

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: P196976

Luminaire Tested: **NAV-AF-02-D-UNV-AFL-8030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196976  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)  
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-AFL-8030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8228 lumens  
Efficiency: N/A  
Efficacy: 96.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G1

Input Watts (W): 85  
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

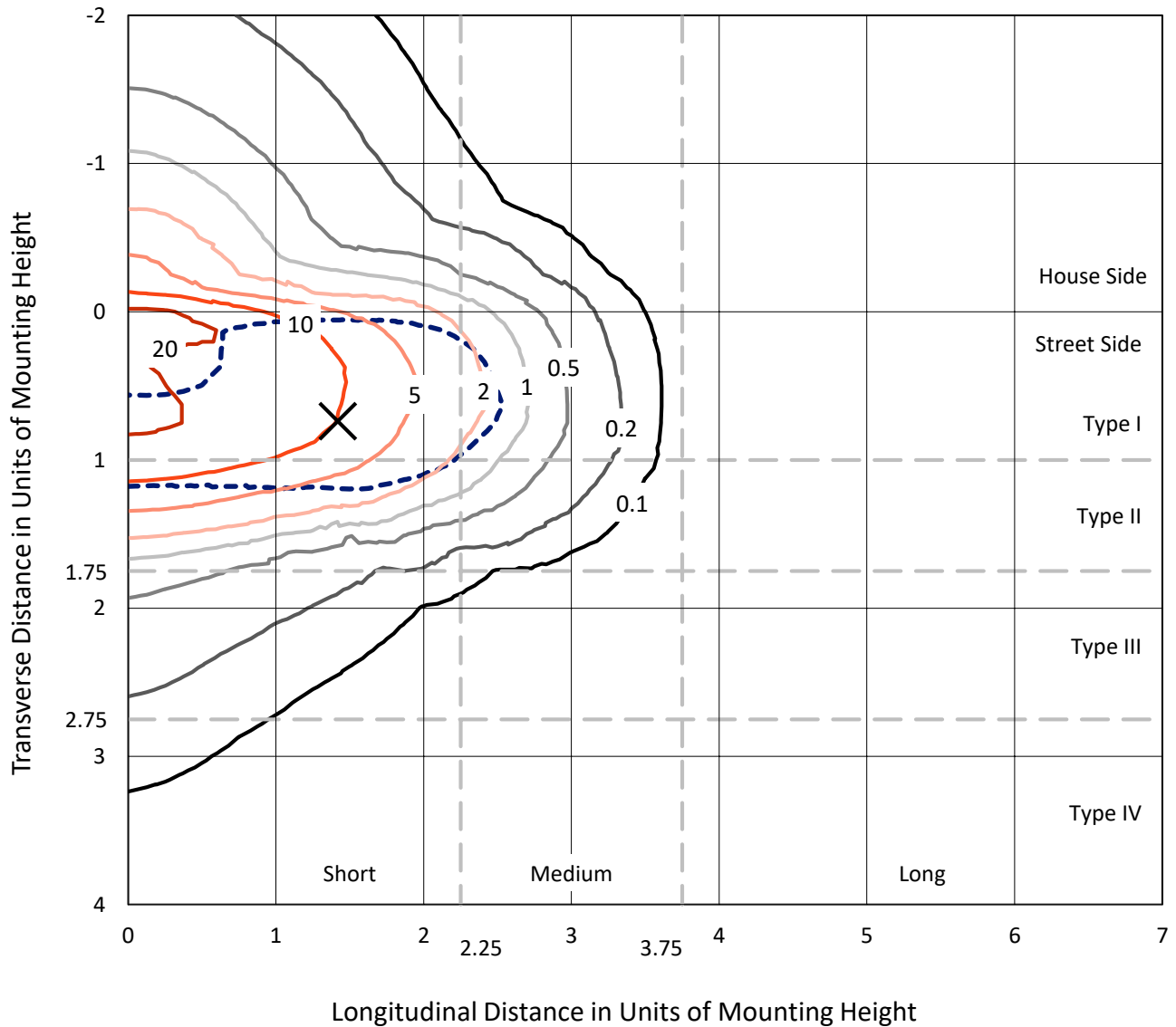


REPORT NUMBER: P196976

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-8030-800

### Iso-Footcandle Lines of Horizontal Illumination

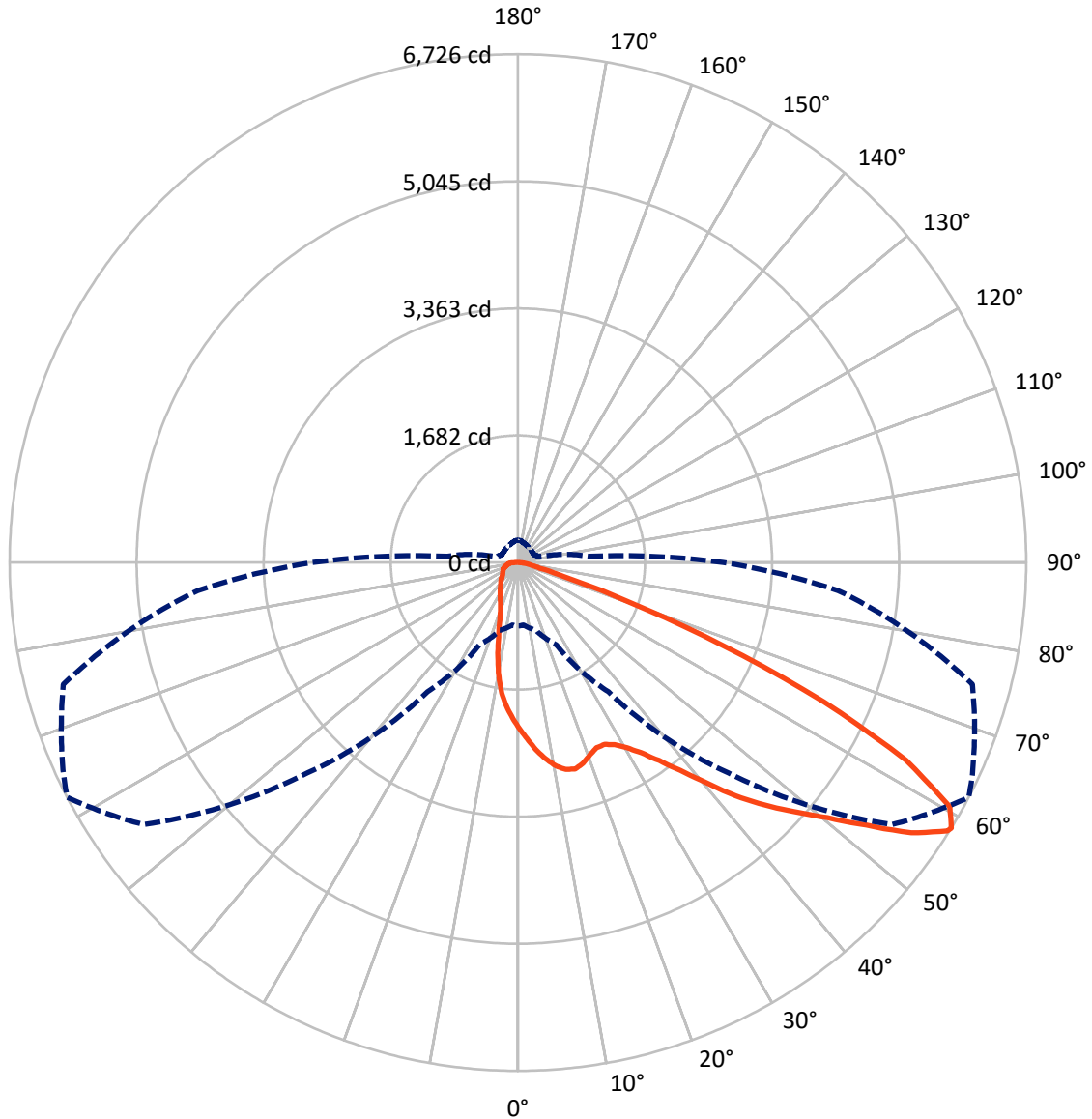
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 25.7 fc  
 Type II - Short - Full Cutoff

REPORT NUMBER: P196976  
CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-8030-800

### Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral    - - - Horizontal Cone Through 58-Deg Vertical

REPORT NUMBER: P196976

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-8030-800

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1263.3	0.0	1263.3
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	6964.7	0.0	6964.7
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	8228.0	0.0	8228.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	196.4	2.4
10°-20°	495.6	6.0
20°-30°	803.1	9.8
30°-40°	1282.2	15.6
40°-50°	1865.1	22.7
50°-60°	1951.6	23.7
60°-70°	1189.8	14.5
70°-80°	332.7	4.0
80°-90°	111.5	1.4
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°	8228.0	100.0
0°-180°	8228.0	100.0



REPORT NUMBER: P196976

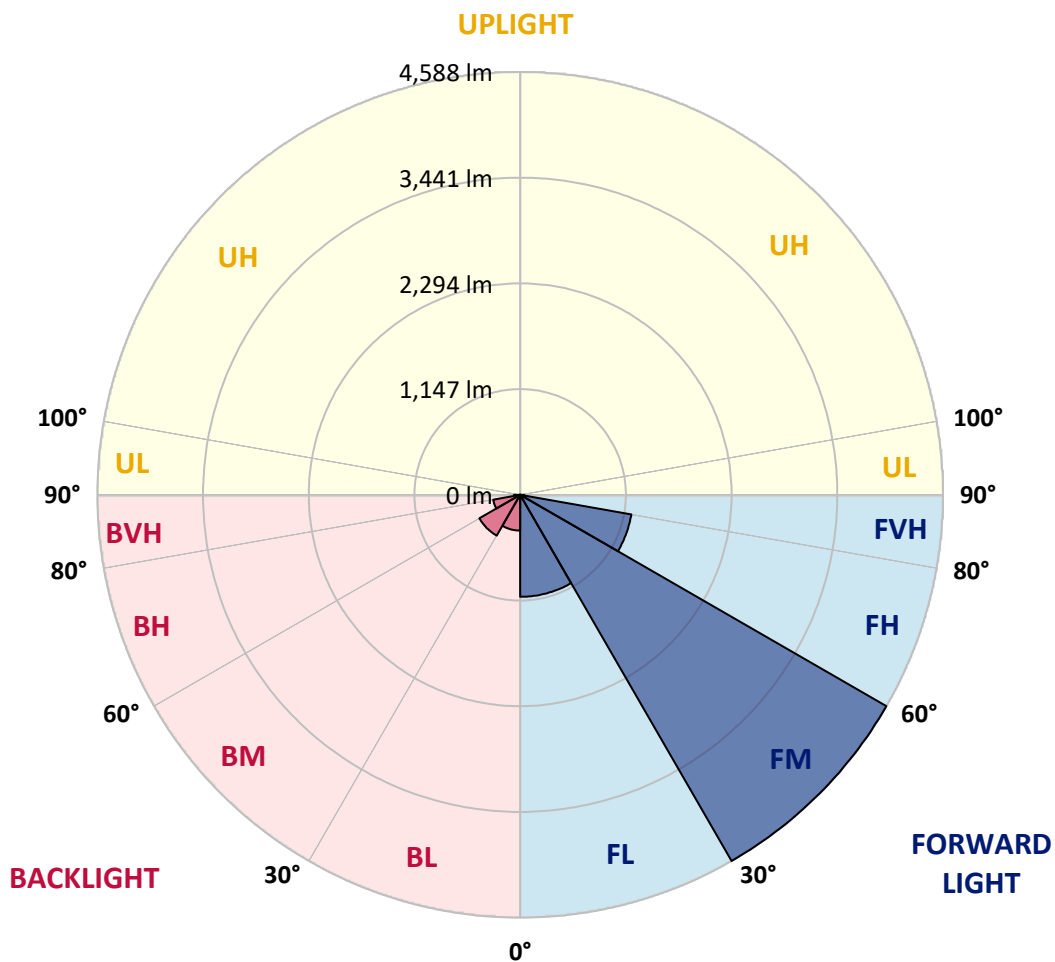
CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-8030-800

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1106.7	13.5			
FM	(30°-60°)	4588.0	55.8			
FH	(60°-80°)	1225.1	14.9			G1/1800
FVH	(80°-90°)	44.9	0.5			G1/100
BL	(0°-30°)	388.3	4.7	B1/500		
BM	(30°-60°)	510.9	6.2	B1/1000		
BH	(60°-80°)	297.4	3.6	B1/500		G1/500
BVH	(80°-90°)	66.7	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type II Short





REPORT NUMBER: P196976

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-8030-800

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	2196.8	2196.8	2196.8	2196.8	2196.8	2196.8	2196.8	2196.8	2196.8	2196.8	2196.8
2.5°	2493.5	2492.0	2470.9	2457.0	2440.6	2402.5	2364.5	2336.2	2321.8	2266.8	2213.3
5°	2699.7	2693.6	2681.7	2666.8	2645.2	2597.4	2537.2	2485.3	2464.7	2367.0	2268.8
7.5°	2590.7	2600.5	2637.0	2678.1	2721.3	2724.4	2681.7	2620.0	2597.4	2466.8	2322.8
10°	2288.9	2284.8	2330.5	2410.7	2553.2	2694.1	2764.5	2734.2	2710.5	2561.4	2376.8
12.5°	2197.3	2196.3	2204.0	2224.6	2314.1	2507.4	2743.5	2809.3	2801.1	2661.7	2434.4
15°	2225.1	2226.1	2225.6	2228.2	2252.9	2344.9	2625.7	2834.5	2860.2	2760.9	2493.0
17.5°	2314.1	2310.5	2299.2	2286.8	2290.4	2323.3	2498.7	2791.3	2868.4	2849.4	2542.4
20°	2451.4	2451.4	2421.0	2386.6	2363.9	2371.1	2445.7	2717.2	2830.4	2924.5	2579.4
22.5°	2623.6	2626.2	2581.5	2518.7	2467.3	2447.8	2476.1	2662.2	2784.1	2993.9	2612.3
25°	2837.6	2837.0	2771.7	2681.7	2600.5	2553.7	2553.2	2664.8	2769.7	3075.1	2646.8
27.5°	3102.4	3078.2	3002.1	2874.1	2759.4	2687.9	2655.5	2729.6	2800.0	3174.9	2693.1
30°	3401.2	3376.5	3276.7	3112.2	2956.9	2852.5	2799.0	2841.7	2892.6	3301.9	2763.0
32.5°	3696.9	3702.5	3585.3	3399.6	3200.1	3053.0	2973.8	3000.1	3035.5	3457.2	2857.6
35°	4129.8	4129.3	3976.1	3744.2	3507.1	3303.5	3203.2	3217.1	3249.5	3676.3	2990.3
37.5°	4452.8	4447.6	4348.9	4143.7	3876.8	3632.6	3487.6	3489.6	3517.4	3951.4	3165.1
40°	4485.7	4484.7	4484.1	4454.8	4272.3	4041.9	3860.4	3822.8	3834.2	4243.5	3350.8
42.5°	4234.2	4271.8	4379.8	4545.3	4596.3	4475.4	4303.7	4219.8	4195.1	4578.8	3547.2
45°	3875.8	3894.8	4084.1	4456.4	4759.3	4882.7	4753.6	4576.7	4534.5	4904.8	3707.1
47.5°	3709.2	3701.0	3810.5	4216.2	4743.3	5206.7	5215.9	4925.9	4854.4	5186.1	3843.4
50°	3351.8	3341.0	3479.3	3863.0	4569.5	5367.6	5690.6	5306.4	5174.3	5453.5	3966.8
52.5°	2639.6	2629.3	2814.9	3309.1	4180.7	5307.4	6090.6	5773.3	5548.1	5711.1	4082.0
55°	1717.6	1718.6	1895.5	2405.1	3383.2	4956.7	6278.3	6312.8	6060.3	5968.8	4175.1
57.5°	945.7	936.9	1062.9	1376.1	2327.4	4160.2	6122.0	6701.5	6569.9	6189.9	4242.5
58°	840.8	830.5	927.7	1197.7	2086.8	3935.5	6043.3	6726.2	6635.2	6226.4	4252.2
60°	599.1	581.6	566.7	675.2	1202.3	2837.6	5518.8	6566.3	6654.2	6299.4	4243.0
62.5°	505.0	484.9	431.4	427.3	566.2	1387.9	4364.3	5766.7	6013.0	6131.3	4093.8
65°	469.0	448.9	378.5	353.3	384.1	599.1	2698.7	4452.8	4781.9	5546.6	3718.5
67.5°	443.3	419.6	344.0	311.1	317.3	358.4	1145.2	2912.1	3293.7	4325.3	2983.1
70°	420.1	393.9	316.8	278.7	273.6	272.5	447.4	1520.6	1888.3	2830.4	1998.3
72.5°	393.9	368.2	292.6	252.0	240.7	221.1	268.9	628.4	861.3	1387.4	915.9
75°	355.9	334.8	265.9	229.9	210.3	179.5	198.5	301.3	371.3	531.2	425.3
77.5°	313.2	296.2	238.6	211.4	185.1	146.6	151.7	204.2	229.3	299.3	246.3
80°	221.6	227.8	208.3	186.2	163.0	118.3	116.7	149.6	164.6	201.1	165.6
82.5°	152.7	157.4	169.7	147.1	131.6	92.0	85.9	103.9	111.6	121.4	80.2
85°	109.0	105.9	117.8	105.4	96.7	58.6	55.0	65.8	70.5	74.1	38.6
87.5°	66.3	65.8	67.9	54.5	50.4	29.8	27.3	31.4	33.4	32.4	18.5
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: P196976

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-8030-800

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2196.8	2196.8	2196.8	2196.8	2196.8	2196.8	2196.8	2196.8	2196.8	2196.8	2196.8
2.5°	2193.2	2168.0	2113.0	2068.8	2021.0	1984.4	1947.9	1927.4	1904.7	1891.9	1890.3
5°	2217.4	2166.0	2048.7	1939.7	1827.6	1726.8	1628.1	1555.1	1495.4	1461.5	1459.4
7.5°	2244.1	2163.4	1982.4	1793.7	1594.1	1395.6	1220.3	1096.4	1016.6	979.6	977.1
10°	2264.7	2152.6	1901.6	1608.0	1291.8	1029.5	870.1	797.1	772.9	766.7	765.7
12.5°	2289.4	2144.9	1799.8	1369.9	987.3	783.7	735.4	730.7	735.9	739.0	739.5
15°	2312.5	2130.0	1662.5	1106.1	772.9	700.4	701.4	711.2	721.5	726.1	726.6
17.5°	2323.3	2093.5	1482.0	871.6	676.2	662.9	674.7	687.5	696.8	700.4	700.4
20°	2323.3	2034.8	1272.7	706.0	625.8	628.4	642.8	652.6	654.6	651.5	650.0
22.5°	2313.6	1962.3	1069.1	616.1	584.7	594.5	605.8	599.1	574.9	556.4	552.8
25°	2304.8	1876.5	873.2	561.0	548.7	561.5	556.9	511.2	474.1	455.1	452.0
27.5°	2290.4	1772.6	709.6	515.8	513.7	524.0	478.2	434.0	415.5	405.2	403.2
30°	2286.8	1660.0	593.9	475.7	479.3	464.9	412.4	398.0	393.9	388.2	385.7
32.5°	2298.6	1547.3	521.4	442.8	446.4	399.0	379.0	381.0	380.5	373.3	370.8
35°	2331.0	1437.8	475.2	412.9	402.6	357.4	360.0	366.1	366.1	357.4	354.3
37.5°	2387.6	1336.0	445.8	387.7	352.3	335.8	342.5	350.7	350.7	344.5	342.0
40°	2447.8	1236.7	423.7	367.7	320.4	320.9	327.6	333.7	336.3	337.3	335.3
42.5°	2502.3	1133.9	400.1	346.1	306.0	309.6	312.7	317.3	328.1	335.3	334.3
45°	2534.2	1030.5	374.4	319.3	296.2	297.7	296.7	304.9	317.8	328.6	328.6
47.5°	2563.5	945.7	353.3	292.6	286.4	286.4	283.3	291.6	303.4	316.3	317.3
50°	2591.2	890.7	338.4	272.0	274.1	272.5	271.5	279.2	295.2	310.6	313.2
52.5°	2619.5	872.1	325.0	257.1	261.2	259.2	260.2	271.0	289.0	304.9	307.5
55°	2659.1	884.0	311.1	246.8	248.9	248.4	252.5	264.8	280.8	296.7	297.7
57.5°	2708.0	927.2	299.3	239.1	237.1	240.1	246.8	258.7	274.1	293.1	294.7
58°	2717.7	937.5	297.2	237.1	234.5	239.1	245.8	257.1	273.1	293.1	294.7
60°	2732.7	974.0	292.1	232.9	225.8	234.0	242.2	253.5	271.0	295.7	298.8
62.5°	2660.7	981.2	290.5	228.3	216.5	226.8	236.5	249.4	268.9	304.4	311.1
65°	2411.3	907.1	279.7	220.6	208.8	221.1	231.4	246.3	275.1	330.7	333.7
67.5°	1935.6	753.4	253.5	208.8	200.0	214.4	227.3	246.3	277.7	334.8	336.8
70°	1330.8	566.2	220.6	195.9	189.8	206.2	225.8	252.0	268.9	316.8	310.6
72.5°	695.2	393.9	193.4	181.0	177.4	199.0	240.7	246.3	258.7	295.7	289.5
75°	350.2	267.9	170.2	164.0	163.5	196.4	269.5	237.1	247.9	278.2	291.6
77.5°	206.7	209.8	151.7	148.1	150.7	191.8	270.0	227.8	235.5	256.1	270.5
80°	141.4	173.3	137.3	136.3	138.3	176.4	248.9	216.5	221.1	242.2	257.6
82.5°	79.7	95.6	120.3	127.0	126.0	144.5	215.0	197.0	202.6	286.4	302.9
85°	38.6	57.6	100.8	118.8	107.5	96.2	174.8	174.8	176.4	205.2	207.8
87.5°	14.4	25.7	67.9	94.1	75.1	57.6	118.8	123.9	137.8	141.9	145.0
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)