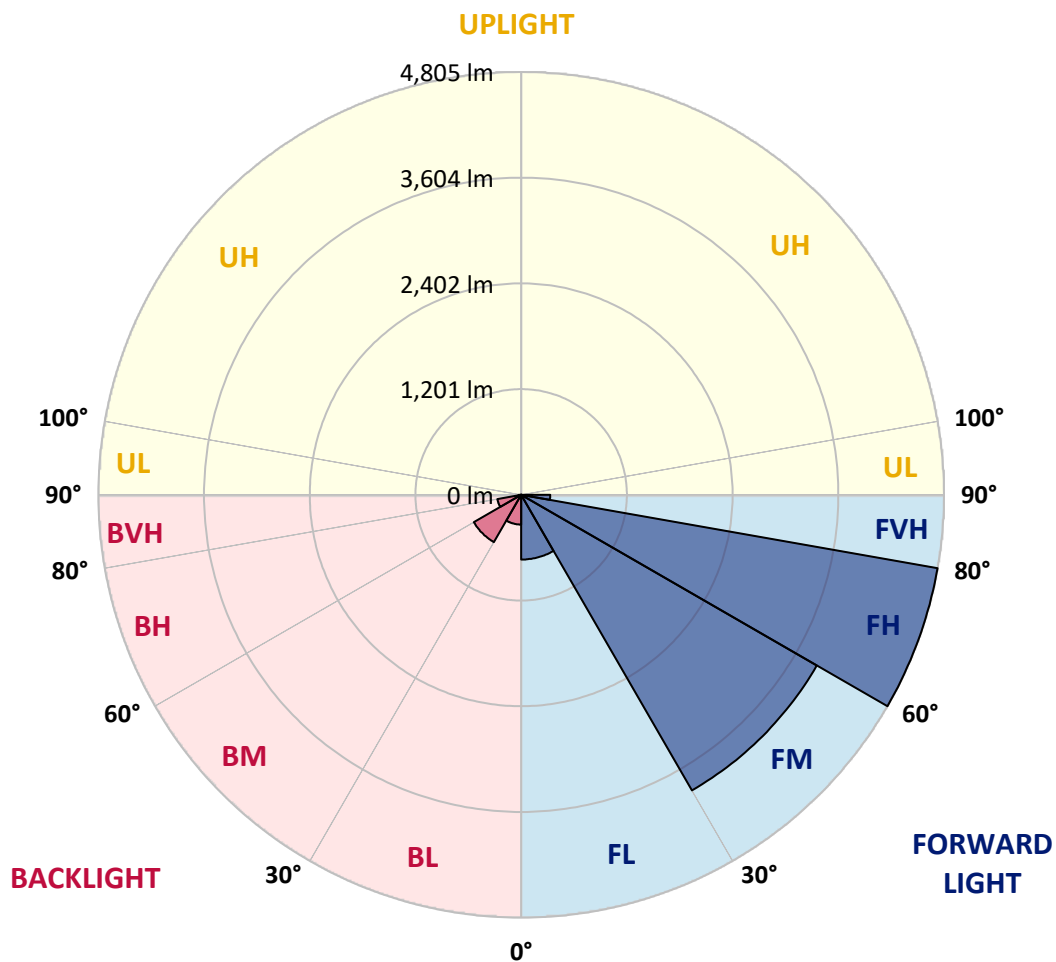
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	735.6	6.7			
FM	(30°-60°)	3878.7	35.2			
FH	(60°-80°)	4804.8	43.6			G2/5000
FVH	(80°-90°)	330.4	3.0			G3/500
BL	(0°-30°)	338.0	3.1	B1/500		
BM	(30°-60°)	620.5	5.6	B1/1000		
BH	(60°-80°)	274.3	2.5	B1/500		G1/500
BVH	(80°-90°)	29.8	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	1681.7	1681.7	1681.7	1681.7	1681.7	1681.7	1681.7	1681.7	1681.7	1681.7	1681.7
2.5°	1718.0	1718.7	1716.5	1709.9	1703.9	1700.9	1695.8	1687.0	1675.2	1667.0	1660.3
5°	1701.7	1703.9	1702.5	1691.4	1681.1	1675.2	1667.0	1654.4	1638.9	1632.3	1616.7
7.5°	1689.1	1690.7	1686.2	1673.7	1653.6	1646.3	1631.5	1615.3	1601.2	1591.6	1573.2
10°	1680.3	1681.7	1678.1	1665.5	1643.4	1634.4	1616.7	1599.0	1580.6	1568.6	1547.9
12.5°	1667.8	1670.7	1670.7	1664.8	1650.1	1644.1	1626.4	1607.1	1590.0	1577.4	1551.7
15°	1665.5	1669.2	1675.8	1675.2	1670.7	1666.2	1652.2	1633.0	1618.2	1603.4	1571.5
17.5°	1684.0	1692.1	1705.4	1709.9	1706.8	1697.4	1681.1	1663.3	1647.0	1633.0	1593.8
20°	1730.5	1735.0	1754.9	1763.8	1749.0	1735.0	1713.5	1690.7	1675.8	1664.8	1614.6
22.5°	1800.8	1806.7	1823.0	1823.6	1792.6	1775.7	1748.2	1720.2	1706.2	1701.7	1642.6
25°	1913.1	1911.7	1916.1	1897.7	1841.4	1821.5	1788.2	1755.7	1746.1	1754.9	1684.0
27.5°	2047.7	2044.0	2029.9	1981.9	1896.8	1871.1	1831.0	1802.2	1802.2	1823.0	1740.2
30°	2202.8	2199.3	2153.4	2072.8	1962.7	1933.2	1891.0	1860.6	1876.2	1916.1	1816.3
32.5°	2367.0	2353.8	2289.4	2181.5	2056.6	2024.0	1983.4	1952.4	1981.9	2049.9	1925.7
35°	2521.6	2514.2	2435.1	2307.1	2177.7	2150.4	2122.4	2083.9	2131.2	2237.0	2080.2
37.5°	2681.2	2675.3	2578.4	2442.5	2325.7	2307.1	2283.5	2256.9	2333.0	2472.0	2289.4
40°	2859.5	2847.6	2725.6	2589.6	2497.8	2489.0	2476.5	2469.0	2591.7	2798.7	2554.1
42.5°	3061.2	3038.3	2880.8	2751.4	2685.7	2693.0	2686.3	2715.9	2903.7	3175.7	2868.9
45°	3291.9	3246.0	3035.3	2923.7	2893.4	2922.9	2937.0	3012.4	3272.7	3611.1	3220.9
47.5°	3507.7	3448.6	3204.6	3110.7	3127.8	3178.7	3218.7	3351.7	3677.0	4041.4	3580.1
50°	3706.5	3640.0	3385.7	3304.4	3387.1	3459.5	3542.4	3730.2	4107.2	4484.2	3909.9
52.5°	3853.7	3805.6	3566.9	3515.9	3685.1	3781.3	3913.5	4150.9	4541.9	4906.3	4204.1
55°	3967.5	3941.6	3743.6	3758.3	4022.2	4159.7	4320.1	4592.9	5001.7	5284.8	4440.7
57.5°	4099.1	4079.8	3945.4	4051.0	4440.7	4613.6	4802.8	5105.9	5439.4	5618.2	4626.1
60°	4238.0	4238.0	4170.0	4403.7	4963.9	5162.1	5350.7	5586.4	5875.4	5918.3	4701.5
62.5°	4343.0	4370.4	4394.7	4779.2	5460.8	5706.9	5913.8	6140.2	6327.1	6066.2	4524.1
65°	4495.3	4553.7	4691.1	5213.1	6075.8	6398.1	6677.5	6867.5	6693.1	5948.6	3945.4
67.5°	4757.0	4843.5	5136.3	5859.2	7017.6	7500.3	7771.6	7443.4	6621.3	5208.7	3022.0
70°	4992.8	5114.8	5615.3	6679.0	8241.8	8742.9	8618.1	7309.6	5766.8	3818.2	1859.1
72°	4836.2	4969.1	5637.4	7036.1	8896.0	9132.6	8473.9	6478.0	4456.1	2330.1	916.6
72.5°	4733.3	4871.6	5565.7	7027.2	8913.7	9083.0	8273.5	6147.5	4045.1	2038.8	741.5
75°	3954.2	4072.4	4785.8	6228.1	7855.2	7544.7	6456.4	3978.5	1859.1	658.7	381.5
77.5°	2582.2	2672.4	3299.9	4314.9	5502.2	5203.5	3929.8	1862.9	697.1	399.9	286.8
80°	1297.4	1361.7	1766.0	2268.8	2969.5	2732.2	1814.1	901.2	466.4	289.0	225.5
82.5°	902.6	961.7	1216.0	1158.3	1241.1	1201.3	853.1	751.8	349.0	182.6	118.3
85°	756.9	818.4	1006.1	825.8	675.7	615.7	611.3	710.4	230.6	90.1	99.8
87.5°	660.2	753.3	830.2	603.2	463.5	408.8	450.1	651.3	73.2	49.5	30.3
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°	1681.7	1681.7	1681.7	1681.7	1681.7	1681.7	1681.7	1681.7	1681.7	1681.7	1681.7
2.5°	1649.3	1647.0	1635.9	1618.9	1606.3	1598.3	1582.7	1582.0	1583.5	1570.2	1575.3
5°	1602.7	1593.8	1564.9	1525.8	1494.0	1463.6	1430.4	1419.4	1409.8	1389.8	1392.0
7.5°	1553.8	1538.4	1488.1	1423.7	1362.5	1306.2	1250.8	1223.4	1202.7	1176.8	1176.8
10°	1525.0	1500.6	1423.7	1329.9	1232.3	1150.3	1067.5	1018.0	981.7	948.5	946.1
12.5°	1523.6	1486.6	1379.4	1250.0	1116.3	1001.0	887.8	811.7	757.7	718.5	714.9
15°	1535.4	1483.6	1342.5	1175.4	1006.9	856.8	717.1	620.3	551.4	507.8	503.4
17.5°	1545.8	1479.9	1302.6	1097.1	900.4	717.9	562.5	462.0	396.9	361.5	357.9
20°	1555.3	1471.8	1251.6	1014.3	782.9	587.7	439.9	358.5	315.6	295.6	293.5
22.5°	1569.4	1464.4	1198.3	921.0	667.6	478.3	363.0	304.7	281.7	272.0	270.5
25°	1592.4	1465.1	1146.5	825.8	561.8	398.5	314.2	277.9	265.4	258.7	258.7
27.5°	1625.6	1474.0	1095.6	728.9	472.3	343.7	285.3	263.9	255.7	250.6	249.1
30°	1674.4	1490.3	1041.6	637.2	401.4	306.0	268.3	255.0	248.3	243.9	243.2
32.5°	1745.3	1519.1	984.7	553.7	347.5	279.4	255.7	247.7	242.4	238.7	238.0
35°	1851.1	1570.2	929.2	482.7	308.9	260.2	245.4	238.7	235.8	234.4	233.6
37.5°	2006.3	1652.2	876.7	427.3	283.8	247.7	235.1	231.4	229.9	229.9	229.9
40°	2201.5	1760.1	829.4	388.1	269.9	238.0	227.7	224.7	224.7	225.5	225.5
42.5°	2438.7	1895.4	788.8	361.5	261.6	231.4	222.6	221.0	220.2	220.2	221.0
45°	2714.4	2055.0	763.6	340.8	255.7	227.7	218.8	218.1	215.1	213.6	213.6
47.5°	2991.7	2225.8	762.2	329.0	248.3	223.2	215.1	215.1	209.2	206.3	206.9
50°	3250.5	2378.9	778.5	326.0	243.9	216.6	211.4	212.2	204.0	200.4	199.6
52.5°	3458.9	2495.7	798.3	329.8	243.9	210.7	204.8	208.4	199.6	195.1	194.4
55°	3620.1	2577.0	805.8	337.8	246.9	205.5	198.9	204.8	198.1	192.2	192.2
57.5°	3735.3	2602.9	774.0	341.6	251.3	204.8	193.0	204.0	200.4	193.0	193.0
60°	3693.2	2452.8	655.7	327.4	250.6	203.3	188.5	205.5	207.7	199.6	199.6
62.5°	3364.3	2052.1	526.3	295.6	238.0	198.1	183.3	204.0	212.9	210.0	208.4
65°	2738.9	1505.0	408.1	258.0	216.6	187.1	172.2	190.7	201.0	204.0	204.8
67.5°	1930.2	952.8	317.2	219.5	190.0	170.8	159.6	168.6	172.2	173.7	176.7
70°	1055.7	516.0	252.1	184.7	162.6	154.5	146.4	147.1	145.7	144.1	145.7
72°	530.0	337.1	212.9	160.4	144.1	139.0	135.3	133.1	133.1	130.9	131.5
72.5°	456.1	313.5	205.5	154.5	139.8	135.3	132.3	130.1	129.4	128.0	128.6
75°	303.8	248.3	171.5	129.4	119.0	116.1	117.6	115.3	116.1	114.6	115.3
77.5°	245.4	213.6	145.7	109.4	102.0	97.6	100.5	101.3	102.7	101.3	100.5
80°	205.5	181.8	122.0	90.1	85.0	81.3	82.8	88.0	88.7	84.2	83.6
82.5°	133.1	146.4	96.1	70.3	65.0	63.6	67.3	72.4	74.0	68.0	66.5
85°	111.7	117.6	69.5	48.1	42.8	41.4	48.8	54.0	57.7	51.8	50.3
87.5°	31.0	57.7	34.0	23.0	19.2	19.2	23.7	28.1	33.3	34.0	34.0
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)