

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: P195776

Luminaire Tested: **NAV-AF-02-D-UNV-T2-7050-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195776  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)  
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-T2-7050-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9633 lumens  
Efficiency: N/A  
Efficacy: 113.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B2 - U0 - G2

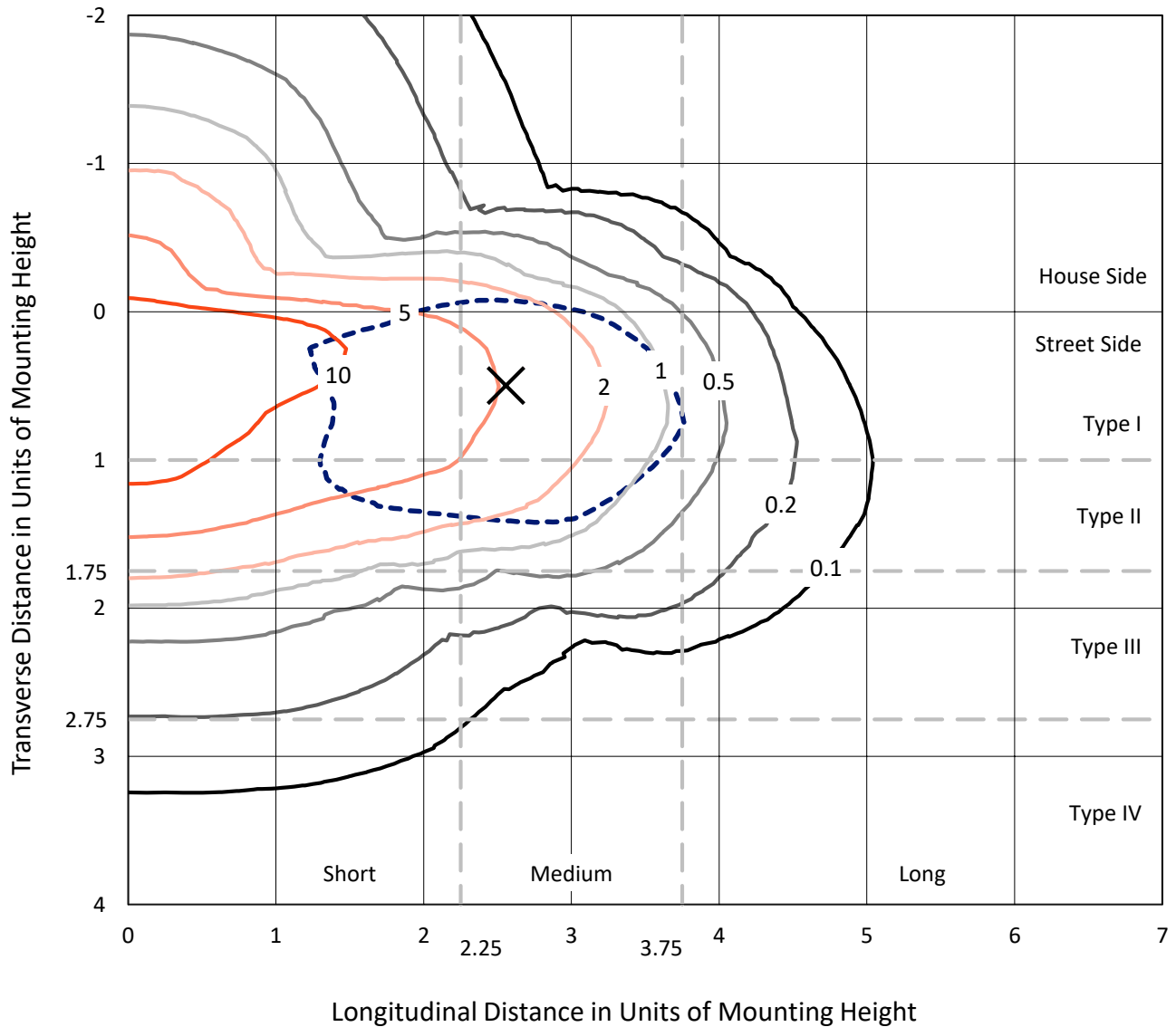
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

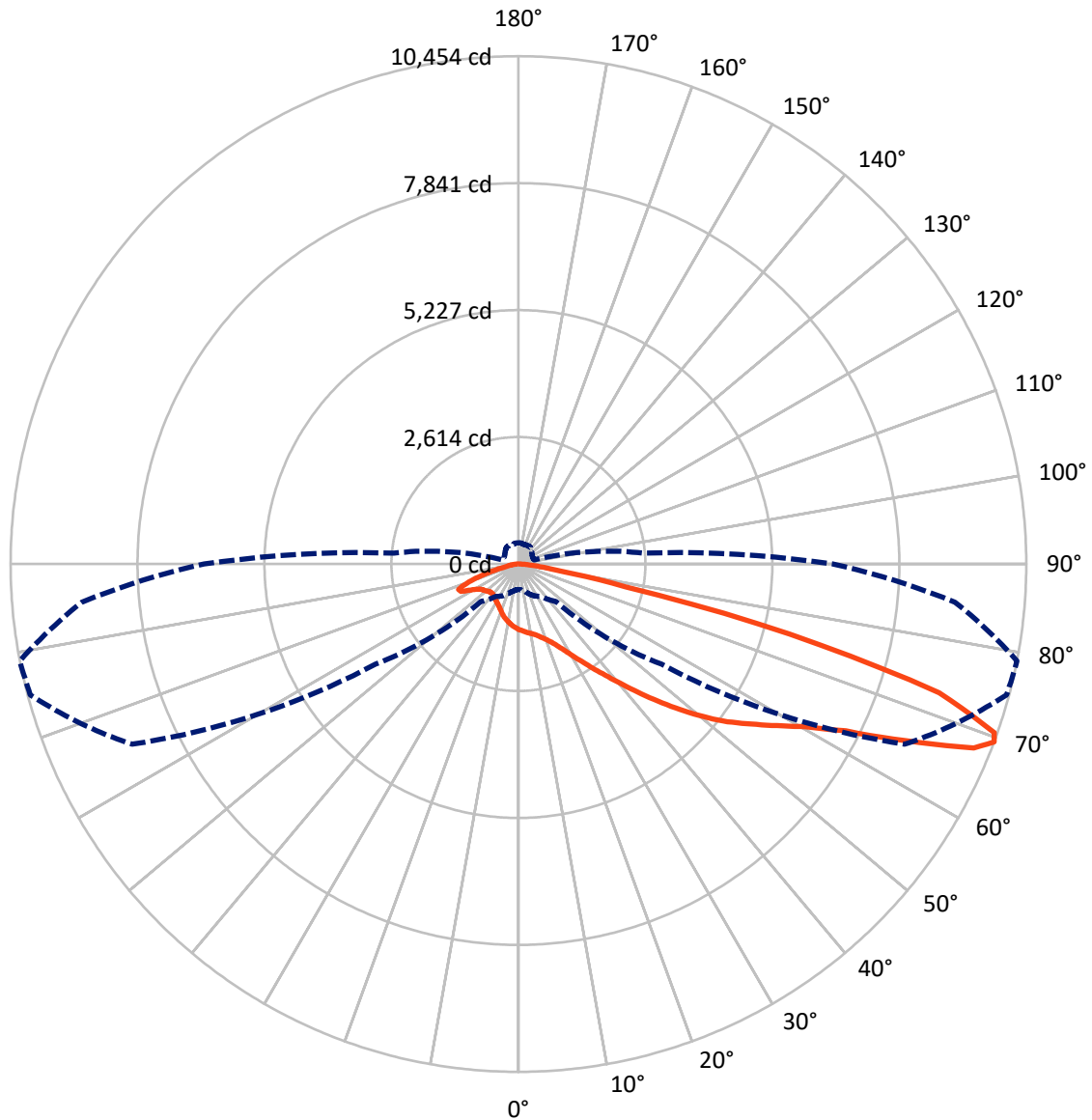
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.3 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1812.1	0.0	1812.1
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	7820.9	0.0	7820.9
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	9633.0	0.0	9633.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.3	1.3
10°-20°	359.3	3.7
20°-30°	593.7	6.2
30°-40°	961.3	10.0
40°-50°	1535.8	15.9
50°-60°	2199.4	22.8
60°-70°	2450.4	25.4
70°-80°	1225.9	12.7
80°-90°	181.9	1.9
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°	9633.0	100.0
0°-180°	9633.0	100.0



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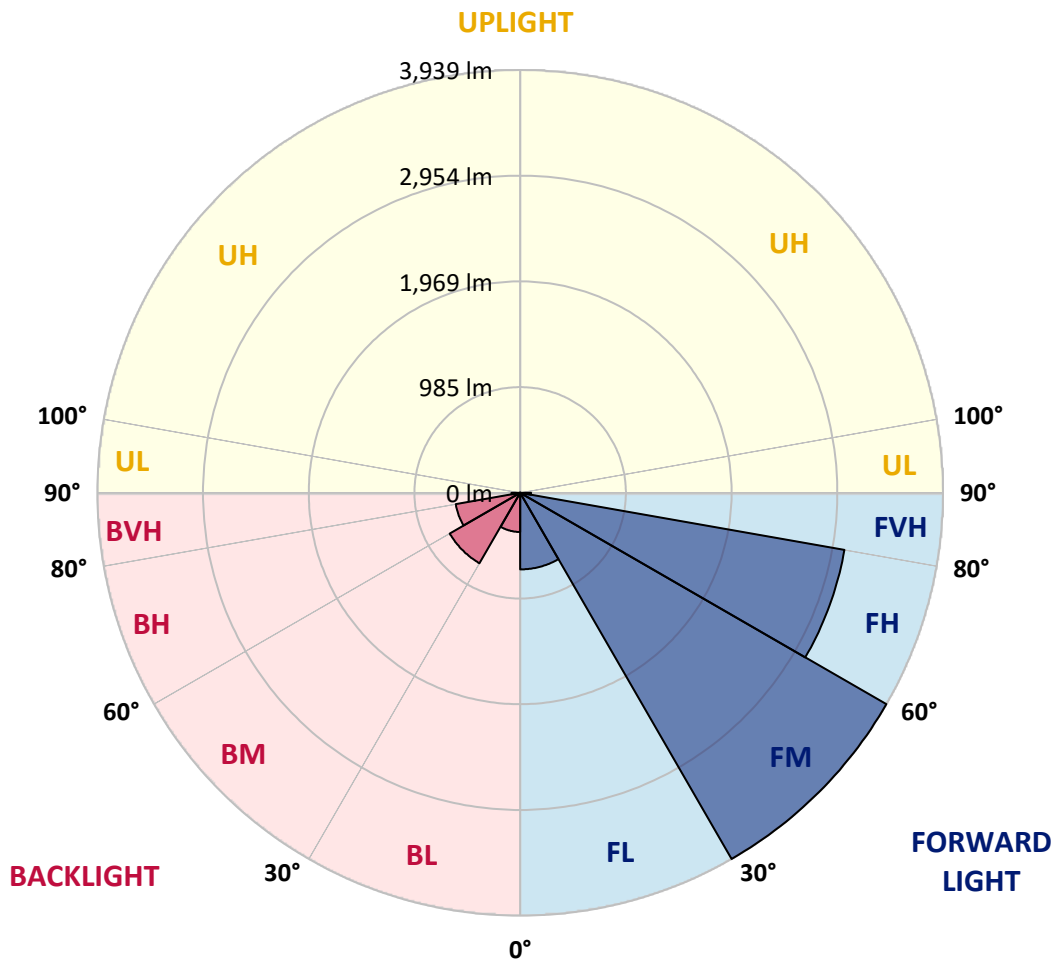
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	713.2	7.4			
FM	(30°-60°)	3939.0	40.9			
FH	(60°-80°)	3067.0	31.8			G2/5000
FVH	(80°-90°)	101.7	1.1			G2/225
BL	(0°-30°)	365.1	3.8	B1/500		
BM	(30°-60°)	757.5	7.9	B1/1000		
BH	(60°-80°)	609.3	6.3	B2/1000		G2/1000
BVH	(80°-90°)	80.3	0.8			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°	75°	79°	85°
0°	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8
2.5°	1484.2	1481.0	1480.4	1470.9	1465.9	1455.2	1430.0	1404.1	1380.2	1367.6	1354.3
5°	1608.3	1602.0	1598.9	1583.1	1569.2	1545.3	1505.6	1464.6	1421.8	1399.7	1373.2
7.5°	1683.3	1683.9	1683.9	1671.3	1657.5	1628.5	1578.1	1522.0	1458.3	1429.3	1387.7
10°	1689.6	1690.2	1699.7	1702.8	1706.0	1690.9	1644.2	1573.7	1491.7	1453.9	1399.7
12.5°	1627.2	1631.6	1647.4	1670.1	1702.2	1718.6	1698.4	1629.1	1534.6	1488.6	1422.4
15°	1543.4	1547.8	1568.0	1602.6	1654.3	1709.1	1737.5	1692.8	1590.7	1536.5	1455.8
17.5°	1502.4	1507.5	1521.3	1549.1	1599.5	1673.2	1758.3	1760.8	1656.8	1594.4	1495.5
20°	1482.9	1486.7	1504.3	1527.0	1565.5	1636.0	1760.2	1832.7	1735.6	1663.1	1544.0
22.5°	1527.6	1528.9	1537.7	1550.3	1576.2	1630.4	1758.9	1907.0	1833.9	1749.5	1606.4
25°	1658.7	1650.5	1644.2	1628.5	1634.8	1673.2	1779.1	1986.4	1960.0	1862.9	1689.6
27.5°	1813.8	1812.5	1796.1	1759.6	1736.2	1760.8	1836.5	2075.3	2114.4	2007.2	1798.6
30°	1986.4	1987.1	1970.1	1925.3	1878.0	1880.6	1927.8	2178.0	2299.0	2181.2	1932.9
32.5°	2167.3	2178.7	2147.1	2102.4	2045.1	2026.8	2058.9	2302.2	2512.7	2386.6	2088.5
35°	2383.5	2385.4	2350.7	2285.2	2227.8	2198.8	2228.4	2457.2	2759.1	2628.0	2278.2
37.5°	2607.8	2609.1	2573.2	2489.4	2416.9	2398.0	2430.7	2645.6	3020.0	2902.8	2501.3
40°	2791.2	2804.5	2776.1	2697.3	2624.2	2612.9	2660.1	2871.3	3353.4	3228.0	2766.7
42.5°	2999.2	3014.3	2980.3	2898.4	2840.4	2836.6	2910.3	3128.4	3684.9	3604.2	3067.3
45°	3233.6	3255.1	3207.8	3115.8	3066.6	3149.8	3154.2	3413.3	4066.8	4025.2	3405.7
47.5°	3489.5	3507.2	3468.7	3369.8	3316.2	3436.6	3393.1	3721.4	4479.6	4476.4	3771.8
50°	3686.8	3706.3	3710.1	3666.6	3610.5	3625.6	3655.3	4045.4	4891.1	4940.3	4150.6
52.5°	3650.8	3669.8	3754.8	3868.9	3959.0	3919.9	3955.9	4389.5	5288.8	5392.8	4510.5
55°	3360.9	3371.0	3530.5	3801.5	4185.3	4371.8	4374.3	4763.8	5666.9	5812.5	4852.0
57.5°	2838.5	2839.8	3047.1	3446.7	4053.6	4664.9	5034.8	5233.9	6061.4	6276.3	5275.5
60°	2008.5	2013.5	2254.9	2777.4	3581.5	4629.6	5745.1	6075.3	6518.3	6797.5	5821.3
62.5°	1192.4	1203.7	1385.8	1804.9	2660.1	4175.8	6164.8	7572.1	7191.4	7562.0	6694.8
65°	775.8	785.2	894.3	1104.8	1571.8	3038.3	6026.8	9021.5	8465.1	8764.4	7950.2
67.5°	597.4	605.0	690.7	818.0	964.2	1642.3	4818.6	9325.3	10015.4	10108.7	9009.6
69°	525.0	531.3	594.3	716.6	811.7	1087.1	3591.0	8773.9	10403.0	10454.0	9022.8
70°	486.5	491.6	550.8	656.7	745.5	867.8	2748.4	8133.6	10261.2	10391.6	8762.5
72.5°	400.8	405.2	447.5	528.8	609.4	618.2	1217.6	5939.2	8640.3	9057.5	7415.1
75°	334.6	337.2	364.9	424.1	493.5	492.2	622.0	3364.1	5272.4	5769.6	4578.5
77.5°	279.2	281.1	299.4	335.9	389.5	387.6	438.0	1452.0	2328.0	2246.1	1576.2
80°	246.4	247.7	257.1	266.6	300.6	298.7	324.6	666.8	947.2	875.4	596.2
82.5°	187.2	189.7	237.6	242.0	233.2	225.0	226.2	388.2	485.3	441.8	320.1
85°	105.9	106.5	152.5	178.4	202.9	152.5	146.8	200.4	239.5	209.9	139.9
87.5°	47.3	49.2	73.1	84.4	109.7	89.5	83.8	85.1	103.4	85.7	55.5
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°	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8
2.5°	1341.7	1331.0	1305.8	1280.0	1254.1	1237.7	1220.7	1205.0	1198.7	1198.0	1186.1
5°	1347.4	1322.2	1264.8	1201.8	1142.0	1095.3	1056.2	1031.0	1006.5	1002.0	991.3
7.5°	1349.3	1308.3	1215.1	1114.2	1022.8	958.6	919.5	902.5	890.5	887.3	883.6
10°	1348.7	1290.7	1159.6	1021.6	917.6	869.1	854.6	858.4	863.4	865.9	865.9
12.5°	1358.7	1282.5	1104.1	934.6	849.5	826.2	837.6	857.1	872.2	878.5	879.8
15°	1377.0	1277.4	1043.0	859.0	801.6	807.3	835.0	863.4	884.8	894.3	896.8
17.5°	1399.7	1270.5	972.4	796.6	773.9	793.4	829.4	865.3	891.1	903.1	905.0
20°	1424.9	1260.4	899.3	750.0	749.3	773.9	809.8	850.2	877.9	891.1	890.5
22.5°	1459.0	1251.0	831.3	715.9	722.2	744.9	774.5	811.1	836.9	848.9	846.4
25°	1504.3	1242.2	770.1	685.7	691.3	706.5	727.3	755.0	773.3	779.6	775.2
27.5°	1565.5	1235.2	722.2	657.9	657.3	664.2	676.9	692.0	700.8	698.9	692.0
30°	1640.5	1228.3	686.9	633.4	624.5	623.9	629.6	638.4	644.1	632.7	627.1
32.5°	1724.3	1216.3	655.4	611.9	596.2	590.5	593.0	605.0	628.3	617.0	612.6
35°	1823.2	1202.5	623.9	588.6	576.6	565.9	567.8	593.7	664.2	656.1	651.6
37.5°	1942.3	1189.8	594.9	563.4	562.8	549.5	548.3	579.2	673.7	656.1	652.3
40°	2085.4	1187.3	569.1	535.7	545.8	540.7	536.3	555.2	621.4	585.5	578.5
42.5°	2258.1	1198.7	550.2	509.2	526.2	538.2	530.0	534.4	561.5	529.4	523.7
45°	2459.7	1229.6	536.3	485.9	505.4	536.3	526.9	523.1	527.5	509.8	506.1
47.5°	2694.8	1284.4	526.9	466.4	485.9	531.3	525.6	518.0	516.1	506.1	503.5
50°	2946.3	1358.1	520.6	448.7	468.3	522.4	525.0	514.3	511.1	506.7	505.4
52.5°	3195.8	1438.2	513.0	433.6	453.8	511.7	525.6	510.5	506.1	503.5	502.3
55°	3444.1	1521.3	499.1	420.4	443.0	499.1	525.0	505.4	500.4	500.4	500.4
57.5°	3766.2	1648.0	480.9	409.6	429.2	482.7	516.8	499.8	492.8	493.5	494.1
60°	4231.3	1860.4	460.7	397.7	410.9	463.8	504.2	489.7	481.5	484.0	484.6
62.5°	5008.3	2231.6	433.0	380.7	392.0	443.7	487.8	475.8	468.3	472.7	473.3
65°	6044.4	2680.9	396.4	359.2	372.5	421.0	467.0	459.4	451.2	461.9	461.3
67.5°	6676.5	2812.7	358.0	336.5	353.6	397.0	441.2	438.0	432.3	451.2	450.0
69°	6469.2	2574.4	335.9	322.0	340.3	380.7	424.8	423.5	419.1	437.4	436.1
70°	6147.1	2352.0	322.0	312.6	333.4	370.6	414.1	414.1	409.6	425.4	422.2
72.5°	4937.7	1744.4	289.9	288.6	309.4	342.8	385.1	388.2	385.7	391.4	388.2
75°	2899.0	1051.2	258.4	262.2	280.4	313.2	352.9	355.4	352.9	352.3	352.9
77.5°	1005.2	471.4	228.1	233.8	249.6	283.0	317.6	322.7	318.9	314.5	315.7
80°	393.3	274.1	195.4	203.6	216.8	248.9	282.3	285.5	279.8	279.2	274.1
82.5°	236.3	167.0	151.9	165.1	181.5	216.2	243.9	242.6	238.2	264.1	231.3
85°	102.7	92.6	110.9	124.2	132.3	162.0	206.1	200.4	189.7	167.0	163.2
87.5°	41.6	47.9	61.1	73.7	79.4	104.6	141.2	136.1	138.0	113.4	112.8
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)