

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: P197217

Luminaire Tested: **NAV-AF-03-D-UNV-T2-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197217
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-03-D-UNV-T2-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11689 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B2 - U0 - G2

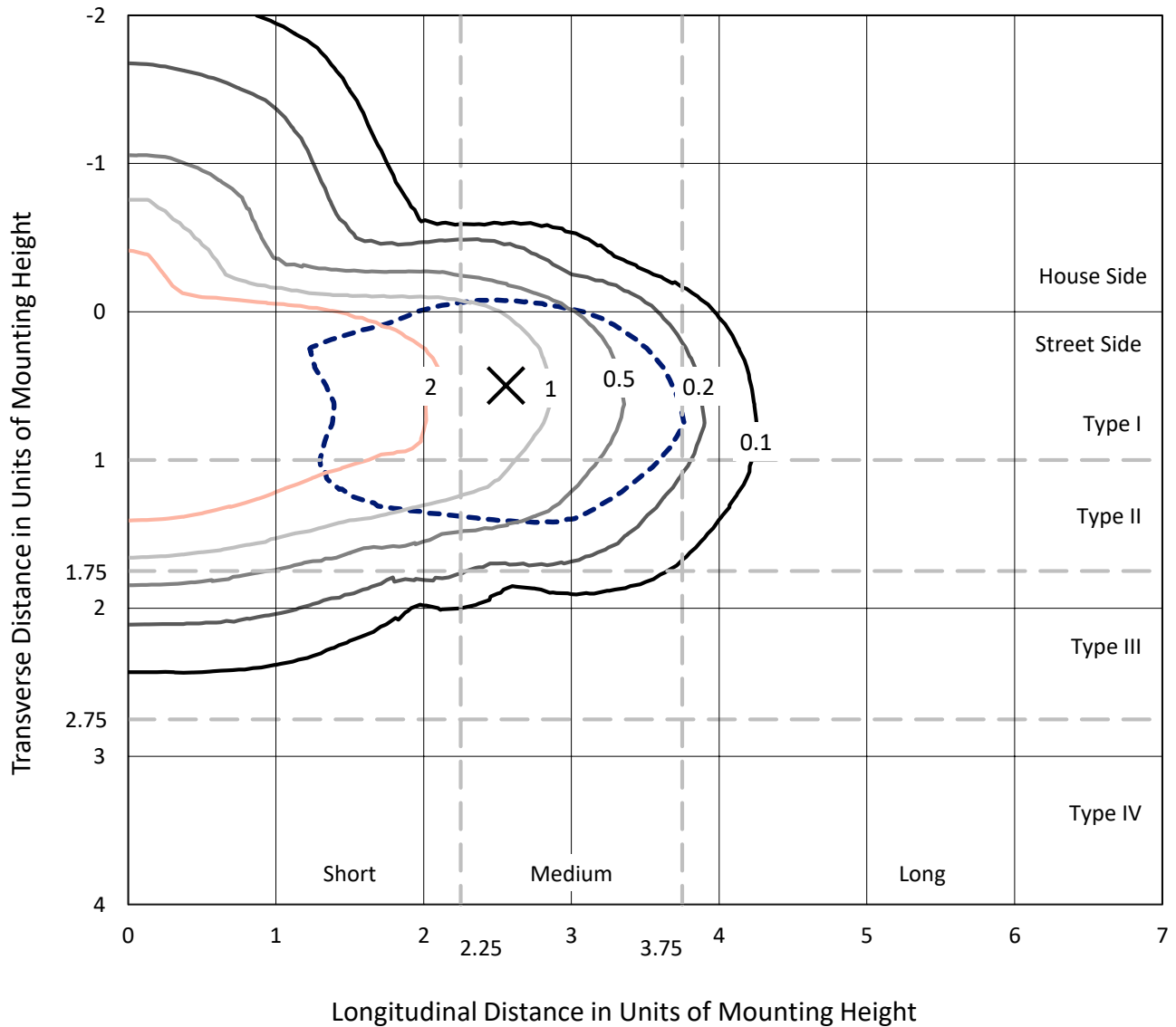
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P197217
 CATALOG NUMBER: NAV-AF-03-D-UNV-T2-8030-800

Iso-Footcandle Lines of Horizontal Illumination

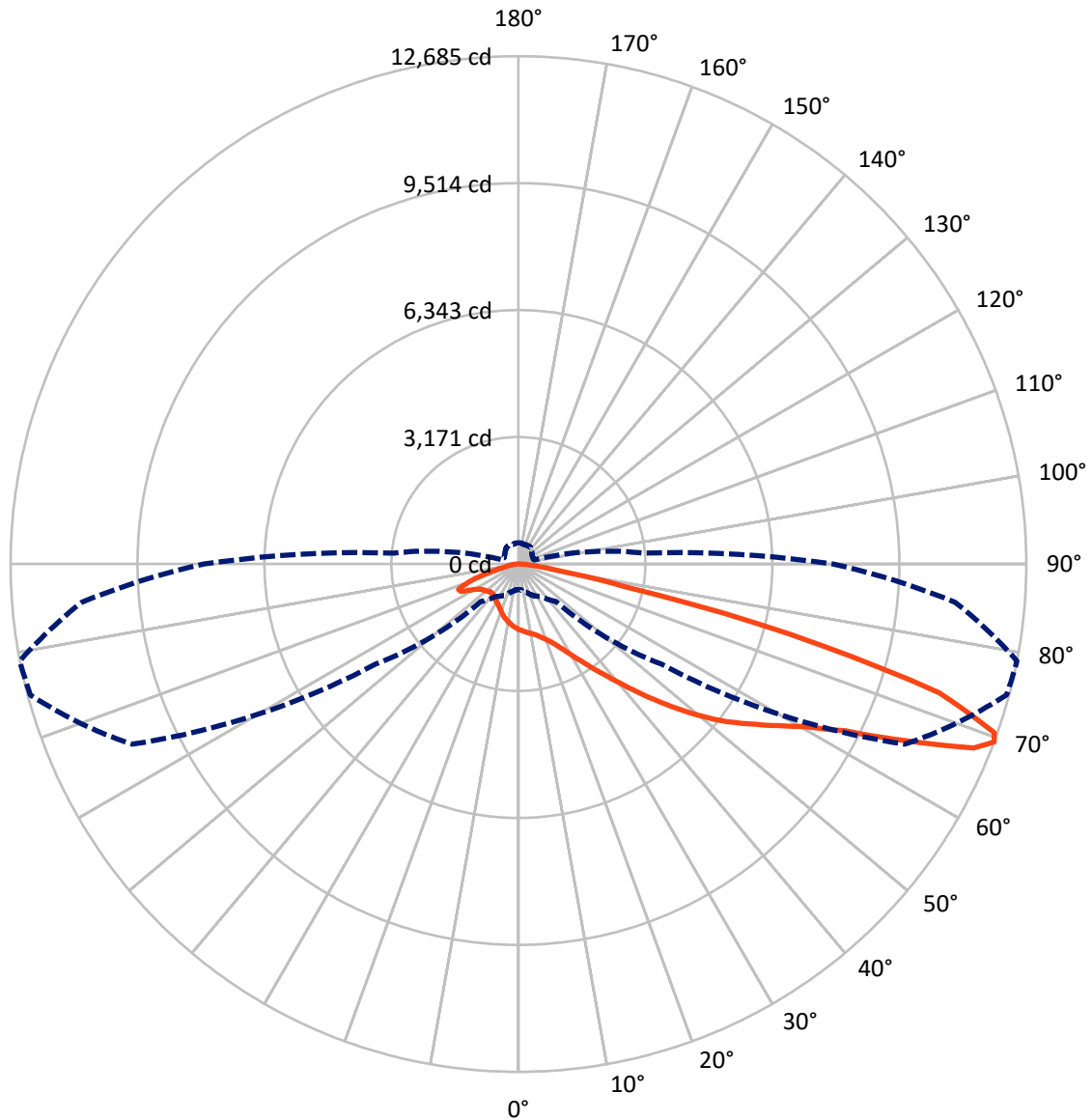
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5 fc
 Type II - Medium - Full Cutoff

REPORT NUMBER: P197217
CATALOG NUMBER: NAV-AF-03-D-UNV-T2-8030-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P197217

CATALOG NUMBER: NAV-AF-03-D-UNV-T2-8030-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2198.9	0.0	2198.9
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	9490.1	0.0	9490.1
	% Fixture	81.2	0.0	81.2
Total	Lumens	11689.0	0.0	11689.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.1	1.3
10°-20°	436.0	3.7
20°-30°	720.4	6.2
30°-40°	1166.5	10.0
40°-50°	1863.5	15.9
50°-60°	2668.8	22.8
60°-70°	2973.4	25.4
70°-80°	1487.6	12.7
80°-90°	220.8	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°	11689.0	100.0
0°-180°	11689.0	100.0



REPORT NUMBER: P197217

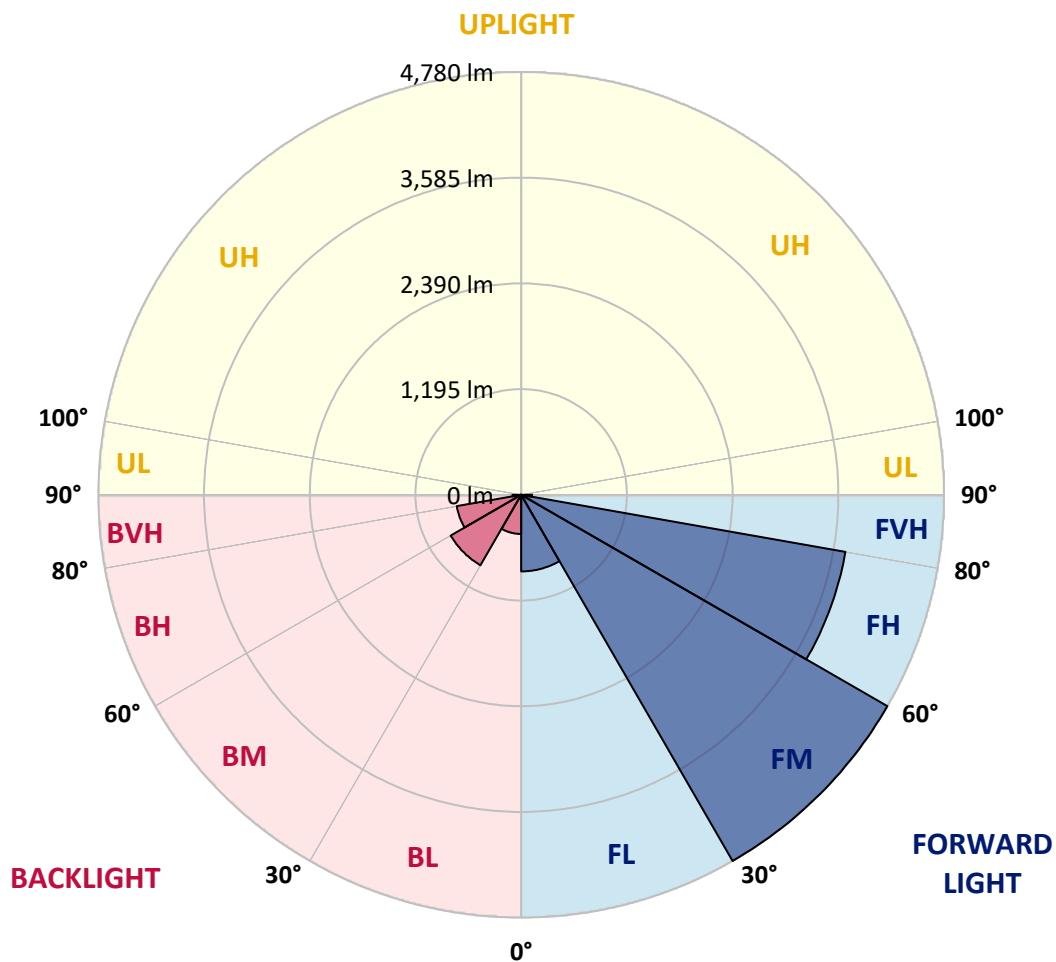
CATALOG NUMBER: NAV-AF-03-D-UNV-T2-8030-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	865.5	7.4			
FM	(30°-60°)	4779.7	40.9			
FH	(60°-80°)	3721.6	31.8			G2/5000
FVH	(80°-90°)	123.4	1.1			G2/225
BL	(0°-30°)	443.0	3.8	B1/500		
BM	(30°-60°)	919.2	7.9	B1/1000		
BH	(60°-80°)	739.4	6.3	B2/1000		G2/1000
BVH	(80°-90°)	97.4	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





REPORT NUMBER: P197217

CATALOG NUMBER: NAV-AF-03-D-UNV-T2-8030-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	1640.3	1640.3	1640.3	1640.3	1640.3	1640.3	1640.3	1640.3	1640.3	1640.3	1640.3
2.5°	1800.9	1797.1	1796.3	1784.9	1778.8	1765.8	1735.2	1703.8	1674.7	1659.5	1643.4
5°	1951.6	1943.9	1940.1	1921.0	1904.2	1875.1	1826.9	1777.2	1725.2	1698.5	1666.3
7.5°	2042.6	2043.3	2043.3	2028.1	2011.2	1976.1	1914.9	1846.8	1769.6	1734.4	1683.9
10°	2050.2	2051.0	2062.5	2066.3	2070.1	2051.8	1995.2	1909.5	1810.1	1764.2	1698.5
12.5°	1974.5	1979.9	1999.0	2026.5	2065.5	2085.4	2060.9	1976.8	1862.1	1806.3	1726.0
15°	1872.8	1878.2	1902.6	1944.7	2007.4	2073.9	2108.3	2054.1	1930.2	1864.4	1766.5
17.5°	1823.1	1829.2	1846.0	1879.7	1940.9	2030.3	2133.6	2136.6	2010.5	1934.8	1814.7
20°	1799.4	1804.0	1825.4	1852.9	1899.6	1985.2	2135.9	2223.8	2106.1	2018.1	1873.6
22.5°	1853.7	1855.2	1865.9	1881.2	1912.6	1978.3	2134.3	2314.1	2225.4	2122.9	1949.3
25°	2012.8	2002.8	1995.2	1976.1	1983.7	2030.3	2158.8	2410.4	2378.3	2260.5	2050.2
27.5°	2200.9	2199.4	2179.5	2135.1	2106.8	2136.6	2228.4	2518.2	2565.7	2435.7	2182.5
30°	2410.4	2411.2	2390.5	2336.2	2278.9	2281.9	2339.3	2642.9	2789.7	2646.7	2345.4
32.5°	2629.9	2643.7	2605.4	2551.1	2481.5	2459.4	2498.4	2793.5	3049.0	2896.0	2534.3
35°	2892.2	2894.5	2852.4	2772.9	2703.3	2668.1	2704.1	2981.7	3348.0	3188.9	2764.5
37.5°	3164.4	3166.0	3122.4	3020.7	2932.7	2909.8	2949.5	3210.3	3664.6	3522.3	3035.2
40°	3387.0	3403.0	3368.6	3273.0	3184.3	3170.6	3227.9	3484.1	4069.1	3916.9	3357.1
42.5°	3639.3	3657.7	3616.4	3517.0	3446.6	3442.0	3531.5	3796.1	4471.3	4373.5	3721.9
45°	3923.8	3949.8	3892.5	3780.8	3721.2	3822.1	3827.5	4141.8	4934.8	4884.3	4132.6
47.5°	4234.3	4255.7	4209.0	4089.0	4024.0	4170.0	4117.3	4515.7	5435.7	5431.8	4576.9
50°	4473.6	4497.4	4501.9	4449.2	4381.1	4399.5	4435.4	4908.8	5935.0	5994.7	5036.5
52.5°	4430.1	4453.0	4556.2	4694.6	4804.0	4756.6	4800.2	5326.3	6417.6	6543.8	5473.1
55°	4078.3	4090.5	4284.0	4612.8	5078.5	5304.9	5308.0	5780.6	6876.4	7053.1	5887.6
57.5°	3444.3	3445.9	3697.4	4182.3	4918.7	5660.5	6109.4	6351.0	7355.1	7615.9	6401.5
60°	2437.2	2443.3	2736.2	3370.1	4345.9	5617.7	6971.2	7372.0	7909.6	8248.3	7063.8
62.5°	1446.9	1460.6	1681.6	2190.2	3227.9	5067.1	7480.5	9188.2	8726.3	9175.9	8123.7
65°	941.4	952.8	1085.1	1340.6	1907.2	3686.7	7313.1	10947.0	10271.8	10635.0	9647.0
67.5°	725.0	734.1	838.1	992.6	1170.0	1992.9	5847.1	11315.6	12153.0	12266.2	10932.5
69°	637.0	644.7	721.1	869.5	985.0	1319.2	4357.4	10646.5	12623.3	12685.3	10948.6
70°	590.4	596.5	668.4	796.8	904.7	1053.0	3335.0	9869.5	12451.3	12609.6	10632.7
72.5°	486.4	491.7	543.0	641.6	739.5	750.2	1477.4	7206.8	10484.4	10990.6	8997.8
75°	406.1	409.1	442.8	514.7	598.8	597.3	754.8	4082.1	6397.7	7001.1	5555.7
77.5°	338.8	341.1	363.2	407.6	472.6	470.3	531.5	1761.9	2824.9	2725.5	1912.6
80°	299.0	300.5	312.0	323.5	364.8	362.5	393.8	809.1	1149.4	1062.2	723.4
82.5°	227.1	230.2	288.3	293.7	282.9	273.0	274.5	471.1	588.8	536.1	388.5
85°	128.5	129.2	185.1	216.4	246.2	185.1	178.2	243.2	290.6	254.7	169.8
87.5°	57.4	59.6	88.7	102.5	133.1	108.6	101.7	103.2	125.4	104.0	67.3
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: P197217

CATALOG NUMBER: NAV-AF-03-D-UNV-T2-8030-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1640.3	1640.3	1640.3	1640.3	1640.3	1640.3	1640.3	1640.3	1640.3	1640.3	1640.3
2.5°	1628.1	1615.1	1584.5	1553.2	1521.8	1501.9	1481.3	1462.2	1454.5	1453.7	1439.2
5°	1635.0	1604.4	1534.8	1458.3	1385.7	1329.1	1281.7	1251.1	1221.3	1215.9	1202.9
7.5°	1637.3	1587.6	1474.4	1352.0	1241.1	1163.1	1115.7	1095.1	1080.6	1076.7	1072.1
10°	1636.5	1566.2	1407.1	1239.6	1113.4	1054.6	1037.0	1041.6	1047.7	1050.7	1050.7
12.5°	1648.7	1556.2	1339.8	1134.1	1030.8	1002.6	1016.3	1040.0	1058.4	1066.0	1067.6
15°	1670.9	1550.1	1265.6	1042.3	972.7	979.6	1013.3	1047.7	1073.7	1085.1	1088.2
17.5°	1698.5	1541.7	1180.0	966.6	939.1	962.8	1006.4	1050.0	1081.3	1095.9	1098.1
20°	1729.0	1529.5	1091.3	910.0	909.3	939.1	982.7	1031.6	1065.3	1081.3	1080.6
22.5°	1770.3	1518.0	1008.7	868.7	876.4	903.9	939.8	984.2	1015.6	1030.1	1027.0
25°	1825.4	1507.3	934.5	832.0	838.9	857.3	882.5	916.1	938.3	946.0	940.6
27.5°	1899.6	1498.9	876.4	798.4	797.6	806.0	821.3	839.7	850.4	848.1	839.7
30°	1990.6	1490.4	833.6	768.5	757.8	757.1	764.0	774.7	781.5	767.8	760.9
32.5°	2092.3	1475.9	795.3	742.5	723.4	716.5	719.6	734.1	762.4	748.7	743.3
35°	2212.4	1459.1	757.1	714.3	699.7	686.7	689.0	720.4	806.0	796.1	790.7
37.5°	2356.9	1443.8	721.9	683.7	682.9	666.8	665.3	702.8	817.5	796.1	791.5
40°	2530.5	1440.7	690.5	650.0	662.3	656.1	650.8	673.7	754.0	710.4	702.0
42.5°	2740.0	1454.5	667.6	617.9	638.5	653.1	643.1	648.5	681.4	642.4	635.5
45°	2984.7	1492.0	650.8	589.6	613.3	650.8	639.3	634.7	640.1	618.7	614.1
47.5°	3270.0	1558.5	639.3	565.9	589.6	644.7	637.8	628.6	626.3	614.1	611.0
50°	3575.1	1648.0	631.7	544.5	568.2	634.0	637.0	624.0	620.2	614.8	613.3
52.5°	3877.9	1745.1	622.5	526.1	550.6	621.0	637.8	619.4	614.1	611.0	609.5
55°	4179.2	1846.0	605.7	510.1	537.6	605.7	637.0	613.3	607.2	607.2	607.2
57.5°	4570.0	1999.8	583.5	497.1	520.8	585.8	627.1	606.4	598.0	598.8	599.5
60°	5134.4	2257.5	559.0	482.5	498.6	562.8	611.8	594.2	584.3	587.3	588.1
62.5°	6077.3	2707.9	525.4	461.9	475.7	538.4	591.9	577.4	568.2	573.5	574.3
65°	7334.5	3253.1	481.0	435.9	452.0	510.8	566.7	557.5	547.5	560.5	559.8
67.5°	8101.5	3413.0	434.4	408.4	429.0	481.8	535.3	531.5	524.6	547.5	546.0
69°	7849.9	3123.9	407.6	390.8	413.0	461.9	515.4	513.9	508.5	530.7	529.2
70°	7459.1	2854.0	390.8	379.3	404.5	449.7	502.4	502.4	497.1	516.2	512.4
72.5°	5991.6	2116.8	351.8	350.2	375.5	416.0	467.2	471.1	468.0	474.9	471.1
75°	3517.7	1275.6	313.5	318.1	340.3	380.1	428.2	431.3	428.2	427.5	428.2
77.5°	1219.7	572.0	276.8	283.7	302.8	343.4	385.4	391.5	387.0	381.6	383.1
80°	477.2	332.7	237.1	247.0	263.1	302.1	342.6	346.4	339.5	338.8	332.7
82.5°	286.8	202.7	184.3	200.4	220.2	262.3	295.9	294.4	289.1	320.4	280.7
85°	124.7	112.4	134.6	150.7	160.6	196.5	250.1	243.2	230.2	202.7	198.1
87.5°	50.5	58.1	74.2	89.5	96.4	126.9	171.3	165.2	167.5	137.7	136.9
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)