

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: P270522

Luminaire Tested: **NAV-AF-04-D-UNV-SL4-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270522  
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-04-D-UNV-SL4-7027-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 615mA 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: 13323.6 lumens  
Efficiency: N/A  
Efficacy: 103.3 lumens/watt  
Luminous Opening: Rectangular (W 1' 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

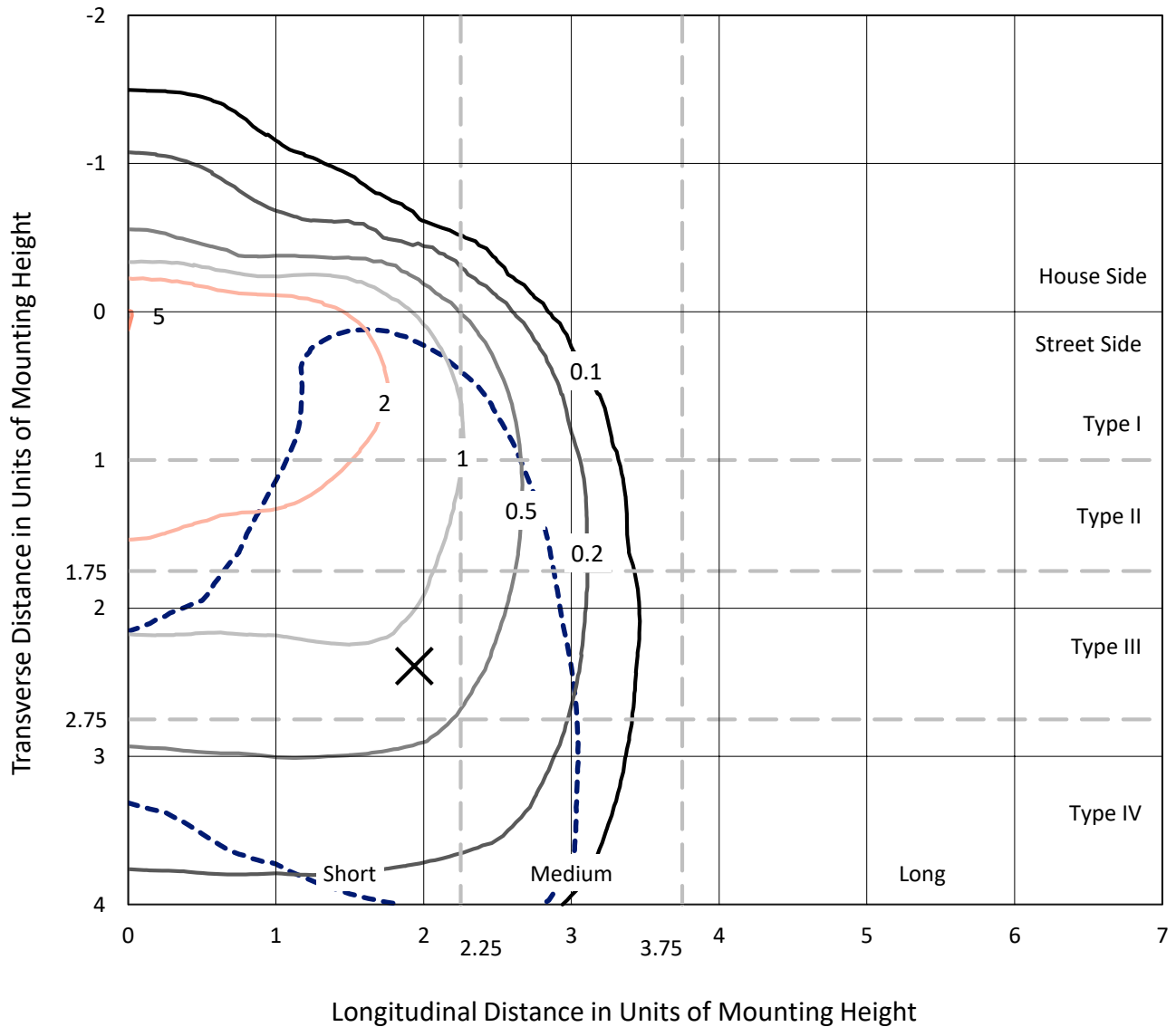


REPORT NUMBER: P270522

CATALOG NUMBER: NAV-AF-04-D-UNV-SL4-7027-600

### Iso-Footcandle Lines of Horizontal Illumination

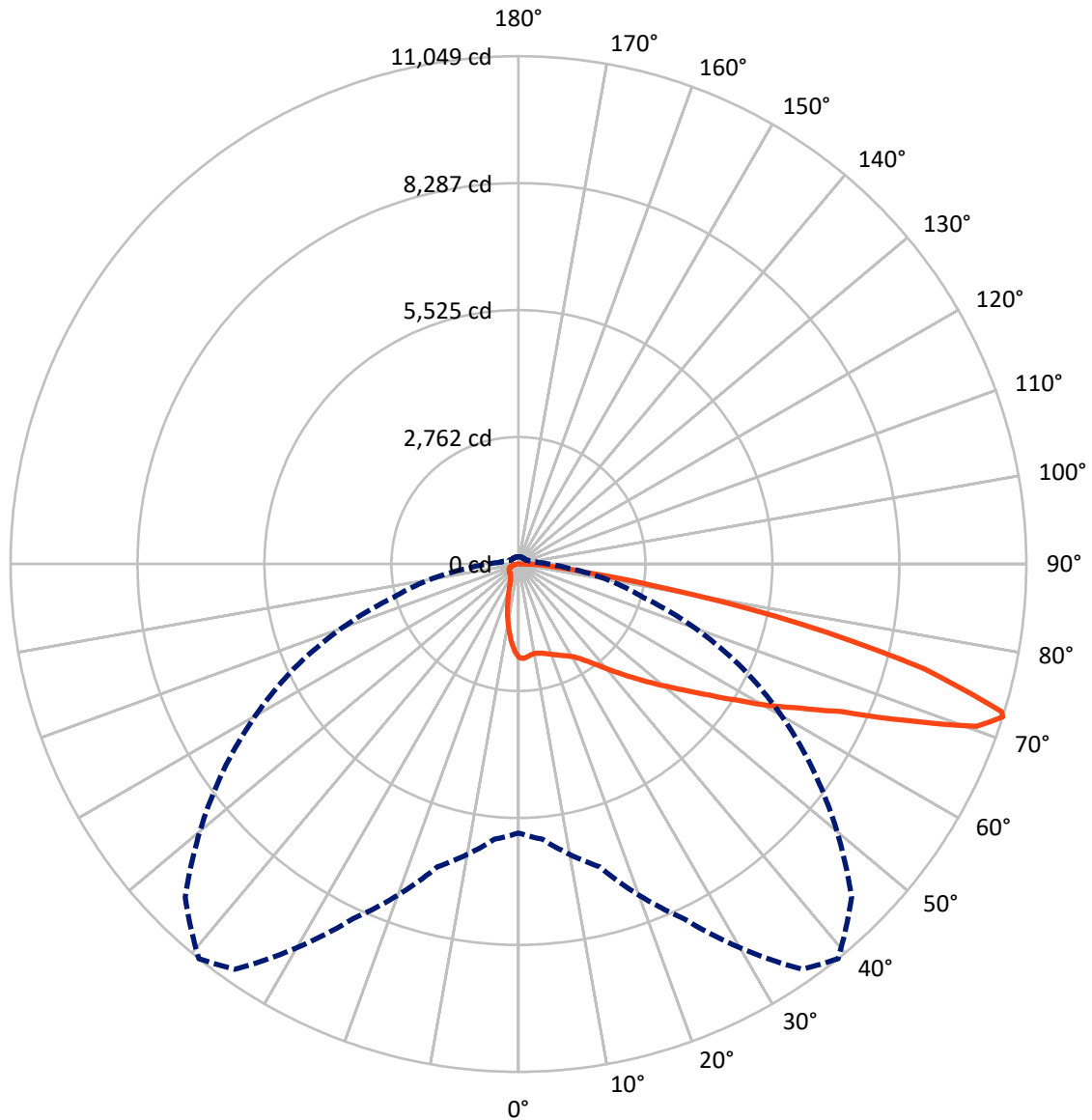
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.1 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270522  
CATALOG NUMBER: NAV-AF-04-D-UNV-SL4-7027-600

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P270522

CATALOG NUMBER: NAV-AF-04-D-UNV-SL4-7027-600

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1527.7	0.0	1527.7
	% Fixture	11.5	0.0	11.5
<b>Street Side</b>	Lumens	11795.9	0.0	11795.9
	% Fixture	88.5	0.0	88.5
<b>Total</b>	Lumens	13323.6	0.0	13323.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.9	1.3
10°-20°	439.4	3.3
20°-30°	684.7	5.1
30°-40°	1054.3	7.9
40°-50°	1718.7	12.9
50°-60°	2670.7	20.0
60°-70°	3574.6	26.8
70°-80°	2570.6	19.3
80°-90°	435.8	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°	13323.6	100.0
0°-180°	13323.6	100.0



REPORT NUMBER: P270522

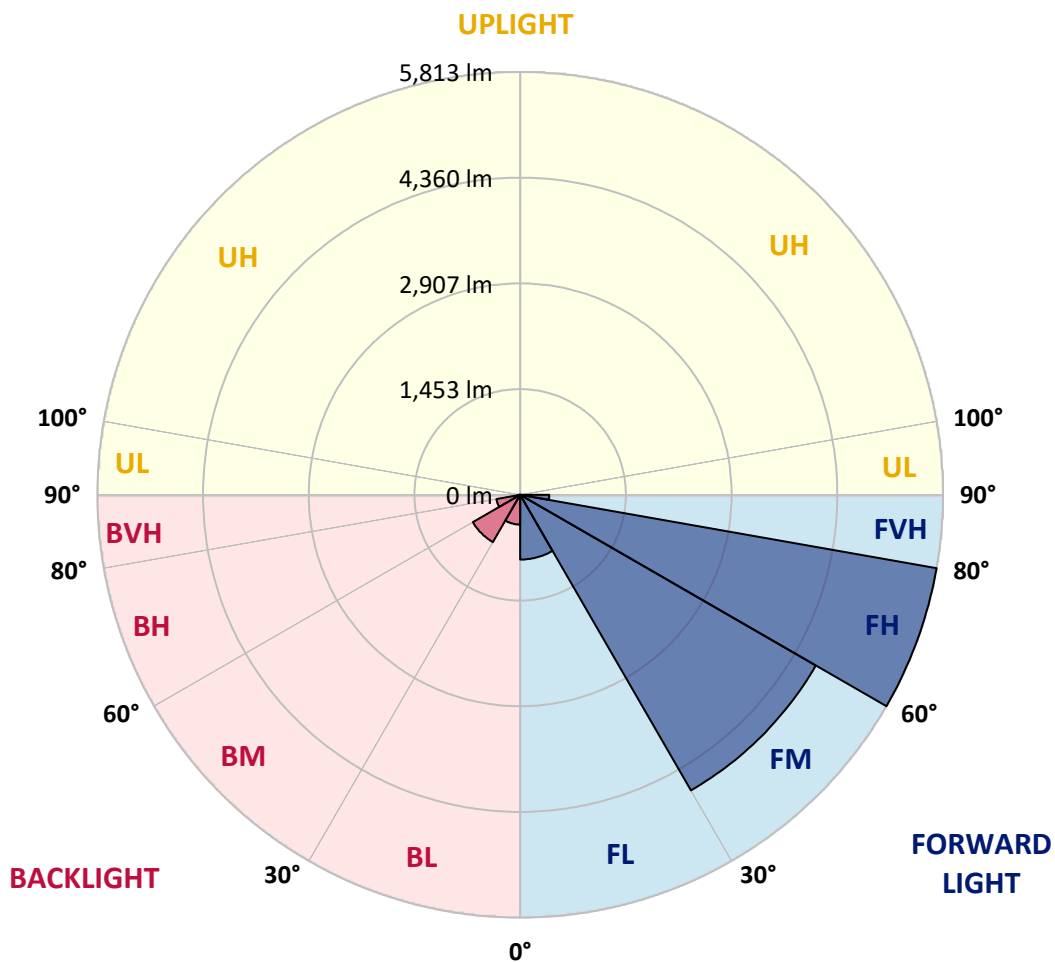
CATALOG NUMBER: NAV-AF-04-D-UNV-SL4-7027-600

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	890.0	6.7			
FM	(30°-60°)	4692.8	35.2			
FH	(60°-80°)	5813.3	43.6			G3/7500
FVH	(80°-90°)	399.8	3.0			G3/500
BL	(0°-30°)	409.0	3.1	B1/500		
BM	(30°-60°)	750.8	5.6	B1/1000		
BH	(60°-80°)	331.9	2.5	B1/500		G1/500
BVH	(80°-90°)	36.0	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: P270522

CATALOG NUMBER: NAV-AF-04-D-UNV-SL4-7027-600

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	2034.8	2034.8	2034.8	2034.8	2034.8	2034.8	2034.8	2034.8	2034.8	2034.8	2034.8
2.5°	2078.6	2079.4	2076.8	2068.7	2061.6	2057.9	2051.8	2040.9	2026.7	2016.9	2008.8
5°	2058.9	2061.6	2059.9	2046.3	2033.9	2026.7	2016.9	2001.7	1982.9	1974.8	1956.1
7.5°	2043.7	2045.5	2040.1	2024.9	2000.7	1991.8	1973.9	1954.3	1937.3	1925.6	1903.2
10°	2033.0	2034.8	2030.3	2015.1	1988.3	1977.4	1956.1	1934.6	1912.2	1897.8	1872.8
12.5°	2017.8	2021.4	2021.4	2014.2	1996.4	1989.1	1967.6	1944.4	1923.8	1908.7	1877.4
15°	2015.1	2019.6	2027.7	2026.7	2021.4	2015.9	1999.0	1975.7	1957.9	1940.0	1901.5
17.5°	2037.4	2047.2	2063.3	2068.7	2065.2	2053.5	2033.9	2012.5	1992.7	1975.7	1928.3
20°	2093.8	2099.2	2123.4	2134.1	2116.1	2099.2	2073.2	2045.5	2027.7	2014.2	1953.4
22.5°	2178.7	2185.9	2205.6	2206.4	2168.9	2148.3	2115.2	2081.3	2064.2	2058.9	1987.3
25°	2314.8	2313.0	2318.3	2295.9	2227.9	2203.8	2163.6	2124.2	2112.5	2123.4	2037.4
27.5°	2477.4	2473.0	2456.1	2397.8	2295.0	2263.6	2215.4	2180.5	2180.5	2205.6	2105.4
30°	2665.4	2660.8	2605.4	2507.9	2374.6	2338.8	2287.9	2251.2	2269.9	2318.3	2197.6
32.5°	2863.8	2847.7	2770.0	2639.4	2488.2	2448.9	2399.6	2362.2	2397.8	2480.2	2329.9
35°	3050.9	3041.8	2946.1	2791.5	2634.9	2601.9	2567.8	2521.4	2578.6	2706.5	2516.8
37.5°	3244.0	3236.9	3119.6	2955.1	2813.9	2791.5	2762.7	2730.6	2822.7	2990.8	2770.0
40°	3459.6	3445.2	3297.7	3133.1	3022.2	3011.5	2996.2	2987.4	3135.8	3386.3	3090.1
42.5°	3703.7	3676.0	3485.5	3328.9	3249.3	3258.3	3250.2	3286.0	3513.2	3842.3	3471.2
45°	3982.7	3927.3	3672.5	3537.3	3500.7	3536.4	3553.4	3644.7	3959.5	4369.1	3896.8
47.5°	4244.0	4172.4	3877.3	3763.5	3784.2	3846.0	3894.2	4055.2	4448.8	4889.7	4331.5
50°	4484.5	4404.0	4096.4	3997.9	4098.2	4185.8	4286.0	4513.2	4969.2	5425.5	4730.5
52.5°	4662.6	4604.4	4315.5	4253.7	4458.6	4574.9	4735.0	5022.1	5495.2	5936.1	5086.5
55°	4800.3	4768.9	4529.3	4547.1	4866.4	5032.8	5226.9	5556.8	6051.5	6394.0	5372.7
57.5°	4959.5	4936.1	4773.5	4901.3	5372.7	5582.0	5810.9	6177.6	6581.0	6797.5	5597.1
60°	5127.5	5127.5	5045.3	5327.9	6005.9	6245.6	6473.6	6758.9	7108.6	7160.6	5688.3
62.5°	5254.5	5287.7	5317.2	5782.3	6606.9	6904.7	7155.2	7428.9	7655.1	7339.4	5473.7
65°	5438.9	5509.5	5675.9	6307.3	7351.1	7741.1	8079.0	8309.0	8098.0	7197.2	4773.5
67.5°	5755.4	5860.2	6214.2	7089.1	8490.5	9074.6	9402.7	9005.7	8011.2	6301.9	3656.3
70°	6040.7	6188.3	6793.8	8081.0	9971.6	10578.0	10426.8	8843.9	6977.1	4619.5	2249.4
72°	5851.1	6012.1	6820.7	8512.9	10763.2	11049.4	10252.4	7837.6	5391.4	2819.2	1109.0
72.5°	5726.9	5894.0	6734.0	8502.2	10784.6	10989.4	10010.2	7437.7	4894.1	2466.7	897.0
75°	4784.2	4927.3	5790.4	7535.3	9503.9	9128.2	7811.8	4813.7	2249.4	796.8	461.5
77.5°	3124.1	3233.3	3992.5	5220.6	6657.0	6295.7	4754.5	2253.8	843.4	483.8	347.0
80°	1569.7	1647.5	2136.7	2745.0	3592.9	3305.8	2194.9	1090.3	564.3	349.7	272.7
82.5°	1092.1	1163.7	1471.2	1401.5	1501.6	1453.4	1032.2	909.7	422.2	221.0	143.1
85°	915.8	990.1	1217.3	999.0	817.5	745.1	739.7	859.5	279.1	109.1	120.7
87.5°	798.8	911.4	1004.5	729.9	560.8	494.5	544.7	788.0	88.6	59.9	36.7
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: P270522

CATALOG NUMBER: NAV-AF-04-D-UNV-SL4-7027-600

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2034.8	2034.8	2034.8	2034.8	2034.8	2034.8	2034.8	2034.8	2034.8	2034.8	2034.8
2.5°	1995.4	1992.7	1979.2	1958.8	1943.6	1933.7	1914.8	1914.0	1915.7	1899.6	1905.9
5°	1939.0	1928.3	1893.4	1846.0	1807.6	1770.9	1730.7	1717.2	1705.6	1681.4	1684.1
7.5°	1880.1	1861.3	1800.5	1722.6	1648.4	1580.4	1513.4	1480.2	1455.2	1423.9	1423.9
10°	1845.2	1815.7	1722.6	1609.0	1490.9	1391.7	1291.6	1231.5	1187.7	1147.6	1144.8
12.5°	1843.3	1798.6	1669.0	1512.4	1350.5	1211.0	1074.2	982.0	916.8	869.4	864.9
15°	1857.7	1795.1	1624.2	1422.0	1218.2	1036.6	867.6	750.4	667.3	614.4	609.1
17.5°	1870.2	1790.6	1575.9	1327.2	1089.4	868.4	680.6	558.9	480.4	437.4	433.0
20°	1881.8	1780.7	1514.3	1227.2	947.2	711.1	532.2	433.8	381.9	357.7	355.1
22.5°	1898.7	1771.7	1449.9	1114.3	807.7	578.7	439.1	368.5	340.7	329.0	327.3
25°	1926.5	1772.6	1387.3	999.0	679.7	482.1	380.2	336.2	321.1	313.0	313.0
27.5°	1966.7	1783.5	1325.4	881.9	571.5	415.8	345.3	319.3	309.5	303.2	301.4
30°	2025.8	1803.1	1260.2	770.9	485.7	370.3	324.6	308.6	300.6	295.2	294.3
32.5°	2111.6	1838.0	1191.3	669.9	420.3	338.1	309.5	299.7	293.3	288.9	287.9
35°	2239.6	1899.6	1124.3	584.1	373.9	314.9	296.9	288.9	285.3	283.5	282.6
37.5°	2427.4	1999.0	1060.8	517.0	343.4	299.7	284.5	279.9	278.1	278.1	278.1
40°	2663.6	2129.5	1003.4	469.5	326.4	287.9	275.5	271.8	271.8	272.7	272.7
42.5°	2950.7	2293.3	954.3	437.4	316.7	279.9	269.2	267.4	266.5	266.5	267.4
45°	3284.3	2486.4	923.8	412.3	309.5	275.5	264.7	263.8	260.2	258.5	258.5
47.5°	3619.6	2692.9	922.1	397.9	300.6	270.1	260.2	260.2	253.1	249.5	250.4
50°	3932.7	2878.2	941.9	394.4	295.2	262.0	255.7	256.6	246.9	242.5	241.5
52.5°	4184.8	3019.6	965.9	398.8	295.2	254.8	247.8	252.2	241.5	236.2	235.3
55°	4379.9	3117.8	974.9	408.8	298.7	248.7	240.6	247.8	239.7	232.5	232.5
57.5°	4519.5	3149.2	936.5	413.2	304.0	247.8	233.4	246.9	242.5	233.4	233.4
60°	4468.3	2967.6	793.4	396.2	303.2	246.0	228.1	248.7	251.3	241.5	241.5
62.5°	4070.4	2482.8	636.8	357.7	287.9	239.7	221.8	246.9	257.5	254.0	252.2
65°	3313.8	1821.0	493.7	312.2	262.0	226.4	208.3	230.8	243.4	246.9	247.8
67.5°	2335.2	1152.9	383.7	265.5	229.8	206.6	193.1	203.9	208.3	210.2	213.7
70°	1277.2	624.3	305.0	223.6	196.8	186.9	177.1	178.0	176.2	174.5	176.2
72°	641.3	407.8	257.5	194.0	174.5	168.2	163.8	160.9	160.9	158.3	159.2
72.5°	551.9	379.3	248.7	186.9	169.1	163.8	160.1	157.5	156.6	154.8	155.6
75°	367.5	300.6	207.5	156.6	144.0	140.4	142.2	139.5	140.4	138.6	139.5
77.5°	296.9	258.5	176.2	132.4	123.4	118.0	121.6	122.4	124.3	122.4	121.6
80°	248.7	220.1	147.6	109.1	102.9	98.4	100.3	106.4	107.3	102.0	101.1
82.5°	160.9	177.1	116.3	85.0	78.7	77.0	81.3	87.7	89.4	82.3	80.5
85°	135.0	142.2	84.1	58.1	51.9	50.0	59.0	65.2	69.8	62.6	60.8
87.5°	37.5	69.8	41.1	27.7	23.3	23.3	28.7	34.0	40.2	41.1	41.1
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)