

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: P197151

Luminaire Tested: **NAV-AF-03-D-UNV-SL4-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197151
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-SL4-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1050mA 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: 14101 lumens
Efficiency: N/A
Efficacy: 84.9 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

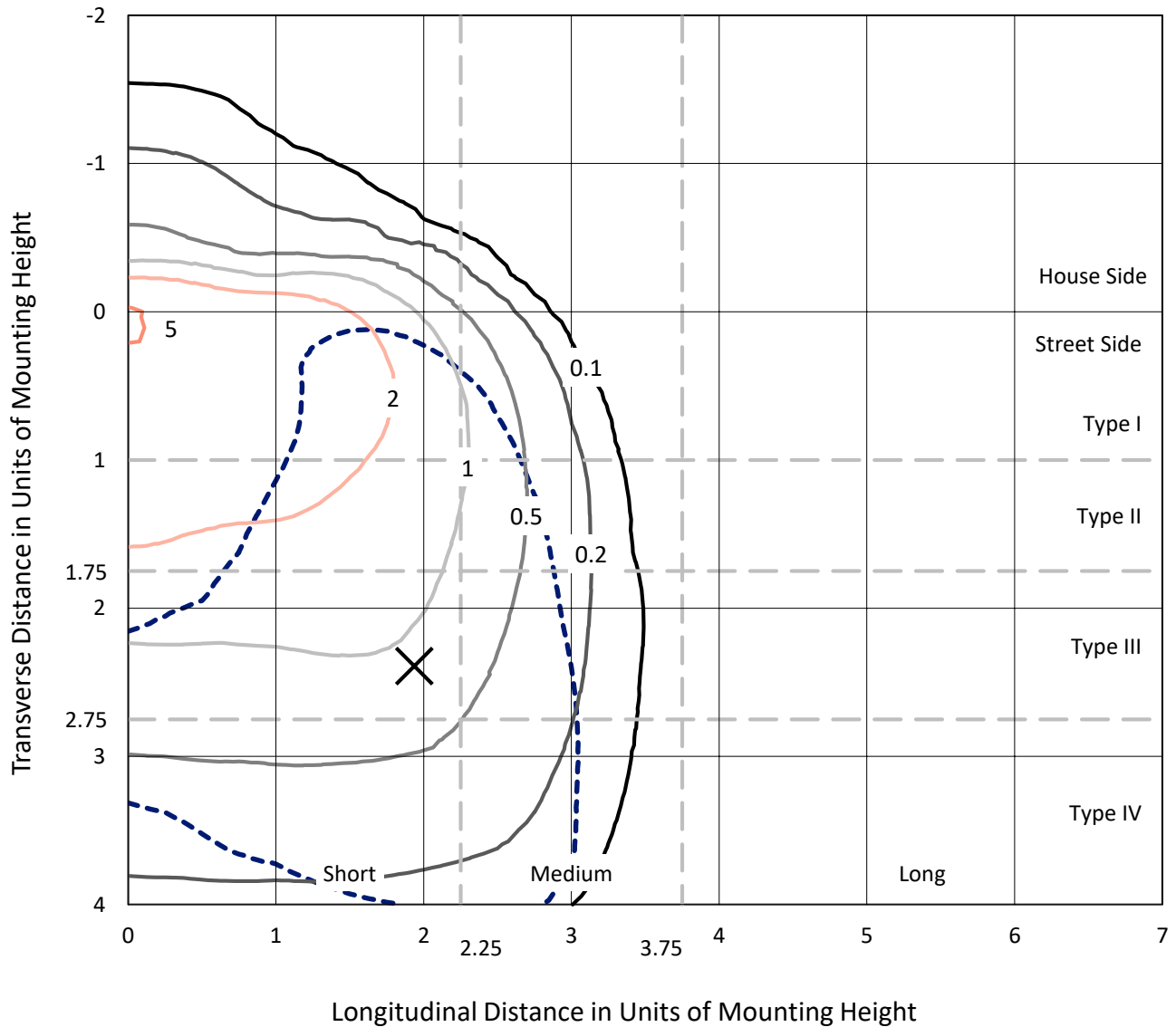
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P197151
 CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-8030

Iso-Footcandle Lines of Horizontal Illumination

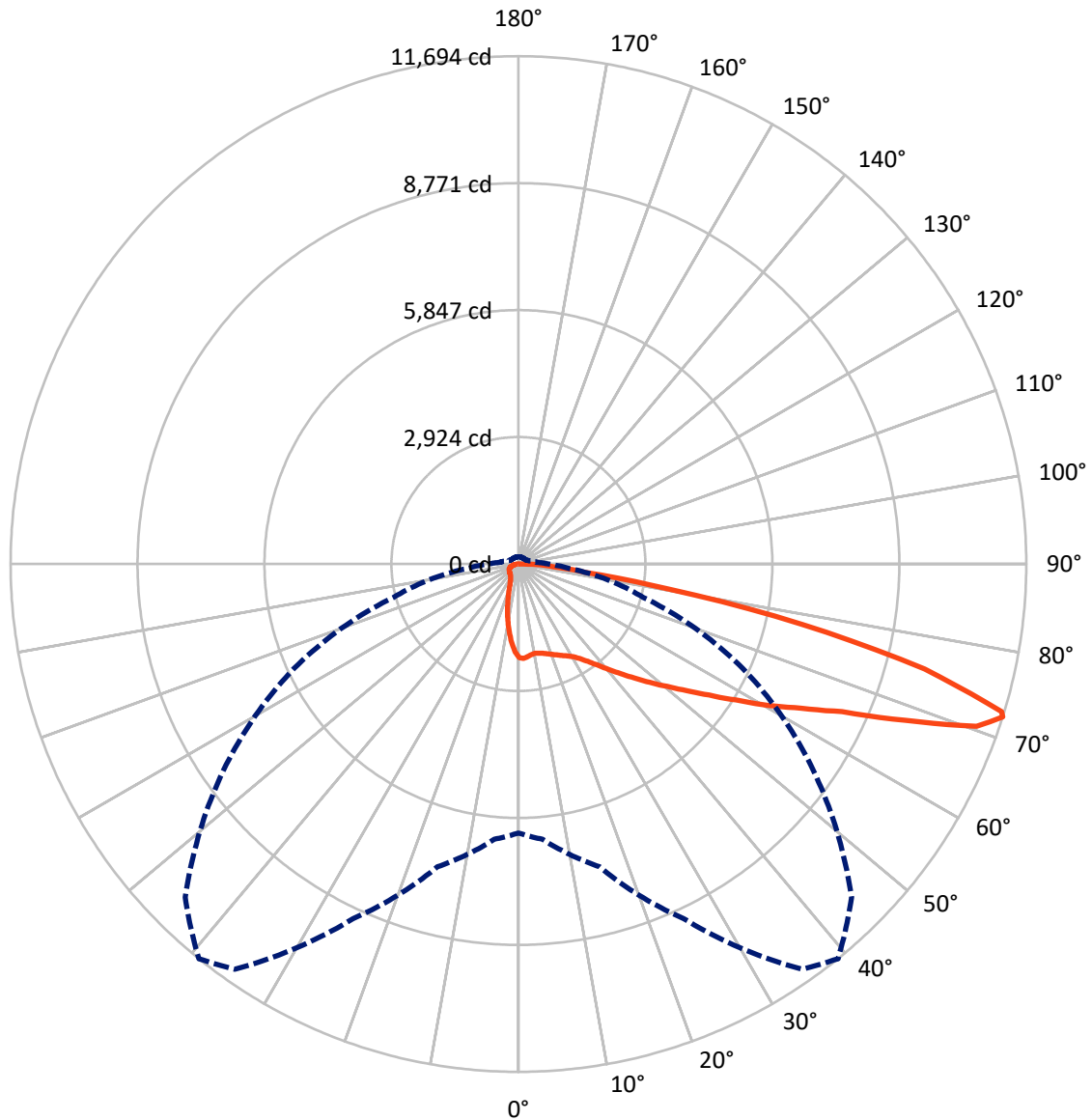
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.4 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P197151
CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-8030

Luminous Intensity Polar Plot



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

REPORT NUMBER: P197151

CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-8030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1616.9	0.0	1616.9
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	12484.1	0.0	12484.1
	% Fixture	88.5	0.0	88.5
Total	Lumens	14101.0	0.0	14101.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.1	1.3
10°-20°	465.0	3.3
20°-30°	724.7	5.1
30°-40°	1115.8	7.9
40°-50°	1819.0	12.9
50°-60°	2826.5	20.0
60°-70°	3783.1	26.8
70°-80°	2720.6	19.3
80°-90°	461.2	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°	14101.0	100.0
0°-180°	14101.0	100.0



REPORT NUMBER: P197151

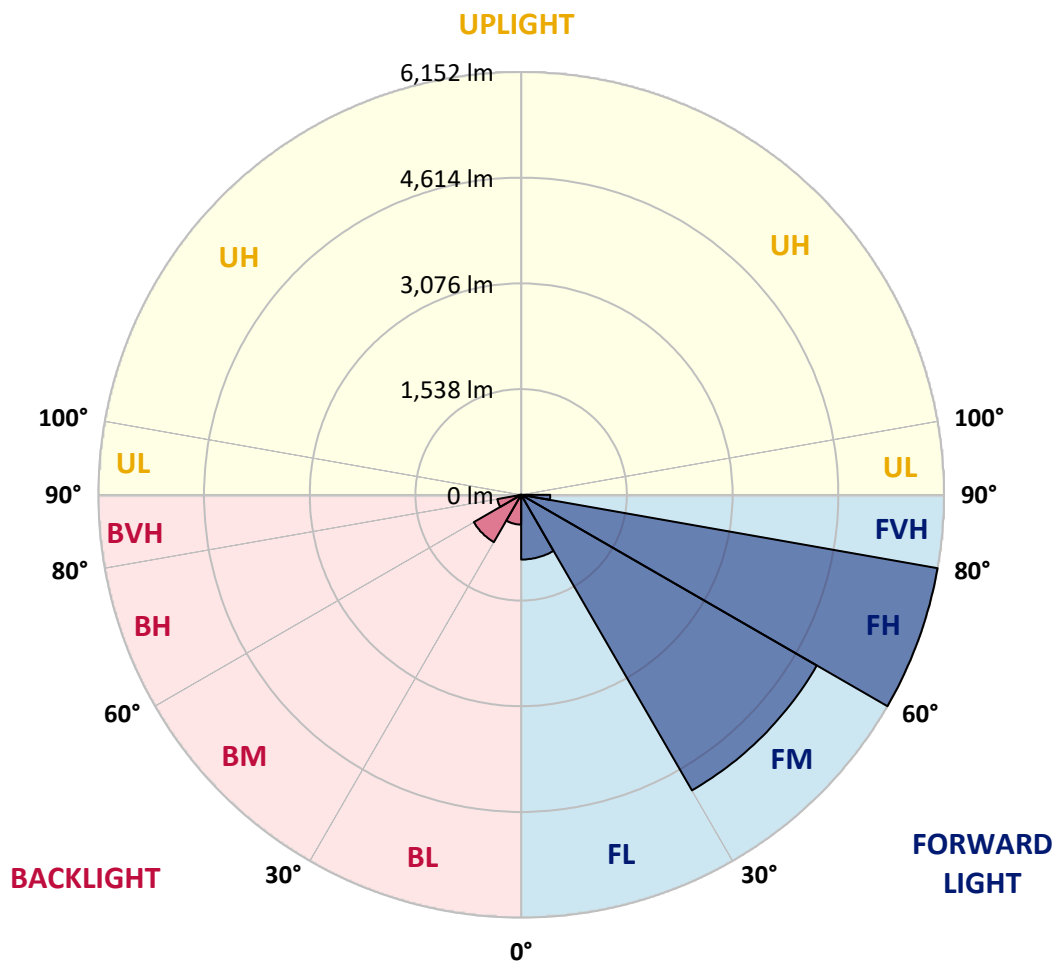
CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	941.9	6.7			
FM	(30°-60°)	4966.6	35.2			
FH	(60°-80°)	6152.5	43.6			G3/7500
FVH	(80°-90°)	423.1	3.0			G3/500
BL	(0°-30°)	432.8	3.1	B1/500		
BM	(30°-60°)	794.6	5.6	B1/1000		
BH	(60°-80°)	351.3	2.5	B1/500		G1/500
BVH	(80°-90°)	38.1	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: P197151
 CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-8030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	2153.5	2153.5	2153.5	2153.5	2153.5	2153.5	2153.5	2153.5	2153.5	2153.5	2153.5
2.5°	2199.9	2200.8	2198.0	2189.4	2181.9	2178.1	2171.5	2160.1	2145.0	2134.5	2126.0
5°	2179.0	2181.9	2180.0	2165.8	2152.5	2145.0	2134.5	2118.5	2098.6	2090.1	2070.2
7.5°	2162.9	2164.8	2159.2	2143.1	2117.5	2108.0	2089.1	2068.3	2050.3	2038.0	2014.3
10°	2151.6	2153.5	2148.7	2132.7	2104.3	2092.9	2070.2	2047.5	2023.8	2008.6	1982.1
12.5°	2135.5	2139.3	2139.3	2131.7	2112.8	2105.2	2082.5	2057.9	2036.1	2020.0	1986.9
15°	2132.7	2137.4	2145.9	2145.0	2139.3	2133.6	2115.6	2091.0	2072.1	2053.1	2012.4
17.5°	2156.3	2166.7	2183.8	2189.4	2185.7	2173.4	2152.5	2129.8	2109.0	2091.0	2040.8
20°	2216.0	2221.6	2247.2	2258.5	2239.6	2221.6	2194.2	2164.8	2145.9	2131.7	2067.3
22.5°	2305.9	2313.4	2334.3	2335.2	2295.5	2273.7	2238.7	2202.7	2184.7	2179.0	2103.3
25°	2449.8	2447.9	2453.5	2429.9	2357.9	2332.4	2289.8	2248.1	2235.8	2247.2	2156.3
27.5°	2622.0	2617.3	2599.3	2537.8	2428.9	2395.8	2344.7	2307.8	2307.8	2334.3	2228.3
30°	2820.8	2816.1	2757.4	2654.2	2513.2	2475.3	2421.4	2382.5	2402.4	2453.5	2325.8
32.5°	3031.0	3013.9	2931.6	2793.4	2633.4	2591.7	2539.7	2499.9	2537.8	2624.9	2465.8
35°	3228.8	3219.3	3118.0	2954.3	2788.6	2753.6	2717.6	2668.4	2729.0	2864.4	2663.7
37.5°	3433.3	3425.7	3301.7	3127.5	2977.9	2954.3	2924.0	2889.9	2987.4	3165.4	2931.6
40°	3661.4	3646.2	3490.1	3315.9	3198.5	3187.1	3171.1	3161.6	3318.7	3583.8	3270.4
42.5°	3919.8	3890.5	3688.8	3523.2	3438.9	3448.4	3439.9	3477.7	3718.2	4066.5	3673.7
45°	4215.1	4156.4	3886.7	3743.7	3704.9	3742.8	3760.8	3857.3	4190.5	4624.1	4124.3
47.5°	4491.5	4415.8	4103.4	3983.2	4005.0	4070.3	4121.4	4291.8	4708.3	5175.0	4584.3
50°	4746.2	4661.0	4335.3	4231.2	4337.2	4430.0	4536.0	4776.5	5259.2	5742.0	5006.5
52.5°	4934.5	4873.0	4567.3	4501.9	4718.7	4841.8	5011.2	5315.1	5815.8	6282.5	5383.2
55°	5080.3	5047.2	4793.5	4812.4	5150.4	5326.4	5531.8	5881.1	6404.6	6767.1	5686.1
57.5°	5248.8	5224.2	5051.9	5187.3	5686.1	5907.6	6149.9	6538.0	6965.0	7194.0	5923.7
60°	5426.8	5426.8	5339.7	5638.8	6356.3	6610.0	6851.4	7153.3	7523.4	7578.3	6020.3
62.5°	5561.2	5596.2	5627.4	6119.7	6992.4	7307.6	7572.7	7862.3	8101.8	7767.7	5793.1
65°	5756.2	5831.0	6007.0	6675.3	7780.0	8192.7	8550.5	8793.8	8570.4	7617.2	5051.9
67.5°	6091.3	6202.0	6576.9	7502.6	8985.9	9604.0	9951.4	9531.1	8478.5	6669.6	3869.6
70°	6393.2	6549.4	7190.2	8552.4	10553.5	11195.2	11035.3	9359.8	7384.3	4889.1	2380.7
72°	6192.5	6362.9	7218.6	9009.6	11391.2	11694.1	10850.7	8294.9	5706.0	2983.6	1173.8
72.5°	6061.0	6238.0	7126.8	8998.2	11413.9	11630.7	10594.2	7871.8	5179.7	2610.7	949.4
75°	5063.3	5214.7	6128.2	7975.0	10058.4	9660.8	8267.5	5094.5	2380.7	843.4	488.4
77.5°	3306.4	3421.9	4225.5	5525.2	7045.4	6663.0	5032.0	2385.4	892.6	512.1	367.3
80°	1661.3	1743.6	2261.4	2905.1	3802.4	3498.6	2322.9	1153.9	597.3	370.1	288.7
82.5°	1155.8	1231.5	1557.1	1483.3	1589.3	1538.2	1092.4	962.7	446.8	233.8	151.5
85°	969.3	1047.9	1288.3	1057.3	865.2	788.5	782.8	909.7	295.3	115.5	127.8
87.5°	845.3	964.6	1063.0	772.4	593.5	523.5	576.5	833.9	93.7	63.4	38.8
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: P197151
 CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-8030

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2153.5	2153.5	2153.5	2153.5	2153.5	2153.5	2153.5	2153.5	2153.5	2153.5	2153.5
2.5°	2111.8	2109.0	2094.8	2073.0	2056.9	2046.5	2026.6	2025.7	2027.6	2010.5	2017.2
5°	2052.2	2040.8	2003.9	1953.7	1913.0	1874.2	1831.6	1817.4	1805.1	1779.6	1782.4
7.5°	1989.7	1969.8	1905.5	1823.1	1744.6	1672.6	1601.6	1566.6	1540.1	1507.0	1507.0
10°	1952.8	1921.6	1823.1	1702.9	1578.0	1472.9	1366.9	1303.4	1257.1	1214.5	1211.6
12.5°	1950.9	1903.6	1766.3	1600.7	1429.3	1281.7	1136.8	1039.3	970.2	920.1	915.3
15°	1966.1	1899.8	1719.0	1505.1	1289.2	1097.1	918.2	794.2	706.2	650.3	644.6
17.5°	1979.3	1895.1	1667.9	1404.7	1152.9	919.1	720.3	591.6	508.3	462.9	458.1
20°	1991.6	1884.6	1602.6	1298.7	1002.4	752.5	563.2	459.1	404.2	378.6	375.8
22.5°	2009.6	1875.2	1534.4	1179.4	854.8	612.4	464.8	390.0	360.6	348.3	346.4
25°	2038.9	1876.1	1468.1	1057.3	719.4	510.2	402.3	355.9	339.8	331.3	331.3
27.5°	2081.5	1887.5	1402.8	933.3	604.9	440.2	365.4	337.9	327.5	320.9	319.0
30°	2144.0	1908.3	1333.7	816.0	514.0	391.9	343.6	326.6	318.1	312.4	311.4
32.5°	2234.9	1945.2	1260.8	709.0	444.9	357.8	327.5	317.1	310.5	305.7	304.8
35°	2370.2	2010.5	1189.9	618.1	395.7	333.2	314.3	305.7	302.0	300.1	299.1
37.5°	2569.0	2115.6	1122.6	547.1	363.5	317.1	301.0	296.3	294.4	294.4	294.4
40°	2818.9	2253.8	1062.1	497.0	345.5	304.8	291.5	287.8	287.8	288.7	288.7
42.5°	3122.8	2427.0	1010.0	462.9	335.1	296.3	284.9	283.0	282.1	282.1	283.0
45°	3475.9	2631.5	977.8	436.4	327.5	291.5	280.2	279.2	275.5	273.6	273.6
47.5°	3830.8	2850.2	975.9	421.2	318.1	285.9	275.5	275.5	267.9	264.1	265.0
50°	4162.1	3046.1	996.8	417.4	312.4	277.3	270.7	271.7	261.3	256.5	255.6
52.5°	4429.1	3195.7	1022.3	422.2	312.4	269.8	262.2	266.9	255.6	249.9	249.0
55°	4635.4	3299.8	1031.8	432.6	316.2	263.2	254.6	262.2	253.7	246.1	246.1
57.5°	4783.1	3332.9	991.1	437.3	321.8	262.2	247.1	261.3	256.5	247.1	247.1
60°	4729.1	3140.8	839.6	419.3	320.9	260.3	241.4	263.2	266.0	255.6	255.6
62.5°	4307.9	2627.7	674.0	378.6	304.8	253.7	234.8	261.3	272.6	268.8	266.9
65°	3507.1	1927.2	522.5	330.4	277.3	239.5	220.6	244.2	257.5	261.3	262.2
67.5°	2471.5	1220.1	406.1	281.1	243.3	218.7	204.5	215.8	220.6	222.4	226.2
70°	1351.7	660.7	322.8	236.6	208.2	197.8	187.4	188.4	186.5	184.6	186.5
72°	678.7	431.6	272.6	205.4	184.6	178.0	173.2	170.4	170.4	167.5	168.5
72.5°	584.0	401.4	263.2	197.8	178.9	173.2	169.4	166.6	165.7	163.8	164.7
75°	389.0	318.1	219.6	165.7	152.4	148.6	150.5	147.7	148.6	146.7	147.7
77.5°	314.3	273.6	186.5	140.1	130.6	124.9	128.7	129.7	131.6	129.7	128.7
80°	263.2	232.9	156.2	115.5	108.9	104.1	106.0	112.6	113.6	107.9	107.0
82.5°	170.4	187.4	123.1	89.9	83.3	81.4	86.1	92.8	94.7	87.1	85.2
85°	142.9	150.5	89.0	61.5	54.9	53.0	62.5	69.1	73.8	66.3	64.4
87.5°	39.8	73.8	43.5	29.3	24.6	24.6	30.3	36.0	42.6	43.5	43.5
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)