

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: P195506

Luminaire Tested: **NAV-AF-02-D-UNV-AFL-7050-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195506
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
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-7050-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6736 lumens
Efficiency: N/A
Efficacy: 102.1 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): 66
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

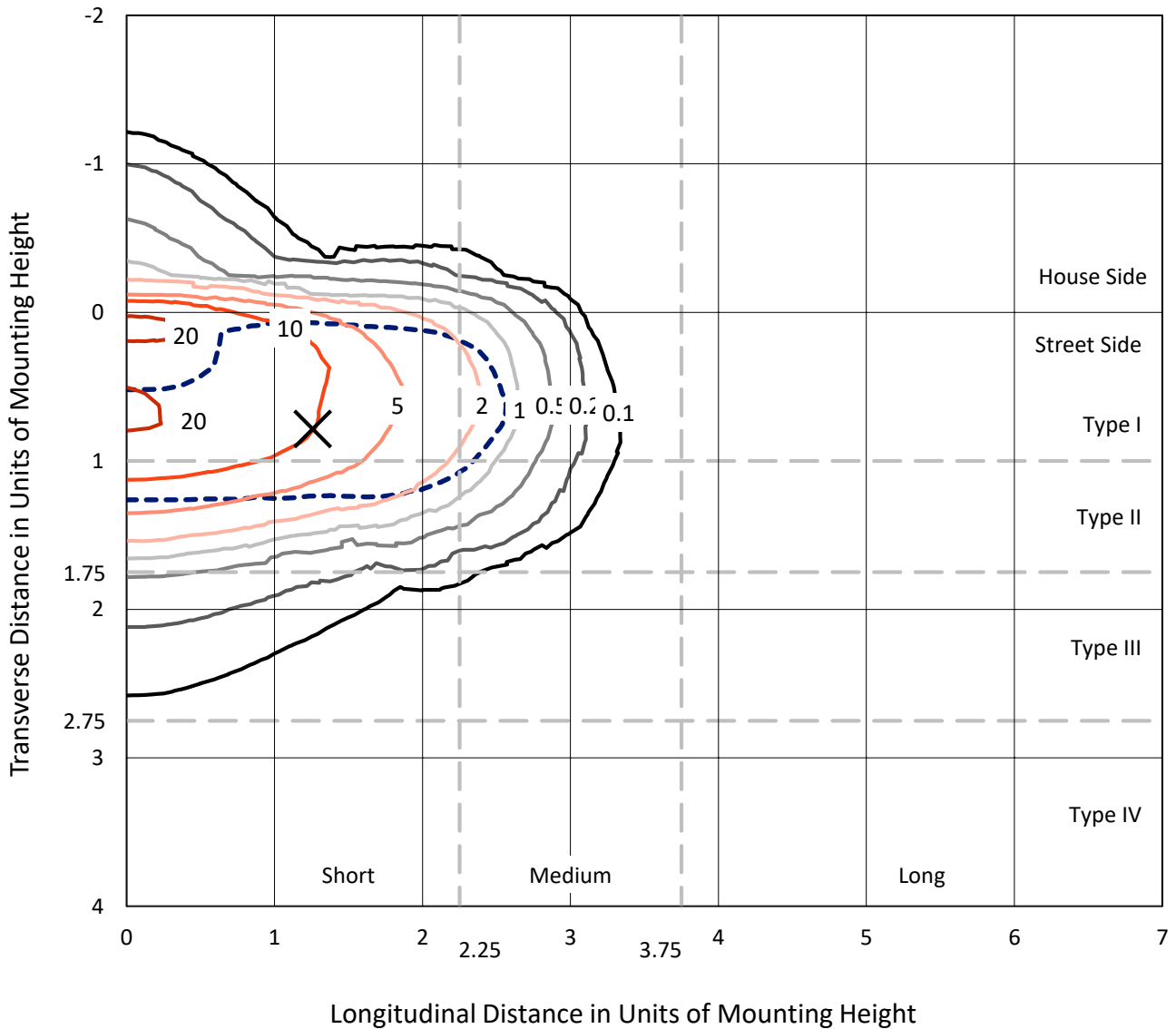


REPORT NUMBER: P195506

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7050-600-HSS

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

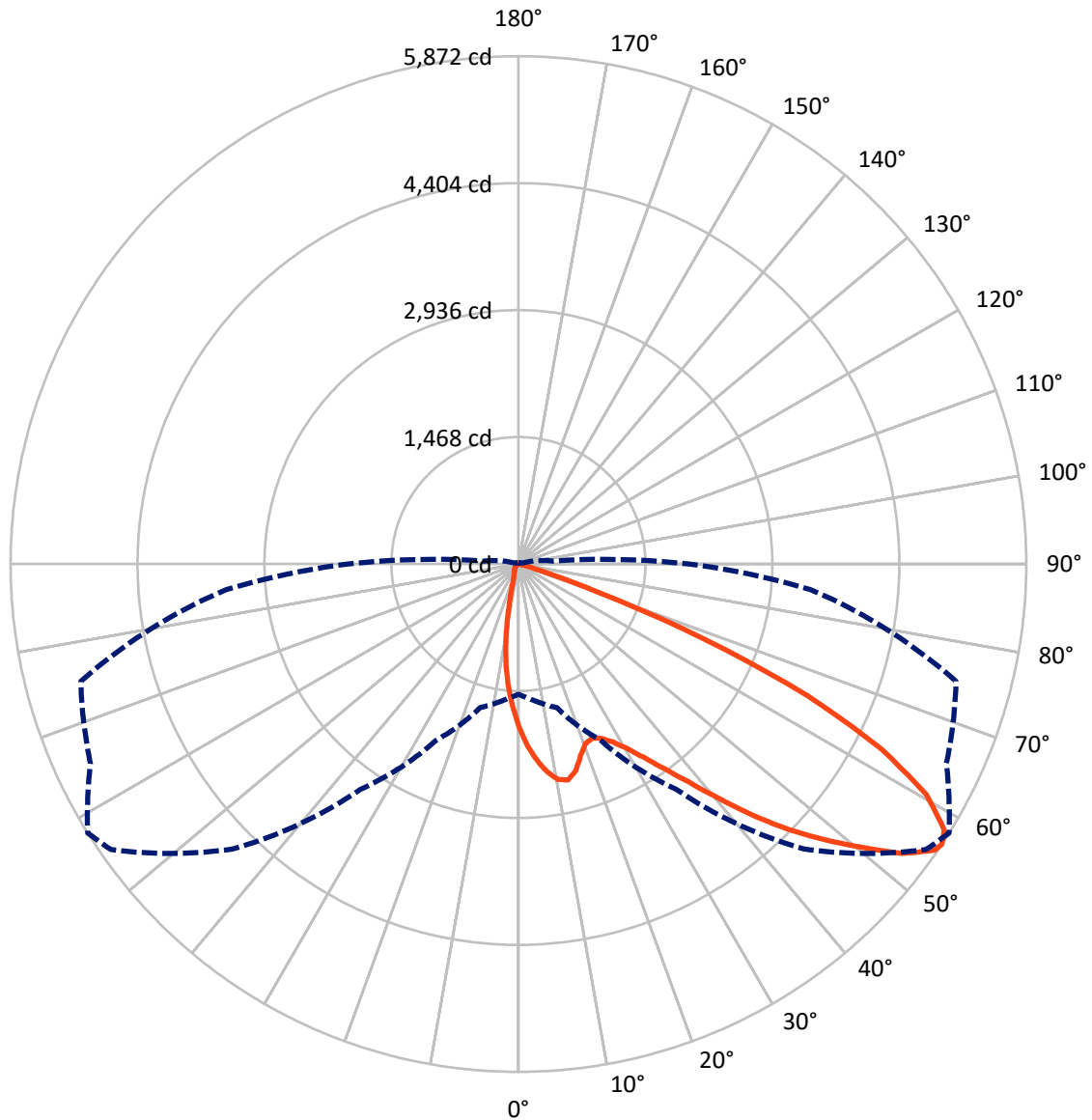


Based on 10 foot mounting height. Maximum calculated value = 23.7 fc
 Type II - Short - Full Cutoff

REPORT NUMBER: P195506

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7050-600-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

REPORT NUMBER: P195506

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7050-600-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	420.5	0.0	420.5
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	6315.5	0.0	6315.5
	% Fixture	93.8	0.0	93.8
Total	Lumens	6736.0	0.0	6736.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.7	2.4
10°-20°	378.6	5.6
20°-30°	637.0	9.5
30°-40°	1090.8	16.2
40°-50°	1646.0	24.4
50°-60°	1711.0	25.4
60°-70°	960.5	14.3
70°-80°	131.6	2.0
80°-90°	17.8	0.3
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°	6736.0	100.0
0°-180°	6736.0	100.0



REPORT NUMBER: P195506

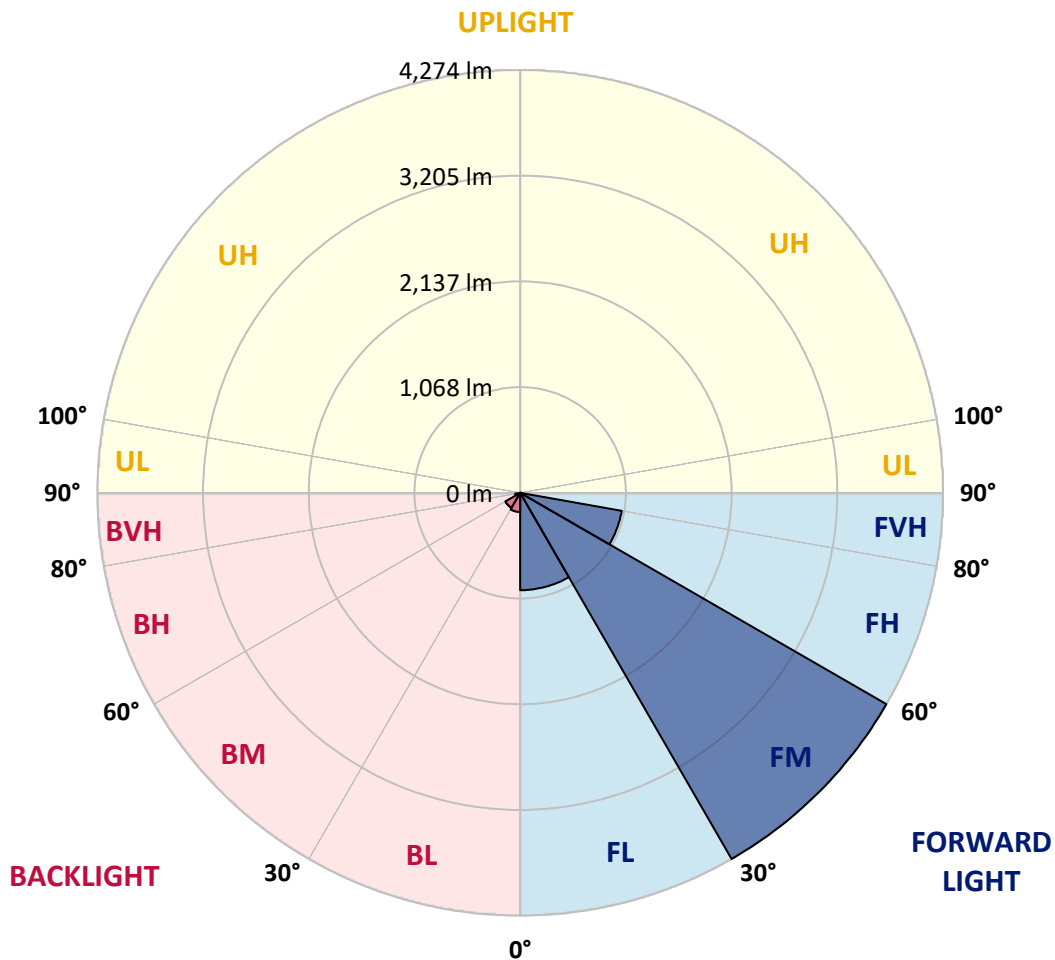
CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7050-600-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	984.3	14.6			
FM	(30°-60°)	4273.6	63.4			
FH	(60°-80°)	1042.3	15.5			G1/1800
FVH	(80°-90°)	15.4	0.2			G1/100
BL	(0°-30°)	194.0	2.9	B1/500		
BM	(30°-60°)	174.2	2.6	B0/220		
BH	(60°-80°)	49.9	0.7	B0/110		G0/110
BVH	(80°-90°)	2.5	0.0			G0/10
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: P195506

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7050-600-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2
2.5°	2294.7	2280.8	2266.4	2239.7	2215.0	2177.0	2124.6	2111.7	2070.6	2002.8	1939.5
5°	2492.5	2490.0	2480.2	2458.6	2431.9	2385.6	2326.5	2287.0	2223.2	2116.3	1994.5
7.5°	2375.3	2396.9	2432.4	2482.8	2516.7	2512.1	2466.8	2432.4	2369.2	2223.2	2048.5
10°	2002.2	2006.4	2055.2	2161.0	2328.6	2484.8	2543.9	2534.7	2476.6	2316.8	2095.8
12.5°	1870.7	1873.2	1884.6	1918.5	2027.4	2245.3	2513.1	2561.4	2556.8	2406.2	2146.1
15°	1881.0	1882.5	1885.6	1896.4	1927.2	2036.7	2356.8	2479.7	2608.2	2491.0	2195.5
17.5°	1962.2	1961.1	1951.4	1941.1	1950.8	1986.8	2197.5	2327.0	2597.4	2562.4	2236.1
20°	2120.4	2125.6	2092.7	2047.0	2023.3	2024.9	2118.9	2216.0	2536.7	2617.9	2266.4
22.5°	2343.0	2346.6	2292.6	2213.5	2144.1	2109.1	2135.3	2186.7	2466.8	2669.3	2291.1
25°	2608.7	2608.7	2533.1	2420.6	2313.2	2236.6	2214.0	2233.5	2440.1	2727.4	2315.7
27.5°	2895.4	2905.7	2807.0	2659.5	2517.7	2405.7	2334.7	2331.2	2460.7	2800.4	2343.5
30°	3207.4	3216.6	3099.5	2919.1	2751.0	2607.6	2498.7	2475.0	2539.3	2898.5	2384.1
32.5°	3517.8	3525.5	3396.0	3212.0	3016.2	2847.6	2704.3	2666.7	2680.6	3041.9	2443.7
35°	3912.5	3914.0	3750.1	3531.2	3322.0	3124.1	2942.7	2905.7	2890.3	3222.8	2529.5
37.5°	4226.5	4214.2	4110.3	3903.2	3663.2	3456.6	3243.4	3195.1	3158.1	3477.2	2662.6
40°	4300.5	4300.5	4285.1	4222.9	4032.2	3833.3	3626.7	3554.8	3473.1	3776.8	2841.5
42.5°	4107.8	4120.1	4221.9	4357.0	4358.6	4231.1	4029.2	3968.5	3824.6	4118.1	3036.8
45°	3676.6	3680.2	3924.3	4289.2	4536.9	4609.9	4460.8	4377.1	4177.7	4472.7	3215.6
47.5°	3521.4	3532.7	3636.5	4082.6	4550.3	4916.7	4875.1	4759.9	4504.5	4796.4	3382.6
50°	3282.9	3296.8	3423.7	3778.4	4430.0	5113.5	5271.3	5148.0	4802.1	5066.2	3465.4
52.5°	2712.5	2734.1	2913.4	3376.0	4129.4	5121.7	5634.1	5560.1	5106.8	5210.7	3455.6
55°	1866.6	1882.5	2091.7	2635.4	3522.9	4870.4	5790.4	5841.2	5378.7	5243.0	3408.3
56°	1505.8	1565.4	1718.6	2245.3	3177.6	4656.6	5754.4	5872.1	5459.4	5237.9	3387.8
57.5°	995.5	1006.8	1173.8	1627.1	2551.6	4192.6	5592.0	5806.3	5563.2	5211.7	3372.9
60°	468.2	473.3	533.5	750.8	1380.9	3055.3	5064.2	5419.8	5601.2	5156.7	3372.4
62.5°	305.3	306.3	313.5	358.2	564.8	1664.1	4198.2	4710.1	5286.2	5150.5	3362.6
65°	251.3	253.9	245.1	250.8	295.5	627.5	2961.2	3672.0	4546.7	5005.6	3252.6
67.5°	221.5	222.0	210.2	203.5	216.4	275.5	1491.9	2316.2	3400.6	4253.2	2679.1
70°	202.0	201.5	188.1	172.7	173.2	183.0	486.2	962.1	1881.5	2525.4	1538.2
72.5°	179.4	180.4	172.7	151.1	143.9	129.5	183.0	259.5	640.3	811.0	405.5
75°	157.3	155.2	147.5	133.6	120.3	86.9	92.0	110.5	167.0	165.5	87.4
77.5°	119.2	117.2	120.8	114.1	94.0	60.6	50.4	57.6	75.5	70.4	35.5
80°	91.0	89.9	82.2	97.6	85.8	45.7	34.4	35.5	41.1	37.5	17.5
82.5°	65.8	65.3	62.2	60.1	54.5	33.4	26.2	27.8	30.8	26.2	12.8
85°	25.2	25.2	48.8	41.1	37.5	22.6	18.5	20.0	23.6	19.0	8.7
87.5°	4.1	4.1	32.9	27.2	17.0	11.3	11.8	12.8	13.9	11.3	6.7
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: P195506

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7050-600-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2
2.5°	1902.0	1867.6	1792.0	1719.1	1655.3	1585.5	1550.0	1508.9	1493.5	1462.6	1465.7
5°	1921.6	1849.6	1698.0	1538.2	1391.7	1242.7	1136.8	1037.1	981.6	926.6	926.6
7.5°	1941.6	1831.6	1597.3	1341.9	1095.2	839.7	658.8	513.9	433.2	379.3	377.7
10°	1955.5	1808.5	1482.7	1114.2	750.3	432.7	261.1	205.6	185.5	176.8	176.3
12.5°	1973.5	1785.4	1352.1	845.9	416.8	205.6	162.9	154.2	150.6	148.5	148.5
15°	1988.9	1752.5	1193.8	568.9	218.9	154.2	140.3	137.2	136.7	136.2	136.7
17.5°	1992.5	1705.7	1004.2	333.0	158.8	134.6	128.5	125.9	125.9	125.4	125.4
20°	1984.3	1644.0	794.5	205.6	137.2	123.9	117.2	114.1	113.6	113.6	113.6
22.5°	1967.3	1565.4	587.4	155.7	124.9	114.1	105.4	102.3	102.3	102.8	103.3
25°	1946.2	1472.4	403.4	134.1	115.6	103.8	95.1	92.0	93.0	94.0	94.6
27.5°	1919.5	1361.4	264.2	116.1	103.3	93.5	85.8	83.8	85.8	87.9	88.9
30°	1892.8	1239.6	178.8	100.7	89.4	82.2	77.6	77.1	80.2	84.8	85.3
32.5°	1875.3	1114.7	135.2	90.5	78.6	72.5	70.4	71.4	76.1	81.2	82.2
35°	1873.8	992.9	115.1	82.2	71.4	65.8	64.8	67.8	73.0	77.1	78.1
37.5°	1897.9	878.8	104.3	76.1	65.8	60.1	58.6	64.2	68.9	73.0	74.0
40°	1946.7	776.5	97.1	70.4	61.2	54.5	53.4	58.1	62.7	67.3	68.9
42.5°	2007.9	680.9	88.9	64.8	56.0	48.3	47.3	50.9	55.5	62.2	63.2
45°	2060.8	592.0	80.2	58.6	50.4	41.6	41.1	45.2	48.8	55.0	56.0
47.5°	2105.5	518.0	71.9	51.9	43.2	37.0	36.5	38.5	40.6	46.3	47.3
50°	2081.9	455.3	63.7	42.7	34.9	31.9	31.3	31.3	33.9	39.6	40.6
52.5°	2023.8	416.3	56.0	35.5	28.8	27.2	25.7	26.2	28.8	31.3	31.9
55°	1977.1	397.8	49.3	31.3	24.2	22.6	21.1	20.6	21.1	20.0	19.0
56°	1965.8	395.7	47.8	30.3	23.1	21.1	19.0	18.0	17.5	15.4	14.9
57.5°	1960.6	395.7	45.2	28.3	21.6	19.0	16.4	14.4	12.3	10.8	10.8
60°	1956.5	398.3	42.1	24.7	18.5	15.4	11.8	8.7	7.2	7.2	7.2
62.5°	1947.8	397.3	38.5	20.6	15.9	11.8	7.2	5.7	5.1	5.7	6.2
65°	1849.6	369.0	33.9	16.4	12.3	8.2	4.1	4.1	4.6	5.7	6.2
67.5°	1490.4	279.6	27.8	12.8	8.7	6.2	3.6	3.6	4.6	5.7	6.2
70°	818.7	147.5	23.6	9.3	6.7	5.1	3.6	3.1	4.6	5.7	6.2
72.5°	199.9	61.7	21.6	7.2	6.2	4.6	3.1	3.1	4.6	5.7	6.2
75°	49.3	46.3	17.5	5.7	5.1	4.1	3.1	3.1	4.6	5.7	6.2
77.5°	23.1	61.2	11.8	5.1	4.6	3.6	3.1	3.1	4.6	5.7	5.7
80°	13.9	46.3	7.2	4.6	4.1	3.6	3.1	3.1	4.6	5.7	6.2
82.5°	8.2	13.4	5.1	4.6	4.1	3.1	3.1	3.1	4.6	5.7	6.2
85°	7.2	6.7	5.1	4.6	4.1	3.6	3.1	3.1	5.1	6.2	6.2
87.5°	5.7	5.1	4.6	4.1	4.1	3.6	3.1	3.1	4.6	5.7	6.2
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)