

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: P270434

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270434
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
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-SL3-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10355.6 lumens
Efficiency: N/A
Efficacy: 107.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G2

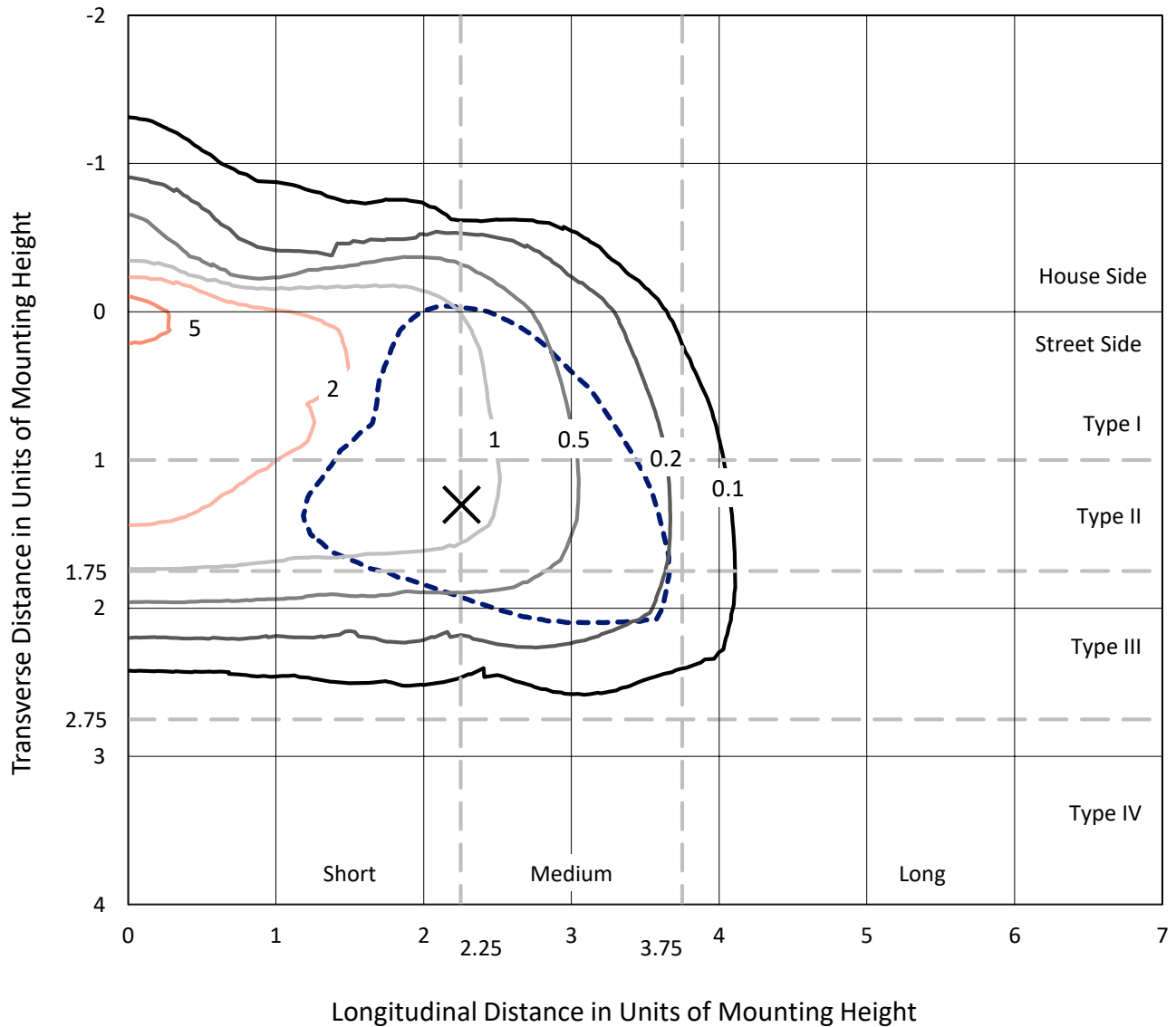
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

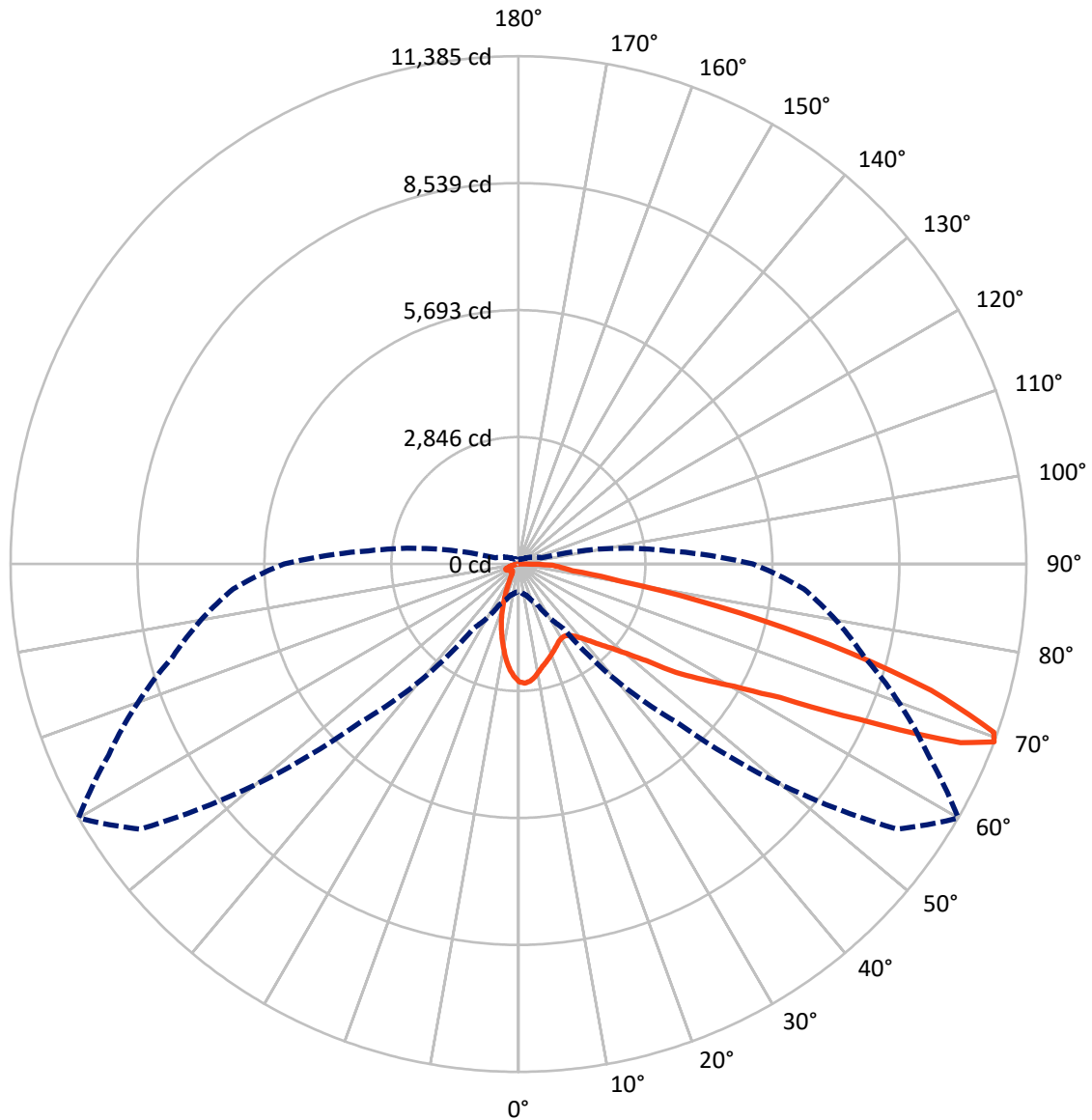
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.6 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1477.1	0.0	1477.1
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	8878.6	0.0	8878.6
	% Fixture	85.7	0.0	85.7
Total	Lumens	10355.6	0.0	10355.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.2	2.2
10°-20°	479.9	4.6
20°-30°	612.3	5.9
30°-40°	842.5	8.1
40°-50°	1364.7	13.2
50°-60°	2141.9	20.7
60°-70°	2855.5	27.6
70°-80°	1588.3	15.3
80°-90°	246.3	2.4
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°	10355.6	100.0
0°-180°	10355.6	100.0



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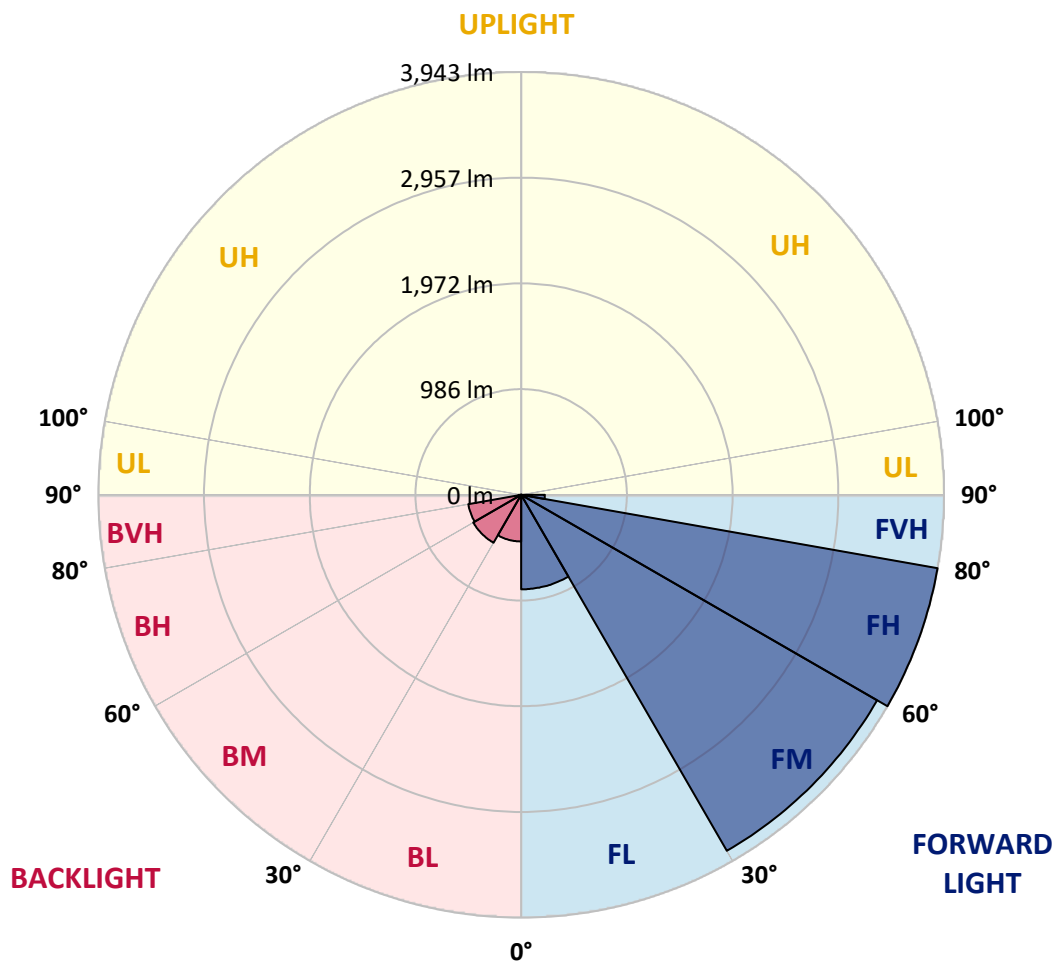
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	881.1	8.5			
FM	(30°-60°)	3833.1	37.0			
FH	(60°-80°)	3943.0	38.1			G2/5000
FVH	(80°-90°)	221.4	2.1			G2/225
BL	(0°-30°)	435.3	4.2	B1/500		
BM	(30°-60°)	516.0	5.0	B1/1000		
BH	(60°-80°)	500.8	4.8	B2/1000		G2/1000
BVH	(80°-90°)	25.0	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	2642.3	2642.3	2642.3	2642.3	2642.3	2642.3	2642.3	2642.3	2642.3	2642.3	2642.3
2.5°	2712.6	2720.0	2720.0	2714.0	2710.6	2691.4	2680.2	2672.2	2658.3	2632.4	2609.0
5°	2615.8	2629.7	2635.6	2638.3	2655.6	2649.6	2650.2	2644.9	2632.9	2605.1	2567.3
7.5°	2437.7	2440.3	2451.0	2468.9	2510.9	2540.0	2563.9	2568.6	2565.9	2545.3	2492.2
10°	2262.4	2267.1	2279.7	2310.3	2350.1	2391.8	2443.7	2464.9	2480.8	2474.2	2407.2
12.5°	2116.9	2117.7	2131.6	2166.8	2211.3	2263.8	2334.2	2367.4	2405.2	2420.5	2345.5
15°	1976.9	1986.2	1999.4	2041.9	2097.1	2163.5	2244.4	2290.3	2340.2	2383.9	2297.7
17.5°	1870.6	1877.9	1885.9	1921.1	1984.8	2067.9	2168.1	2217.2	2283.0	2350.1	2248.5
20°	1812.2	1814.8	1808.8	1826.2	1880.0	1969.5	2085.8	2145.0	2223.2	2317.5	2198.1
22.5°	1800.3	1800.3	1778.4	1775.1	1798.9	1874.7	2000.7	2073.2	2168.8	2295.0	2152.9
25°	1856.0	1852.0	1810.9	1773.1	1764.5	1802.9	1919.8	2008.8	2122.3	2294.4	2119.0
27.5°	1961.5	1956.2	1905.1	1841.4	1786.3	1769.8	1857.3	1948.3	2085.8	2316.9	2101.8
30°	2093.1	2091.2	2039.3	1959.7	1868.7	1783.0	1832.8	1917.2	2061.3	2358.7	2101.0
32.5°	2237.1	2227.8	2196.0	2116.3	1998.1	1856.6	1847.5	1918.4	2054.6	2419.9	2116.3
35°	2390.6	2383.9	2375.9	2295.6	2162.8	1986.8	1911.9	1964.2	2087.1	2504.8	2159.4
37.5°	2585.9	2578.6	2591.8	2504.1	2358.7	2157.5	2020.6	2056.0	2153.5	2628.4	2239.8
40°	2933.1	2911.9	2874.7	2739.9	2587.2	2366.7	2178.1	2183.4	2267.1	2793.6	2368.7
42.5°	3503.5	3435.2	3251.1	3003.6	2828.3	2609.8	2383.4	2358.1	2423.7	3012.1	2555.9
45°	4075.3	3998.3	3687.5	3291.0	3078.0	2870.8	2637.0	2576.5	2619.0	3266.4	2797.1
47.5°	4444.5	4406.6	4056.0	3578.6	3339.4	3154.8	2927.1	2827.5	2858.0	3554.7	3094.5
50°	4552.7	4520.2	4244.6	3803.8	3586.6	3498.2	3286.4	3154.3	3159.6	3891.4	3451.1
52.5°	4471.8	4458.5	4275.8	3943.1	3813.7	3860.1	3783.8	3599.9	3556.0	4260.7	3837.6
55°	4363.4	4368.2	4297.8	4083.2	4044.8	4197.5	4434.6	4286.4	4100.6	4645.0	4240.0
57.5°	4022.8	4026.2	4210.7	4350.2	4485.6	4670.3	4941.1	4878.9	4662.4	5060.2	4690.9
60°	3239.3	3265.2	3676.3	4295.1	4989.6	5601.9	5668.3	5560.8	5259.9	5538.2	5277.3
62.5°	2314.3	2337.5	2813.6	3728.7	4930.5	6656.5	7011.1	6583.4	6070.7	6253.5	6101.9
65°	1215.9	1212.0	1580.5	2576.5	4153.0	6900.8	9126.7	8399.0	7436.7	7236.8	6898.9
67.5°	679.3	701.2	844.0	1299.6	2706.7	6073.4	10478.1	10692.5	9335.9	8017.2	6864.3
69°	628.2	635.6	731.1	1004.8	1764.5	5010.9	10361.9	11385.2	10136.7	8020.4	6422.1
70°	610.3	618.3	705.2	925.8	1482.2	4105.9	9938.8	11304.2	10331.3	7842.5	6019.6
72.5°	547.2	557.8	642.2	832.1	1249.2	2116.3	8005.9	9675.3	9358.5	6854.3	4667.7
75°	466.8	484.7	612.3	826.1	1183.3	1345.4	5338.9	7208.3	6965.3	4902.1	2648.3
77.5°	193.2	195.2	267.6	605.0	1241.7	1287.6	2869.4	4566.1	4042.2	2149.6	797.5
80°	134.7	132.1	133.5	176.6	1002.1	1296.3	1472.2	2322.2	1805.0	567.1	373.2
82.5°	113.5	112.2	117.6	110.9	339.3	1470.9	1231.1	1210.6	849.9	305.5	178.0
85°	75.1	73.0	96.3	100.9	161.3	1168.1	1324.1	951.6	633.6	163.3	75.6
87.5°	36.6	37.2	55.2	68.5	85.7	369.9	1268.3	752.4	489.3	71.1	30.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2642.3	2642.3	2642.3	2642.3	2642.3	2642.3	2642.3	2642.3	2642.3	2642.3	2642.3
2.5°	2599.8	2579.8	2562.0	2539.4	2522.1	2507.4	2487.5	2486.9	2483.5	2488.2	2489.6
5°	2542.1	2508.7	2458.3	2401.9	2362.1	2309.6	2258.5	2241.2	2221.9	2219.9	2225.9
7.5°	2455.0	2403.2	2316.9	2230.5	2144.3	2056.0	1972.1	1929.6	1888.5	1875.9	1881.9
10°	2358.1	2292.4	2160.2	2019.4	1897.8	1766.3	1638.9	1556.6	1481.6	1449.7	1457.6
12.5°	2282.4	2198.7	2012.7	1830.1	1648.2	1459.6	1291.7	1128.9	1006.0	950.9	954.2
15°	2217.2	2110.4	1874.7	1631.6	1403.8	1145.5	912.4	723.9	616.2	576.4	575.0
17.5°	2146.9	2017.5	1730.6	1447.0	1151.4	832.1	610.9	499.4	456.9	443.7	443.7
20°	2071.9	1921.7	1579.8	1245.8	885.9	581.1	459.6	416.4	400.5	396.4	395.8
22.5°	2002.1	1828.1	1428.3	1031.3	640.9	441.0	391.1	374.6	371.9	375.2	375.2
25°	1946.9	1745.8	1275.0	805.5	466.2	369.3	348.0	345.9	355.9	367.9	369.9
27.5°	1905.8	1672.0	1123.6	588.4	366.6	321.5	314.0	322.8	345.9	369.9	374.6
30°	1877.3	1609.0	942.3	423.0	305.5	281.6	284.9	300.2	335.3	371.9	381.8
32.5°	1864.6	1557.9	759.6	324.6	261.0	247.8	256.3	276.3	312.8	349.4	361.3
35°	1876.6	1520.7	591.1	269.6	228.3	218.5	228.3	249.0	272.9	290.8	298.1
37.5°	1919.8	1507.4	444.9	239.0	207.1	197.2	205.3	219.1	229.7	236.4	239.7
40°	2010.8	1521.4	348.6	223.0	195.2	184.0	185.9	192.5	200.0	205.3	205.8
42.5°	2155.6	1567.2	310.2	217.1	187.9	173.4	170.0	174.6	182.6	189.9	191.2
45°	2348.1	1643.4	306.1	219.1	184.6	164.7	158.0	162.8	173.4	185.3	187.2
47.5°	2597.1	1764.5	324.6	229.7	186.6	160.1	150.0	154.7	168.7	184.6	187.2
50°	2892.0	1931.7	359.2	245.6	195.9	160.1	146.8	150.7	165.4	183.3	185.9
52.5°	3239.3	2164.8	395.2	261.6	209.1	165.9	148.1	147.4	160.6	177.2	180.6
55°	3622.4	2454.3	429.6	275.6	216.5	174.0	151.5	143.4	154.1	167.4	170.0
57.5°	4073.4	2850.9	490.0	288.9	220.4	180.0	155.3	139.4	145.4	154.7	156.8
60°	4684.9	3433.1	607.7	311.4	227.8	182.6	156.0	135.5	134.7	141.5	142.1
62.5°	5482.4	4115.1	719.8	338.0	242.5	183.3	153.4	132.8	126.2	128.2	128.2
65°	6049.5	4366.1	687.4	360.6	255.7	182.6	150.7	130.9	119.6	116.2	116.2
67.5°	5726.8	3856.9	583.7	366.6	256.9	175.3	144.7	126.2	113.5	105.6	105.6
69°	5252.7	3380.7	535.8	355.9	246.3	166.6	138.1	121.5	109.6	100.3	100.3
70°	4866.2	3020.1	506.6	343.3	233.7	159.4	132.1	116.9	105.6	97.6	96.9
72.5°	3633.0	2015.3	433.0	296.3	191.9	134.7	115.5	104.3	95.0	89.7	89.7
75°	1917.2	1010.1	354.7	241.7	148.1	107.5	95.0	87.7	82.4	81.7	80.9
77.5°	628.2	456.9	254.9	181.9	109.0	83.6	75.6	71.1	70.3	73.0	73.0
80°	339.3	272.9	164.0	122.9	75.6	62.4	58.4	57.9	59.7	63.8	63.8
82.5°	164.7	134.7	97.6	75.6	51.8	45.9	45.9	46.5	49.1	53.8	53.8
85°	71.1	63.8	56.5	42.5	31.9	28.6	32.6	35.8	37.9	41.1	42.5
87.5°	33.9	29.9	26.0	16.6	14.0	14.6	17.2	21.3	25.2	27.8	28.6
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)