

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: P196665

Luminaire Tested: **NAV-AF-03-D-UNV-SL4-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196665
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-SL4-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 800mA 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: 13503.4 lumens
Efficiency: N/A
Efficacy: 108.9 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

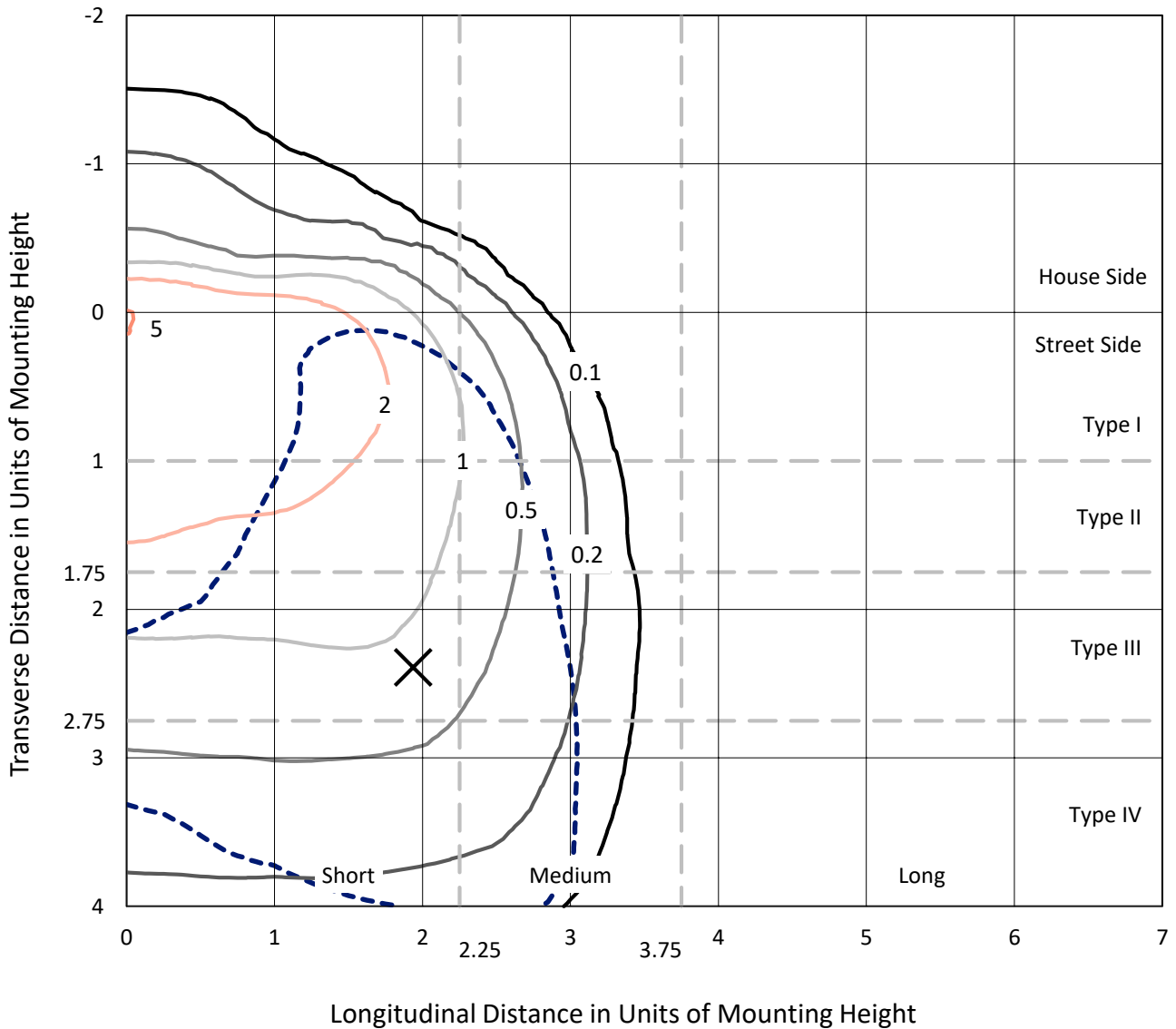
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196665
 CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-7030-800

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

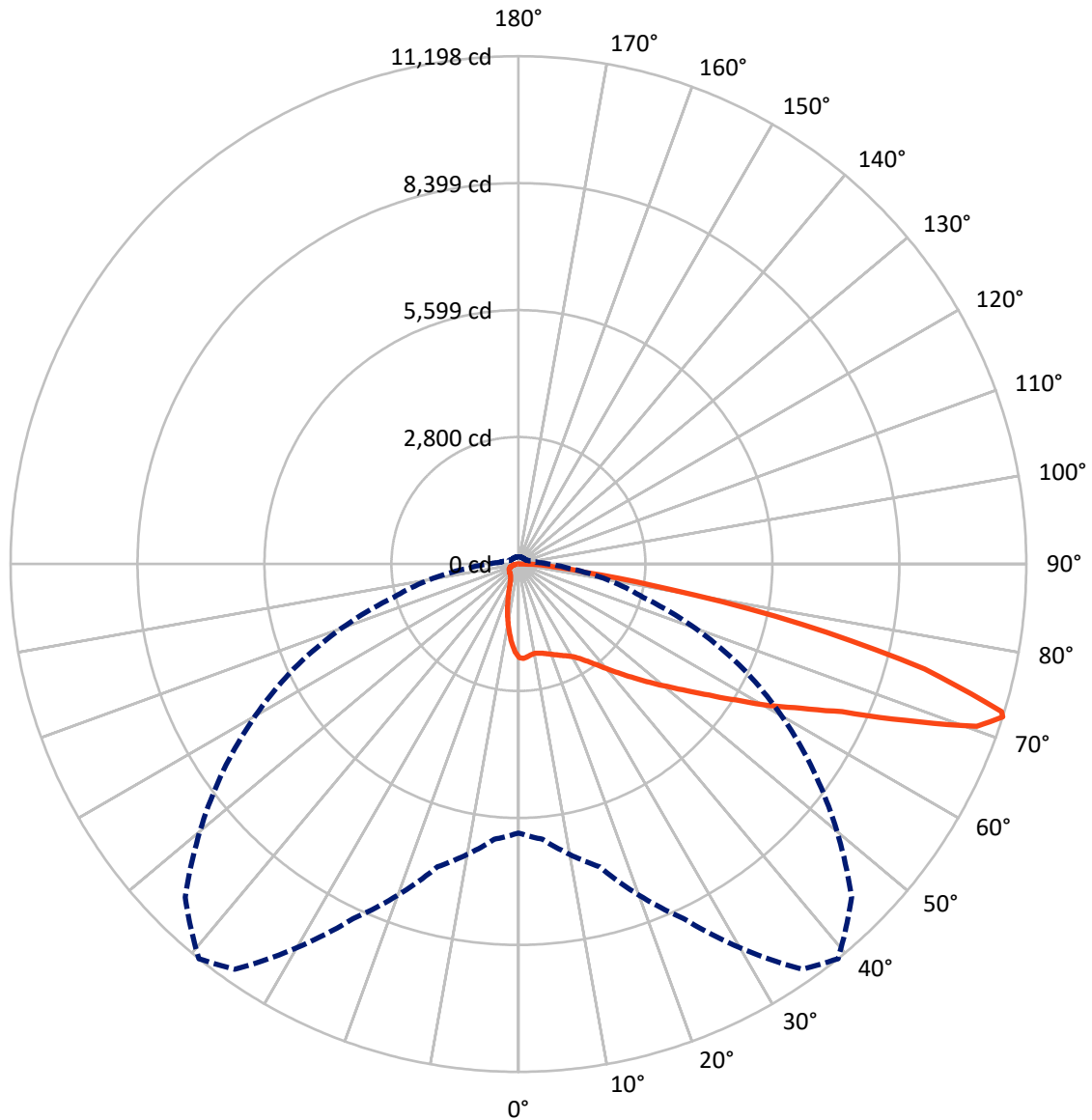


Based on 20 foot mounting height. Maximum calculated value = 5.2 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196665

CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-7030-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196665

CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-7030-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1548.3	0.0	1548.3
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	11955.0	0.0	11955.0
	% Fixture	88.5	0.0	88.5
Total	Lumens	13503.4	0.0	13503.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.2	1.3
10°-20°	445.3	3.3
20°-30°	694.0	5.1
30°-40°	1068.5	7.9
40°-50°	1741.9	12.9
50°-60°	2706.7	20.0
60°-70°	3622.8	26.8
70°-80°	2605.3	19.3
80°-90°	441.7	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°	13503.4	100.0
0°-180°	13503.4	100.0



REPORT NUMBER: P196665

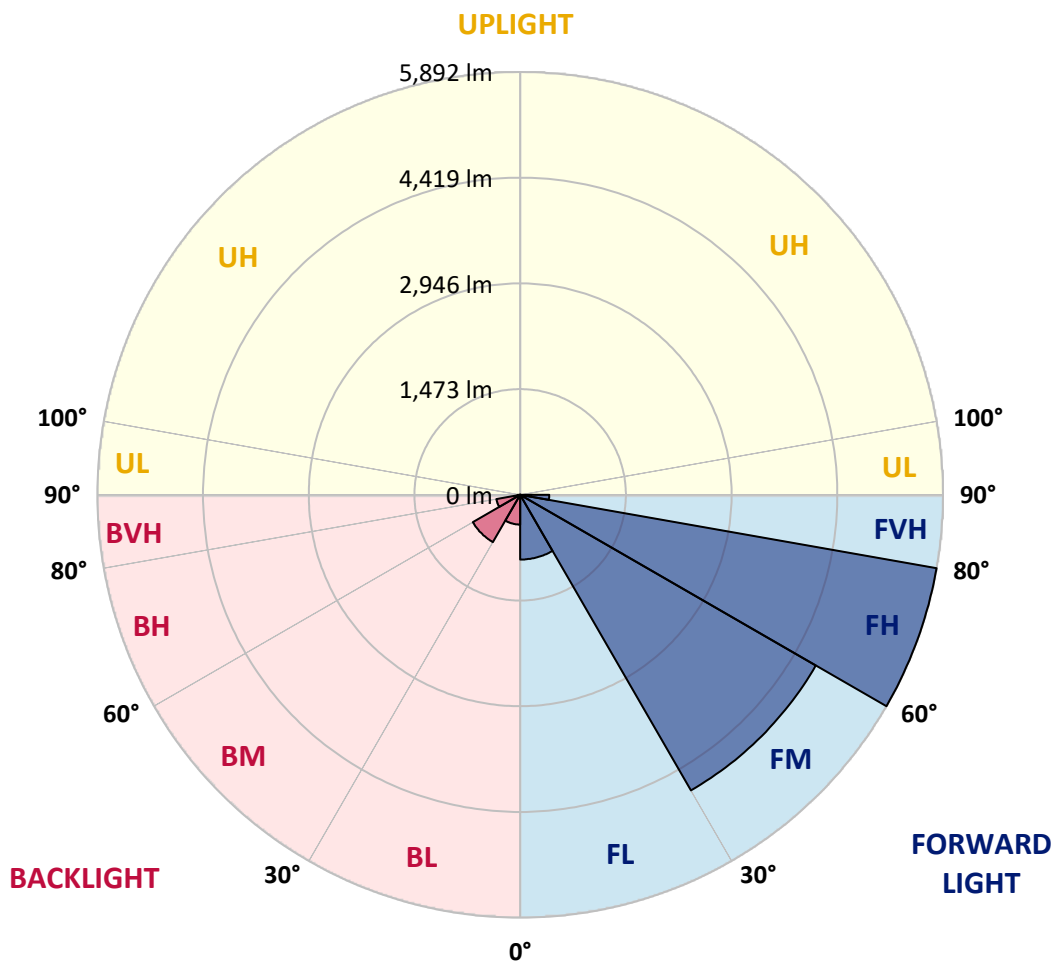
CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-7030-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	902.0	6.7			
FM	(30°-60°)	4756.1	35.2			
FH	(60°-80°)	5891.7	43.6			G3/7500
FVH	(80°-90°)	405.1	3.0			G3/500
BL	(0°-30°)	414.5	3.1	B1/500		
BM	(30°-60°)	760.9	5.6	B1/1000		
BH	(60°-80°)	336.4	2.5	B1/500		G1/500
BVH	(80°-90°)	36.5	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: P196665
 CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-7030-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	2062.2	2062.2	2062.2	2062.2	2062.2	2062.2	2062.2	2062.2	2062.2	2062.2	2062.2
2.5°	2106.6	2107.5	2104.8	2096.6	2089.4	2085.8	2079.4	2068.5	2054.1	2044.0	2035.9
5°	2086.7	2089.4	2087.6	2074.0	2061.2	2054.1	2044.0	2028.6	2009.6	2001.5	1982.4
7.5°	2071.2	2073.0	2067.6	2052.2	2027.8	2018.7	2000.5	1980.7	1963.4	1951.6	1929.0
10°	2060.4	2062.2	2057.7	2042.3	2015.1	2004.2	1982.4	1960.6	1938.0	1923.5	1898.2
12.5°	2045.0	2048.6	2048.6	2041.4	2023.3	2016.0	1994.2	1970.6	1949.8	1934.4	1902.6
15°	2042.3	2046.8	2054.9	2054.1	2048.6	2043.1	2026.0	2002.4	1984.2	1966.1	1927.2
17.5°	2064.9	2075.0	2091.2	2096.6	2093.0	2081.3	2061.2	2039.6	2019.5	2002.4	1954.3
20°	2122.1	2127.5	2152.0	2162.8	2144.6	2127.5	2101.2	2073.0	2054.9	2041.4	1979.7
22.5°	2208.1	2215.4	2235.3	2236.2	2198.2	2177.3	2143.7	2109.4	2092.1	2086.7	2014.2
25°	2345.9	2344.1	2349.5	2326.9	2258.0	2233.5	2192.8	2152.9	2141.1	2152.0	2064.9
27.5°	2510.9	2506.4	2489.2	2430.3	2326.0	2294.2	2245.3	2210.0	2210.0	2235.3	2133.9
30°	2701.2	2696.7	2640.6	2541.7	2406.7	2370.4	2318.7	2281.6	2300.6	2349.5	2227.1
32.5°	2902.5	2886.2	2807.3	2675.0	2521.8	2482.0	2432.0	2394.0	2430.3	2513.6	2361.3
35°	3091.9	3082.9	2985.8	2829.0	2670.4	2636.9	2602.4	2555.3	2613.4	2743.0	2550.7
37.5°	3287.7	3280.5	3161.8	2994.9	2851.7	2829.0	2800.1	2767.4	2860.9	3031.2	2807.3
40°	3506.2	3491.7	3342.1	3175.3	3063.0	3052.0	3036.7	3027.6	3178.1	3431.9	3131.8
42.5°	3753.7	3725.5	3532.5	3373.8	3293.2	3302.3	3294.0	3330.3	3560.5	3894.2	3518.0
45°	4036.5	3980.4	3721.9	3585.1	3547.8	3584.1	3601.4	3693.8	4012.9	4428.1	3949.5
47.5°	4301.2	4228.7	3929.5	3814.3	3835.2	3897.9	3946.8	4109.9	4508.8	4955.7	4390.0
50°	4544.9	4463.5	4151.7	4051.9	4153.4	4242.2	4343.8	4574.0	5036.3	5498.6	4794.3
52.5°	4725.4	4666.5	4373.6	4311.2	4518.8	4636.5	4798.7	5089.9	5569.3	6016.3	5155.1
55°	4865.0	4833.3	4590.3	4608.4	4932.1	5100.7	5297.3	5631.9	6133.2	6480.2	5445.2
57.5°	5026.4	5002.8	4837.8	4967.5	5445.2	5657.2	5889.3	6261.0	6669.7	6889.2	5672.6
60°	5196.8	5196.8	5113.4	5399.8	6087.0	6329.8	6561.0	6850.1	7204.5	7257.1	5765.1
62.5°	5325.6	5359.0	5388.8	5860.3	6696.1	6997.9	7251.7	7529.0	7758.4	7438.5	5547.5
65°	5512.2	5583.8	5752.4	6392.4	7450.2	7845.5	8188.1	8421.0	8207.1	7294.2	4837.8
67.5°	5833.2	5939.2	6298.1	7184.7	8605.0	9197.0	9529.7	9127.2	8119.2	6387.0	3705.6
70°	6122.3	6271.8	6885.5	8189.8	10106.2	10720.7	10567.5	8963.1	7071.4	4681.9	2279.8
72°	5930.0	6093.3	6912.8	8627.7	10908.3	11198.4	10390.8	7943.3	5464.2	2857.1	1124.1
72.5°	5804.1	5973.6	6824.8	8616.8	10930.2	11137.7	10145.2	7538.2	4960.2	2500.1	909.1
75°	4848.7	4993.7	5868.5	7637.0	9632.1	9251.4	7917.0	4878.5	2279.8	807.7	467.7
77.5°	3166.3	3276.9	4046.4	5291.0	6746.8	6380.6	4818.8	2284.3	854.9	490.3	351.7
80°	1590.9	1669.7	2165.5	2782.0	3641.3	3350.3	2224.4	1104.9	572.0	354.4	276.4
82.5°	1106.8	1179.4	1491.2	1420.5	1522.0	1473.1	1046.0	921.8	427.9	223.9	145.0
85°	928.2	1003.4	1233.6	1012.5	828.5	755.1	749.6	871.2	282.8	110.6	122.4
87.5°	809.5	923.7	1018.0	739.6	568.3	501.3	552.1	798.5	89.7	60.7	37.1
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: P196665

CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-7030-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2062.2	2062.2	2062.2	2062.2	2062.2	2062.2	2062.2	2062.2	2062.2	2062.2	2062.2
2.5°	2022.3	2019.5	2006.0	1985.1	1969.7	1959.8	1940.8	1939.8	1941.6	1925.3	1931.7
5°	1965.2	1954.3	1919.0	1870.9	1832.0	1794.8	1754.0	1740.4	1728.6	1704.1	1706.8
7.5°	1905.4	1886.4	1824.7	1745.9	1670.6	1601.7	1533.8	1500.2	1474.8	1443.1	1443.1
10°	1870.1	1840.2	1745.9	1630.7	1511.0	1410.4	1308.9	1248.2	1203.8	1162.9	1160.3
12.5°	1868.3	1822.9	1691.5	1532.8	1368.8	1227.3	1088.7	995.3	929.1	881.0	876.6
15°	1882.7	1819.2	1646.1	1441.2	1234.6	1050.6	879.3	760.6	676.2	622.8	617.4
17.5°	1895.4	1814.7	1597.2	1345.2	1104.1	880.2	689.9	566.5	486.7	443.3	438.6
20°	1907.2	1804.8	1534.6	1243.7	960.0	720.7	539.3	439.7	387.1	362.6	359.9
22.5°	1924.4	1795.6	1469.4	1129.4	818.6	586.5	445.1	373.4	345.4	333.6	331.7
25°	1952.6	1796.7	1405.9	1012.5	688.9	488.6	385.2	340.8	325.4	317.3	317.3
27.5°	1993.3	1807.4	1343.4	893.7	579.2	421.5	349.8	323.6	313.7	307.2	305.5
30°	2053.1	1827.5	1277.2	781.4	492.2	375.3	329.1	312.7	304.7	299.2	298.3
32.5°	2140.2	1862.8	1207.5	678.9	426.0	342.6	313.7	303.6	297.3	292.9	291.8
35°	2269.8	1925.3	1139.5	591.9	378.9	319.0	300.9	292.9	289.2	287.4	286.5
37.5°	2460.2	2026.0	1075.1	523.9	348.1	303.6	288.2	283.7	281.9	281.9	281.9
40°	2699.5	2158.3	1017.1	476.0	330.8	291.8	279.1	275.6	275.6	276.4	276.4
42.5°	2990.4	2324.2	967.2	443.3	320.9	283.7	272.8	271.1	270.1	270.1	271.1
45°	3328.6	2519.9	936.4	417.9	313.7	279.1	268.3	267.3	263.8	262.0	262.0
47.5°	3668.5	2729.4	934.6	403.3	304.7	273.8	263.8	263.8	256.5	252.9	253.8
50°	3985.7	2917.0	954.5	399.8	299.2	265.6	259.3	260.1	250.2	245.7	244.7
52.5°	4241.3	3060.3	979.0	404.3	299.2	258.3	251.1	255.6	244.7	239.3	238.4
55°	4438.9	3159.9	988.0	414.2	302.7	252.0	243.8	251.1	242.9	235.7	235.7
57.5°	4580.3	3191.7	949.0	418.8	308.2	251.1	236.5	250.2	245.7	236.5	236.5
60°	4528.7	3007.7	804.0	401.5	307.2	249.3	231.2	252.0	254.7	244.7	244.7
62.5°	4125.3	2516.3	645.4	362.6	291.8	242.9	224.8	250.2	261.0	257.5	255.6
65°	3358.4	1845.6	500.4	316.3	265.6	229.3	211.2	233.9	246.6	250.2	251.1
67.5°	2366.8	1168.4	388.9	269.3	232.9	209.3	195.8	206.7	211.2	213.0	216.7
70°	1294.4	632.7	309.1	226.6	199.4	189.4	179.5	180.4	178.5	176.8	178.5
72°	650.0	413.3	261.0	196.6	176.8	170.5	165.8	163.2	163.2	160.4	161.3
72.5°	559.3	384.4	252.0	189.4	171.3	165.8	162.2	159.5	158.7	156.8	157.8
75°	372.6	304.7	210.4	158.7	146.0	142.4	144.1	141.4	142.4	140.5	141.4
77.5°	300.9	262.0	178.5	134.2	125.1	119.6	123.3	124.2	125.9	124.2	123.3
80°	252.0	223.0	149.5	110.6	104.3	99.8	101.5	107.8	108.8	103.4	102.3
82.5°	163.2	179.5	117.9	86.1	79.8	77.9	82.5	88.8	90.6	83.4	81.6
85°	136.9	144.1	85.2	58.9	52.6	50.8	59.9	66.2	70.7	63.5	61.6
87.5°	38.0	70.7	41.7	28.1	23.6	23.6	29.0	34.4	40.8	41.7	41.7
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)