

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: P196676

Luminaire Tested: **NAV-AF-02-D-UNV-SL4-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196676
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-02-D-UNV-SL4-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 1200mA 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: 12328.8 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G3

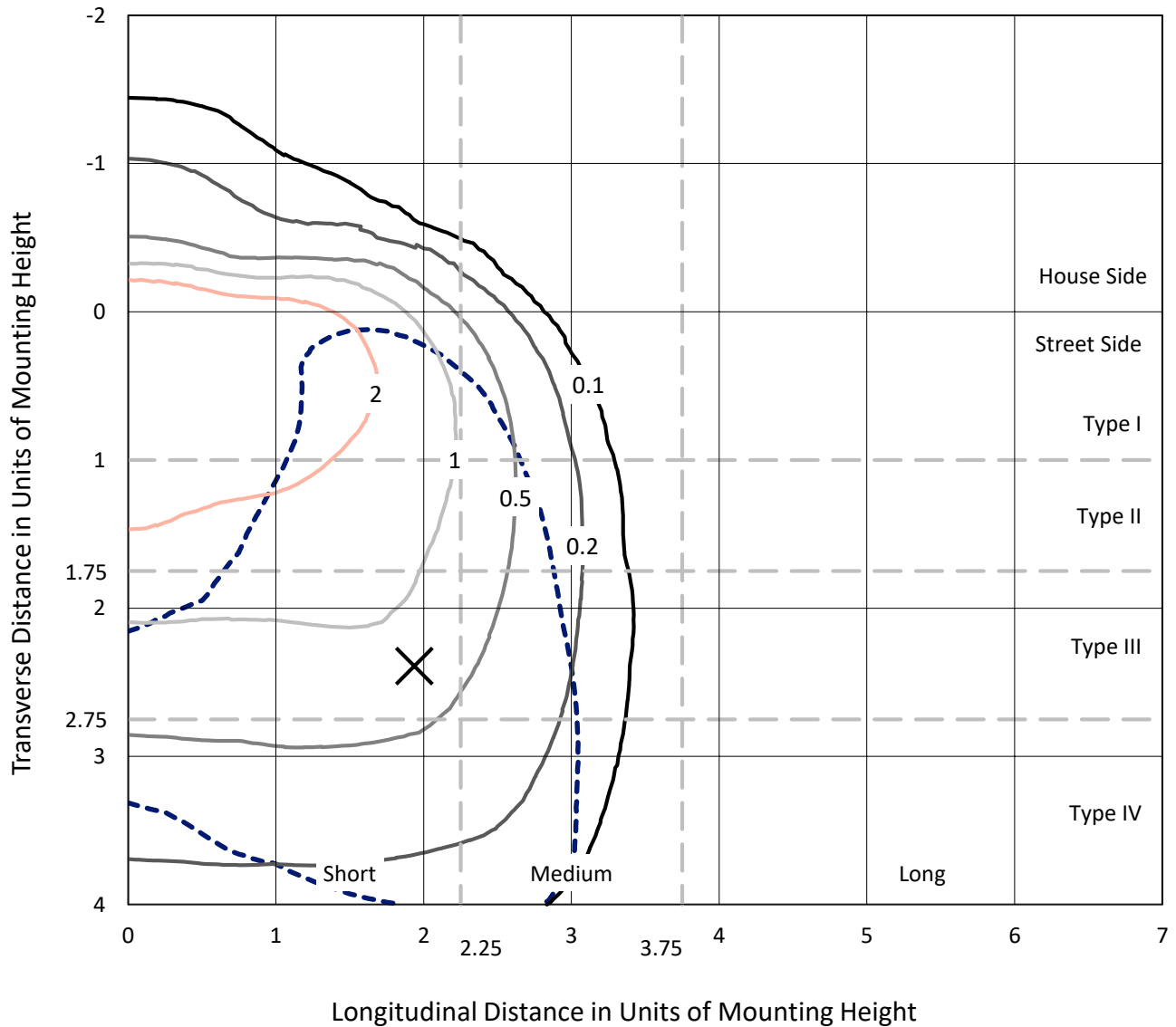
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196676
 CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-1200

Iso-Footcandle Lines of Horizontal Illumination

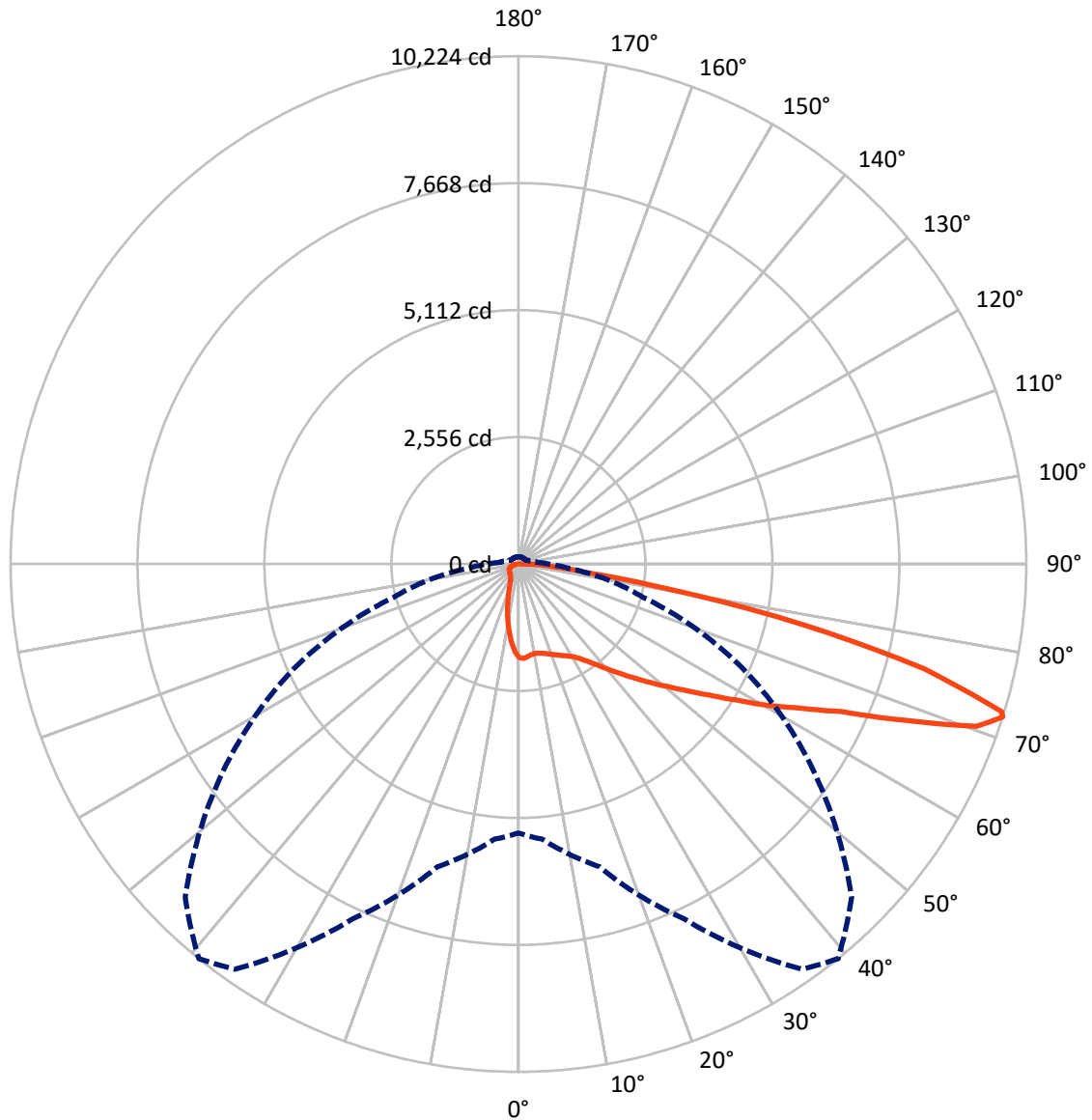
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.7 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196676
CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-1200

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196676

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1413.7	0.0	1413.7
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	10915.2	0.0	10915.2
	% Fixture	88.5	0.0	88.5
Total	Lumens	12328.8	0.0	12328.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.8	1.3
10°-20°	406.6	3.3
20°-30°	633.6	5.1
30°-40°	975.6	7.9
40°-50°	1590.4	12.9
50°-60°	2471.3	20.0
60°-70°	3307.7	26.8
70°-80°	2378.7	19.3
80°-90°	403.2	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°	12328.8	100.0
0°-180°	12328.8	100.0



REPORT NUMBER: P196676

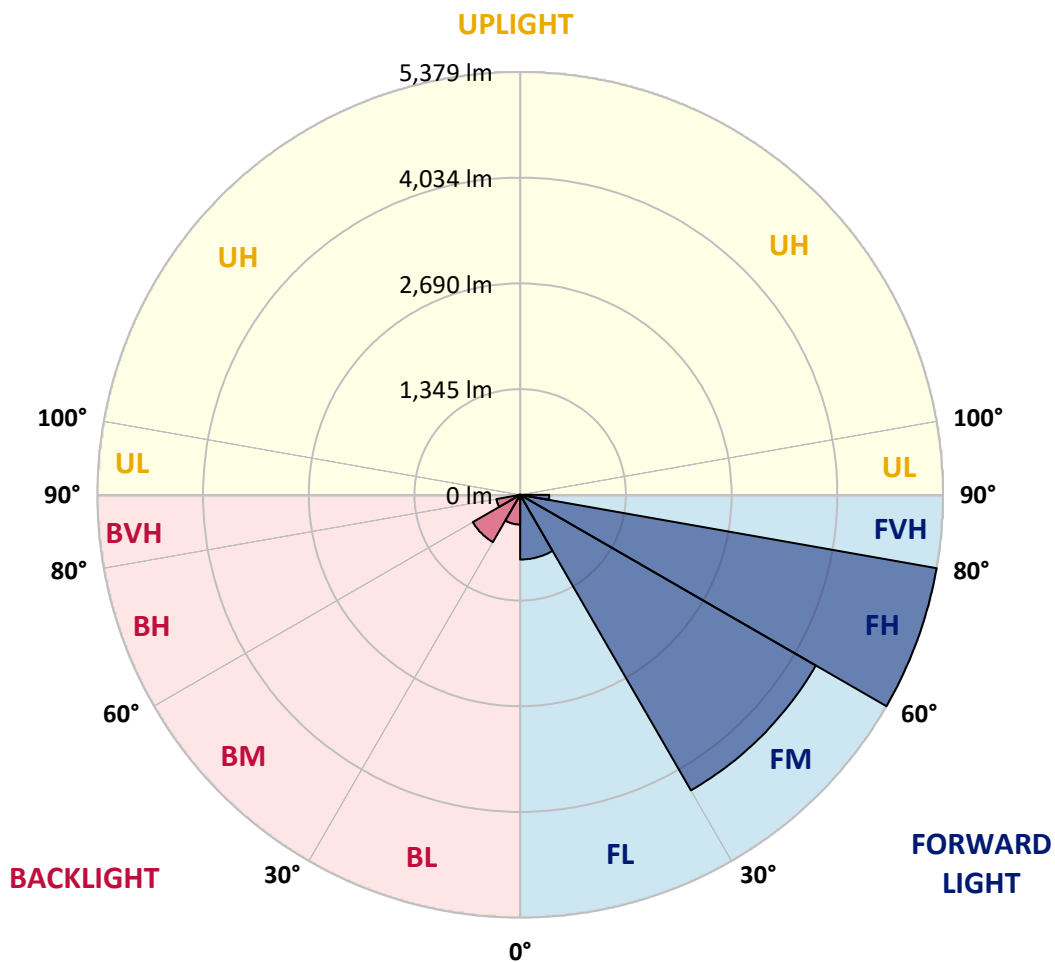
CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	823.5	6.7			
FM	(30°-60°)	4342.4	35.2			
FH	(60°-80°)	5379.3	43.6			G3/7500
FVH	(80°-90°)	369.9	3.0			G3/500
BL	(0°-30°)	378.4	3.1	B1/500		
BM	(30°-60°)	694.8	5.6	B1/1000		
BH	(60°-80°)	307.1	2.5	B1/500		G1/500
BVH	(80°-90°)	33.3	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: P196676

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	1882.9	1882.9	1882.9	1882.9	1882.9	1882.9	1882.9	1882.9	1882.9	1882.9	1882.9
2.5°	1923.4	1924.2	1921.8	1914.3	1907.6	1904.4	1898.6	1888.6	1875.4	1866.2	1858.8
5°	1905.2	1907.6	1906.0	1893.6	1882.0	1875.4	1866.2	1852.2	1834.8	1827.4	1810.0
7.5°	1891.1	1892.8	1887.8	1873.7	1851.4	1843.1	1826.6	1808.4	1792.6	1781.9	1761.2
10°	1881.2	1882.9	1878.7	1864.6	1839.8	1829.9	1810.0	1790.1	1769.5	1756.3	1733.1
12.5°	1867.1	1870.4	1870.4	1863.8	1847.2	1840.6	1820.8	1799.3	1780.2	1766.1	1737.2
15°	1864.6	1868.8	1876.2	1875.4	1870.4	1865.5	1849.8	1828.2	1811.6	1795.1	1759.5
17.5°	1885.3	1894.4	1909.3	1914.3	1911.0	1900.2	1882.0	1862.1	1844.0	1828.2	1784.3
20°	1937.5	1942.4	1964.8	1974.7	1958.2	1942.4	1918.4	1892.8	1876.2	1863.8	1807.4
22.5°	2016.1	2022.7	2040.9	2041.7	2007.0	1988.0	1957.3	1925.9	1910.2	1905.2	1839.0
25°	2141.9	2140.2	2145.2	2124.5	2061.6	2039.3	2001.9	1965.6	1954.8	1964.8	1885.3
27.5°	2292.5	2288.3	2272.6	2218.8	2123.7	2094.7	2050.0	2017.7	2017.7	2040.9	1948.2
30°	2466.3	2462.1	2410.8	2320.6	2197.3	2164.2	2117.0	2083.1	2100.5	2145.2	2033.5
32.5°	2650.1	2635.2	2563.1	2442.3	2302.4	2266.0	2220.4	2185.7	2218.8	2295.0	2155.9
35°	2823.0	2814.7	2726.1	2583.0	2438.1	2407.5	2376.1	2333.0	2386.0	2504.3	2329.0
37.5°	3001.8	2995.2	2886.7	2734.4	2603.6	2583.0	2556.5	2526.7	2612.0	2767.5	2563.1
40°	3201.2	3187.9	3051.4	2899.2	2796.5	2786.5	2772.6	2764.3	2901.6	3133.3	2859.5
42.5°	3427.1	3401.5	3225.3	3080.3	3006.7	3015.0	3007.6	3040.6	3250.9	3555.4	3212.0
45°	3685.5	3634.1	3398.2	3273.2	3239.3	3272.5	3288.1	3372.5	3663.9	4042.9	3605.9
47.5°	3927.0	3860.7	3587.7	3482.6	3501.6	3558.8	3603.5	3752.4	4116.6	4524.5	4008.1
50°	4149.6	4075.2	3790.5	3699.4	3792.2	3873.2	3965.9	4176.1	4598.2	5020.4	4377.3
52.5°	4314.3	4260.6	3993.2	3936.2	4125.6	4233.2	4381.4	4647.2	5084.9	5492.9	4706.7
55°	4441.8	4412.9	4191.0	4207.6	4503.1	4656.9	4836.6	5142.0	5599.6	5916.6	4971.6
57.5°	4589.1	4567.6	4417.1	4535.4	4971.6	5165.1	5377.0	5716.3	6089.6	6289.9	5179.2
60°	4744.7	4744.7	4668.6	4930.1	5557.5	5779.3	5990.2	6254.3	6578.0	6625.9	5263.7
62.5°	4862.2	4892.8	4920.2	5350.5	6113.6	6389.3	6620.9	6874.1	7083.6	6791.4	5065.0
65°	5032.7	5098.1	5252.1	5836.4	6802.2	7163.0	7475.8	7688.6	7493.2	6659.9	4417.1
67.5°	5325.8	5422.5	5750.4	6559.7	7856.7	8397.0	8700.8	8333.3	7413.0	5831.3	3383.3
70°	5589.7	5726.3	6286.6	7477.4	9227.2	9788.2	9648.3	8183.5	6456.2	4274.7	2081.5
72°	5414.3	5563.3	6311.5	7877.3	9959.5	10224.4	9487.0	7252.4	4988.9	2608.7	1026.3
72.5°	5299.3	5454.0	6231.2	7867.3	9979.4	10169.0	9262.7	6882.5	4528.7	2282.5	830.2
75°	4426.9	4559.4	5358.0	6972.7	8794.3	8446.8	7228.4	4454.3	2081.5	737.4	427.1
77.5°	2890.9	2991.8	3694.5	4830.8	6159.9	5825.6	4399.7	2085.6	780.4	447.8	321.1
80°	1452.5	1524.5	1977.1	2540.0	3324.5	3058.8	2031.0	1008.9	522.3	323.6	252.4
82.5°	1010.5	1076.8	1361.5	1296.9	1389.6	1344.9	955.0	841.8	390.6	204.5	132.4
85°	847.6	916.1	1126.4	924.5	756.4	689.4	684.4	795.3	258.2	100.9	111.8
87.5°	739.0	843.4	929.5	675.3	518.9	457.7	504.0	729.1	82.0	55.5	34.0
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: P196676

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-1200

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1882.9	1882.9	1882.9	1882.9	1882.9	1882.9	1882.9	1882.9	1882.9	1882.9	1882.9
2.5°	1846.4	1844.0	1831.5	1812.5	1798.4	1789.3	1771.9	1771.1	1772.7	1757.9	1763.7
5°	1794.2	1784.3	1752.1	1708.2	1672.6	1638.7	1601.4	1589.0	1578.2	1556.0	1558.4
7.5°	1739.6	1722.3	1665.9	1594.0	1525.3	1462.4	1400.3	1369.7	1346.5	1317.5	1317.5
10°	1707.4	1680.1	1594.0	1488.8	1379.6	1287.7	1195.1	1139.7	1099.0	1061.8	1059.4
12.5°	1705.7	1664.3	1544.4	1399.5	1249.7	1120.6	993.9	908.7	848.3	804.4	800.4
15°	1718.9	1661.1	1503.0	1315.9	1127.2	959.2	802.8	694.4	617.5	568.5	563.6
17.5°	1730.5	1656.9	1458.3	1228.2	1008.0	803.6	629.8	517.3	444.4	404.7	400.6
20°	1741.3	1647.7	1401.1	1135.5	876.5	658.0	492.4	401.4	353.4	331.0	328.6
22.5°	1757.0	1639.6	1341.6	1031.2	747.4	535.5	406.3	341.0	315.3	304.7	302.8
25°	1782.7	1640.3	1283.7	924.5	629.0	446.1	351.7	311.2	297.0	289.6	289.6
27.5°	1819.9	1650.3	1226.6	816.0	528.9	384.8	319.5	295.4	286.4	280.6	278.9
30°	1874.6	1668.5	1166.2	713.4	449.4	342.6	300.5	285.5	278.1	273.1	272.3
32.5°	1954.0	1700.7	1102.4	619.9	389.0	312.8	286.4	277.3	271.5	267.3	266.5
35°	2072.3	1757.9	1040.3	540.4	346.0	291.2	274.8	267.3	264.0	262.3	261.5
37.5°	2246.2	1849.8	981.5	478.3	317.8	277.3	263.2	259.1	257.5	257.5	257.5
40°	2464.7	1970.6	928.6	434.6	302.1	266.5	254.9	251.7	251.7	252.4	252.4
42.5°	2730.3	2122.1	883.1	404.7	293.0	259.1	249.1	247.5	246.6	246.6	247.5
45°	3039.0	2300.8	855.0	381.6	286.4	254.9	245.0	244.2	240.8	239.2	239.2
47.5°	3349.4	2491.9	853.4	368.3	278.1	249.9	240.8	240.8	234.3	230.9	231.7
50°	3639.0	2663.3	871.5	364.9	273.1	242.4	236.6	237.5	228.5	224.3	223.4
52.5°	3872.4	2794.1	893.8	369.1	273.1	235.9	229.2	233.4	223.4	218.5	217.7
55°	4052.9	2885.1	902.2	378.2	276.4	230.1	222.7	229.2	221.8	215.1	215.1
57.5°	4182.0	2914.1	866.5	382.4	281.4	229.2	216.0	228.5	224.3	216.0	216.0
60°	4134.8	2746.0	734.1	366.7	280.6	227.6	211.1	230.1	232.6	223.4	223.4
62.5°	3766.5	2297.5	589.2	331.0	266.5	221.8	205.3	228.5	238.4	235.0	233.4
65°	3066.4	1685.0	456.8	288.9	242.4	209.3	192.9	213.5	225.1	228.5	229.2
67.5°	2160.9	1066.8	355.1	245.9	212.7	191.2	178.7	188.7	192.9	194.5	197.8
70°	1181.8	577.7	282.2	206.9	182.0	172.9	163.9	164.7	163.1	161.3	163.1
72°	593.4	377.4	238.4	179.6	161.3	155.5	151.5	148.9	148.9	146.5	147.3
72.5°	510.7	350.9	230.1	172.9	156.5	151.5	148.1	145.7	144.9	143.1	144.0
75°	340.2	278.1	192.0	144.9	133.3	129.9	131.5	129.2	129.9	128.3	129.2
77.5°	274.8	239.2	163.1	122.5	114.1	109.3	112.5	113.4	115.0	113.4	112.5
80°	230.1	203.5	136.6	100.9	95.2	91.0	92.7	98.5	99.3	94.4	93.5
82.5°	148.9	163.9	107.6	78.6	72.8	71.1	75.3	81.1	82.7	76.2	74.6
85°	125.0	131.5	77.8	53.7	48.0	46.3	54.6	60.4	64.6	57.9	56.3
87.5°	34.8	64.6	38.0	25.6	21.6	21.6	26.4	31.4	37.2	38.0	38.0
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)