

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: P195831

Luminaire Tested: **NAV-AF-03-D-UNV-T3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195831
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-7050
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18119 lumens
Efficiency: N/A
Efficacy: 109.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

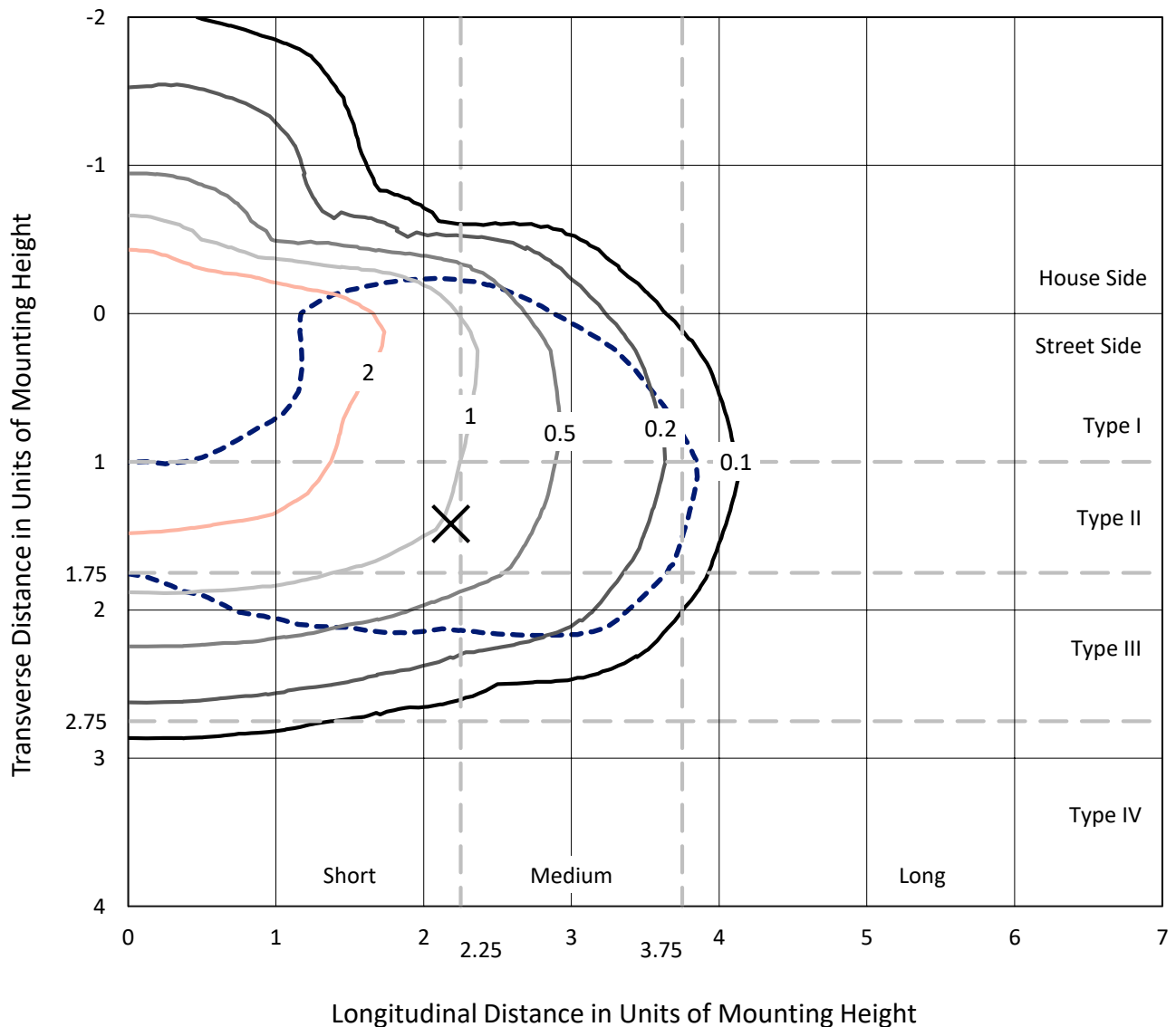
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P195831
 CATALOG NUMBER: NAV-AF-03-D-UNV-T3-7050

Iso-Footcandle Lines of Horizontal Illumination

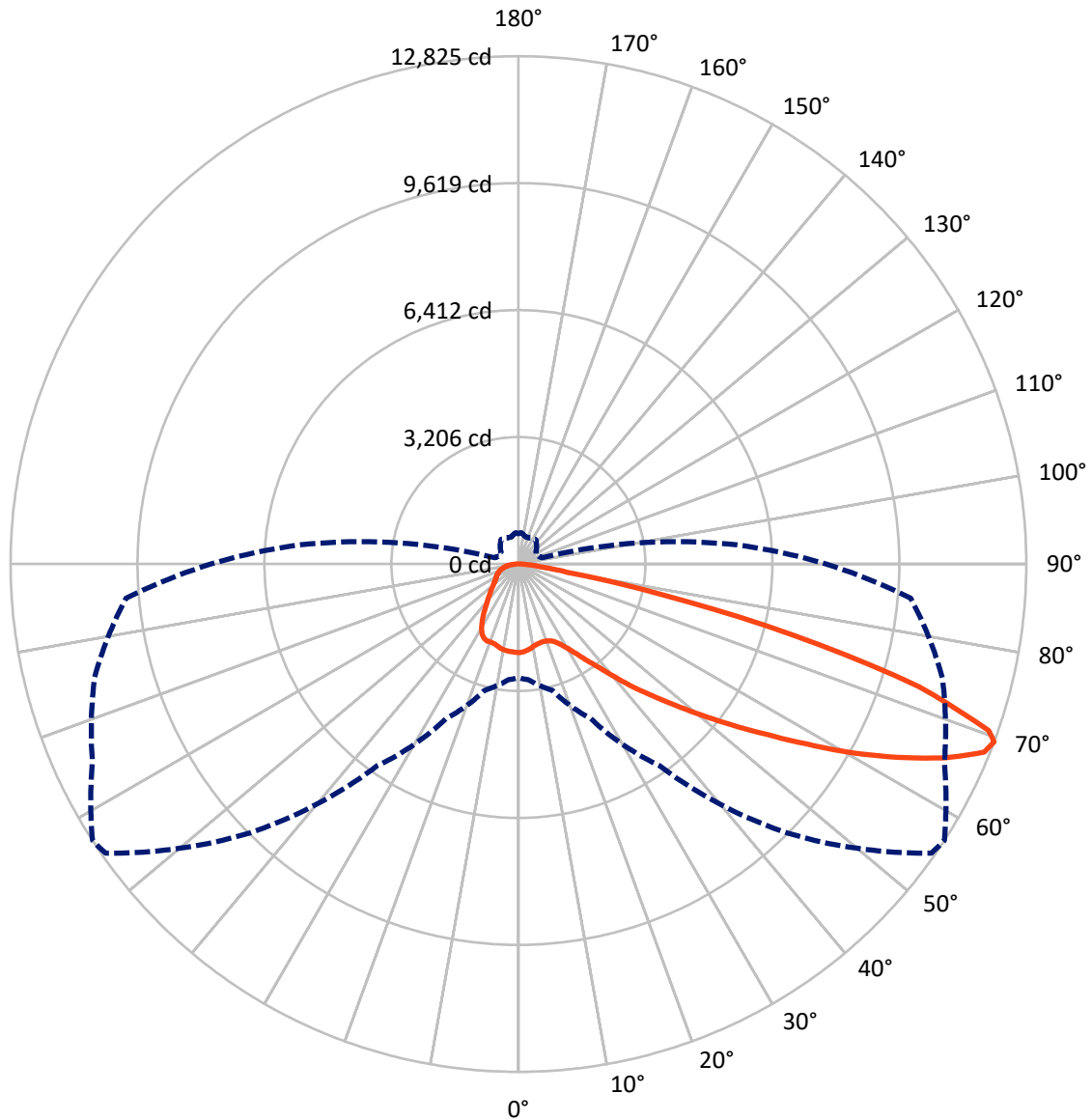
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P195831
CATALOG NUMBER: NAV-AF-03-D-UNV-T3-7050

Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P195831

CATALOG NUMBER: NAV-AF-03-D-UNV-T3-7050

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3998.2	0.0	3998.2
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	14120.8	0.0	14120.8
	% Fixture	77.9	0.0	77.9
Total	Lumens	18119.0	0.0	18119.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.6	1.2
10°-20°	595.9	3.3
20°-30°	991.3	5.5
30°-40°	1618.8	8.9
40°-50°	2732.2	15.1
50°-60°	4250.0	23.5
60°-70°	5062.7	27.9
70°-80°	2358.5	13.0
80°-90°	300.0	1.7
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°	18119.0	100.0
0°-180°	18119.0	100.0



REPORT NUMBER: P195831

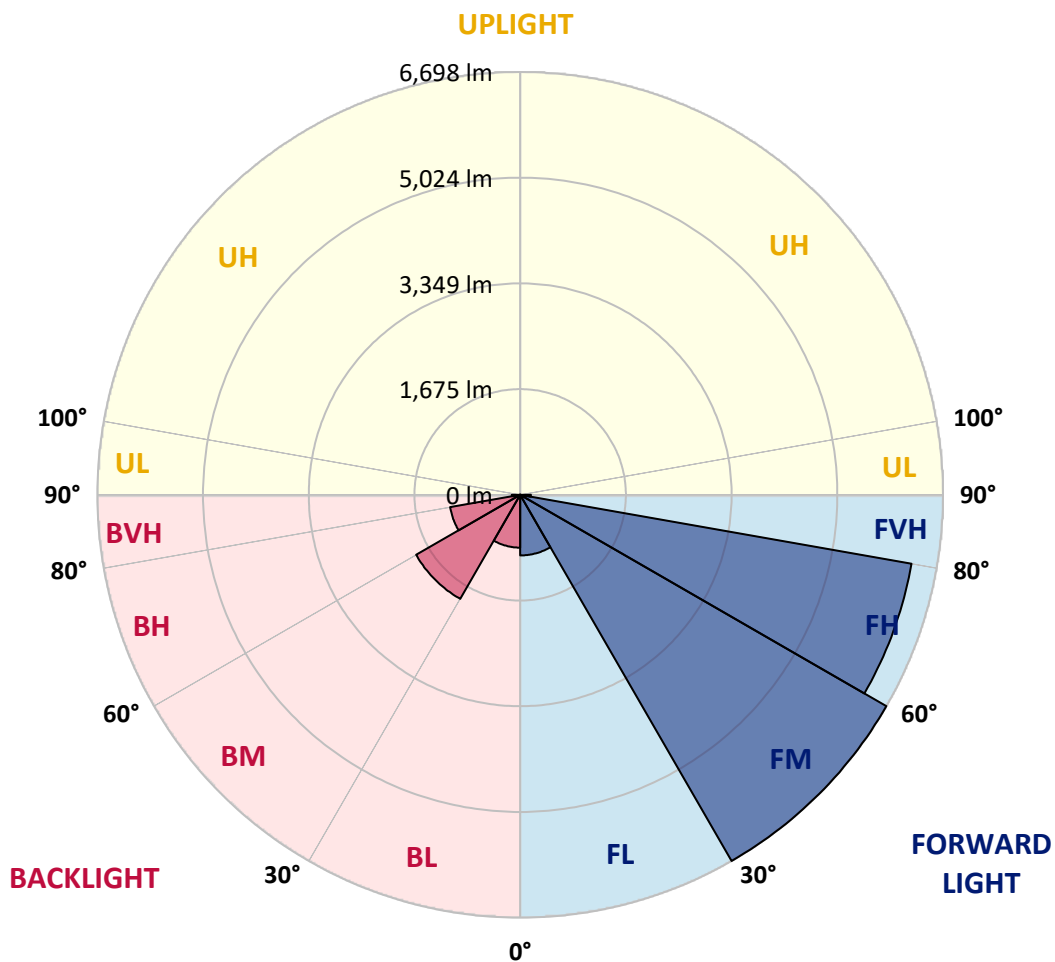
CATALOG NUMBER: NAV-AF-03-D-UNV-T3-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	959.6	5.3			
FM (30°-60°)	6698.0	37.0			
FH (60°-80°)	6294.6	34.7			G3/7500
FVH (80°-90°)	168.6	0.9			G2/225
BL (0°-30°)	837.3	4.6	B2/1000		
BM (30°-60°)	1902.9	10.5	B2/2500		
BH (60°-80°)	1126.6	6.2	B3/2500		G3/2500
BVH (80°-90°)	131.4	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





REPORT NUMBER: P195831

CATALOG NUMBER: NAV-AF-03-D-UNV-T3-7050

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8
2.5°	2226.0	2226.0	2231.8	2231.8	2231.8	2229.5	2222.5	2224.9	2220.2	2216.7	2210.9
5°	2180.8	2183.1	2190.1	2192.4	2195.9	2197.0	2197.0	2195.9	2197.0	2197.0	2193.5
7.5°	2118.1	2120.5	2128.6	2133.2	2143.7	2152.9	2157.6	2157.6	2163.4	2168.0	2169.2
10°	2079.9	2079.9	2084.5	2084.5	2092.6	2097.3	2112.3	2111.2	2127.4	2142.5	2149.5
12.5°	2075.2	2075.2	2072.9	2064.8	2060.1	2059.0	2074.1	2076.4	2100.7	2127.4	2140.2
15°	2090.3	2090.3	2083.3	2067.1	2049.7	2041.6	2056.7	2061.3	2088.0	2119.3	2139.0
17.5°	2139.0	2137.9	2122.8	2090.3	2060.1	2047.4	2052.0	2056.7	2081.0	2117.0	2141.3
20°	2246.9	2246.9	2214.4	2155.3	2103.1	2072.9	2065.9	2069.4	2086.8	2120.5	2151.8
22.5°	2436.0	2439.5	2381.5	2284.0	2194.7	2130.9	2103.1	2106.5	2114.7	2147.1	2181.9
25°	2714.4	2705.1	2622.7	2484.7	2345.5	2236.5	2179.6	2183.1	2183.1	2213.3	2249.2
27.5°	3009.0	3011.3	2893.0	2744.5	2561.3	2398.9	2308.4	2307.2	2306.1	2335.1	2373.3
30°	3341.9	3343.1	3206.2	3034.5	2824.6	2616.9	2481.2	2480.1	2469.6	2505.6	2555.5
32.5°	3706.2	3705.0	3546.1	3352.4	3119.2	2883.7	2707.4	2706.3	2698.1	2746.9	2807.2
35°	4109.8	4109.8	3952.1	3713.1	3461.4	3199.3	2995.1	2993.9	2998.6	3064.7	3121.5
37.5°	4595.9	4606.3	4416.1	4126.1	3851.2	3571.6	3333.8	3326.8	3292.0	3403.4	3497.4
40°	5102.8	5131.8	4934.6	4595.9	4298.9	4010.1	3747.9	3743.3	3713.1	3831.4	3983.4
42.5°	5651.5	5717.6	5498.3	5152.7	4829.0	4517.0	4253.7	4240.9	4124.9	4309.4	4547.2
45°	6370.7	6413.6	6095.7	5782.5	5477.5	5121.4	4808.2	4739.7	4623.7	4860.4	5168.9
47.5°	6860.2	6839.3	6640.9	6431.0	6234.9	5893.9	5412.5	5325.5	5184.0	5497.2	5837.1
50°	7164.1	7179.2	7067.8	7057.4	7046.9	6809.1	6094.6	5990.2	5826.6	6197.8	6594.5
52.5°	7364.8	7296.3	7316.1	7552.7	7839.2	7725.5	6866.0	6750.0	6581.8	6953.0	7400.7
55°	7281.3	7190.8	7372.9	7839.2	8513.2	8538.7	7712.8	7593.3	7449.5	7755.7	8370.5
57.5°	6935.6	6980.8	7268.5	7916.9	8973.7	9267.2	8686.0	8564.2	8281.2	8592.0	9291.5
60°	6449.5	6541.2	6980.8	7794.0	9296.2	9834.4	9754.3	9673.1	9186.0	9406.4	10258.9
62.5°	5927.5	6018.0	6558.6	7584.0	9151.2	10336.7	10803.0	10753.1	10184.7	10190.5	10872.6
65°	5156.2	5193.3	5745.4	7011.0	8748.6	10790.2	11852.8	11808.7	11139.4	10859.8	11044.3
67.5°	3894.1	3940.5	4394.0	5534.3	7523.7	10544.3	12691.4	12684.5	11713.6	11108.1	10635.9
69°	2875.6	2932.5	3302.5	4296.6	6221.0	9607.0	12730.9	12824.8	11869.0	11082.5	9945.7
70°	2104.2	2169.2	2511.4	3410.4	5181.7	8572.3	12393.3	12595.2	11809.8	10921.3	9407.5
72.5°	894.4	916.4	1084.6	1539.3	2628.5	5168.9	10151.1	10575.6	10666.1	9785.7	7349.7
75°	560.3	567.2	633.4	790.0	1169.3	2137.9	6573.7	7152.5	7963.3	7592.1	4920.7
77.5°	422.2	428.0	466.3	544.0	726.2	798.1	3049.6	3636.6	4561.1	4466.0	2448.7
80°	323.6	327.1	352.6	395.6	511.6	500.0	989.5	1243.5	1903.5	1679.7	866.5
82.5°	254.0	255.2	277.2	285.4	357.3	336.4	496.5	553.3	769.1	639.2	423.4
85°	225.0	228.5	250.6	208.8	228.5	203.0	272.6	295.8	408.3	385.1	160.1
87.5°	114.8	120.6	210.0	178.6	114.8	96.3	119.5	128.8	165.9	179.8	77.7
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: P195831

CATALOG NUMBER: NAV-AF-03-D-UNV-T3-7050

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8
2.5°	2212.1	2213.3	2216.7	2222.5	2231.8	2243.4	2257.3	2271.3	2279.4	2285.2	2282.9
5°	2193.5	2194.7	2201.7	2212.1	2223.7	2241.1	2264.3	2281.7	2294.5	2302.6	2301.4
7.5°	2170.3	2173.8	2187.7	2199.3	2215.6	2229.5	2248.1	2264.3	2277.1	2285.2	2284.0
10°	2152.9	2156.4	2173.8	2188.9	2202.8	2205.1	2201.7	2197.0	2195.9	2201.7	2199.3
12.5°	2144.8	2151.8	2168.0	2178.5	2172.7	2150.6	2125.1	2114.7	2111.2	2122.8	2123.9
15°	2147.1	2152.9	2166.9	2159.9	2128.6	2091.5	2077.5	2085.7	2092.6	2099.6	2100.7
17.5°	2152.9	2156.4	2159.9	2134.4	2090.3	2065.9	2061.3	2053.2	2032.3	2020.7	2019.5
20°	2163.4	2168.0	2162.2	2121.6	2082.2	2049.7	1994.0	1944.1	1896.6	1871.1	1860.6
22.5°	2199.3	2202.8	2185.4	2146.0	2085.7	1980.1	1867.6	1781.7	1708.7	1669.2	1654.1
25°	2270.1	2275.9	2251.5	2201.7	2043.9	1859.5	1700.5	1584.5	1492.9	1445.3	1432.6
27.5°	2394.2	2400.0	2373.3	2243.4	1946.5	1698.2	1505.7	1390.8	1311.9	1271.3	1265.5
30°	2579.8	2587.9	2563.6	2242.3	1798.0	1492.9	1315.4	1248.1	1202.9	1175.1	1173.9
32.5°	2837.3	2867.5	2767.7	2202.8	1614.7	1285.3	1171.6	1148.4	1126.3	1107.8	1107.8
35°	3164.5	3235.2	2969.6	2120.5	1412.9	1143.7	1091.5	1069.5	1041.7	1022.0	1019.6
37.5°	3555.4	3665.6	3113.4	1974.3	1238.9	1075.3	1042.8	1006.9	962.8	924.5	915.2
40°	4092.4	4118.0	3184.2	1736.5	1108.9	1038.2	997.6	952.4	896.7	853.8	849.1
42.5°	4631.8	4548.3	3170.3	1481.3	1034.7	1004.6	951.2	901.3	851.4	815.5	815.5
45°	5245.5	4924.2	3064.7	1224.9	967.4	966.3	908.3	860.7	822.4	795.8	790.0
47.5°	5832.4	5261.7	2882.6	1035.9	897.8	928.0	880.4	842.2	807.4	781.8	777.2
50°	6544.7	5652.6	2688.9	903.6	830.6	894.4	868.8	849.1	815.5	771.4	766.8
52.5°	7252.3	6109.7	2539.2	803.9	771.4	867.7	875.8	878.1	846.8	761.0	755.2
55°	8012.0	6598.0	2381.5	726.2	722.7	854.9	892.0	889.7	874.6	763.3	754.0
57.5°	8734.7	7088.7	2146.0	671.6	684.4	842.2	895.5	858.4	831.7	774.9	759.8
60°	9333.3	7494.7	1800.3	633.4	651.9	816.6	872.3	816.6	771.4	772.6	758.6
62.5°	9624.4	7608.4	1376.9	589.3	625.2	774.9	838.7	785.3	743.6	777.2	769.1
65°	9402.9	7284.7	981.4	548.7	592.8	726.2	819.0	758.6	729.6	800.4	791.1
67.5°	8607.1	6403.1	712.2	512.7	561.4	676.3	781.8	734.3	715.7	817.8	796.9
69°	7761.5	5528.5	617.1	491.8	539.4	649.6	757.5	721.5	705.3	793.4	763.3
70°	7058.5	4854.6	569.6	479.1	520.8	634.5	738.9	713.4	694.8	764.4	728.5
72.5°	5061.0	3137.8	479.1	440.8	472.1	600.9	698.3	683.2	655.4	690.2	667.0
75°	3057.7	1637.9	407.2	401.4	421.1	554.5	650.8	632.2	604.4	607.8	596.2
77.5°	1404.7	756.3	341.0	355.0	367.7	496.5	592.8	571.9	546.4	537.1	538.2
80°	616.0	442.0	285.4	302.8	309.7	446.6	530.1	506.9	479.1	529.0	490.7
82.5°	332.9	256.4	222.7	234.3	254.0	388.6	460.5	430.4	403.7	469.8	379.3
85°	134.6	131.1	150.8	162.4	176.3	279.6	385.1	353.8	321.3	287.7	280.7
87.5°	58.0	62.6	74.2	78.9	94.0	174.0	258.7	226.2	227.4	194.9	191.4
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)