

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: P270428

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270428
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
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-SL2-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12465.8 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B2 - U0 - G3

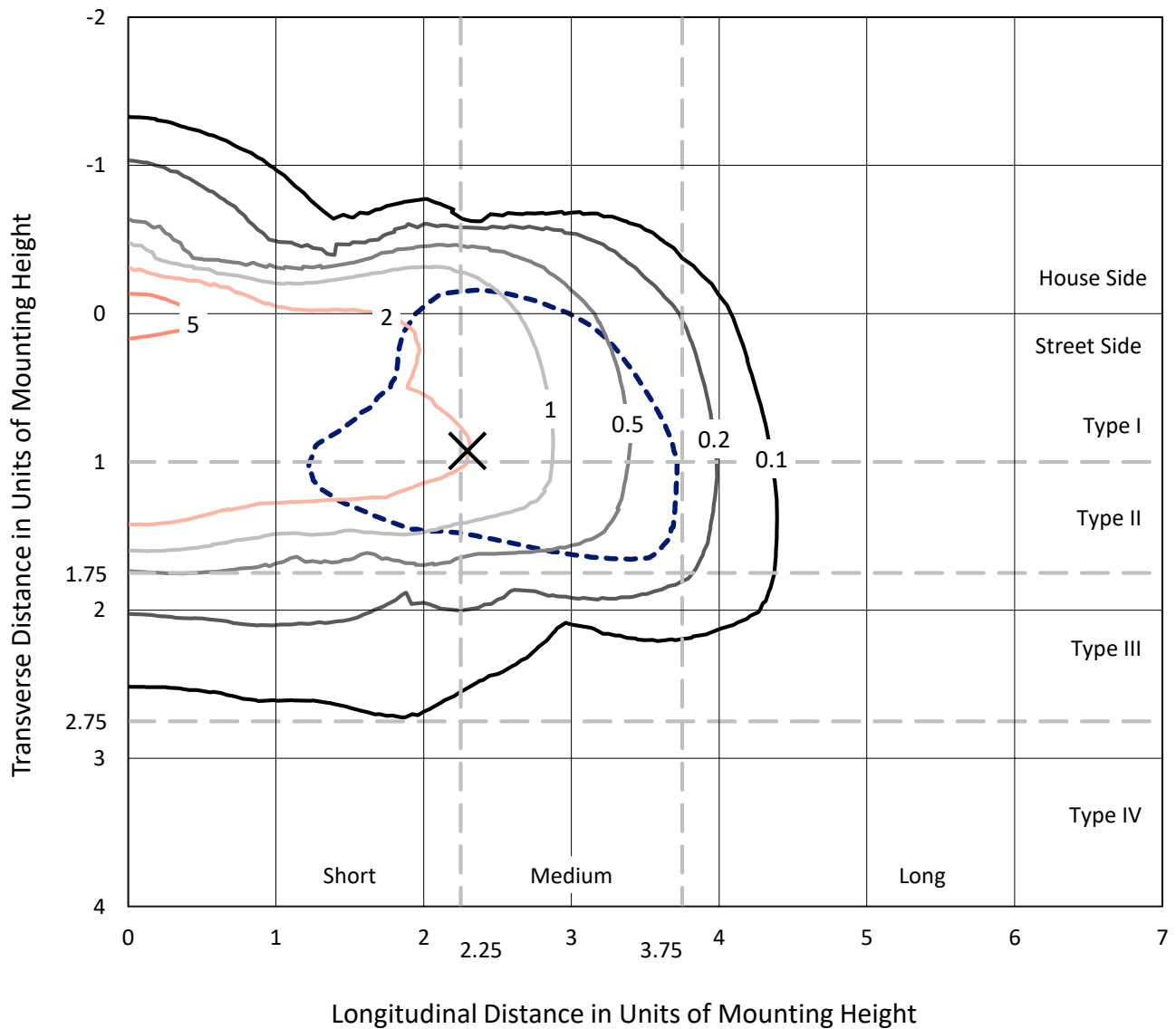
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

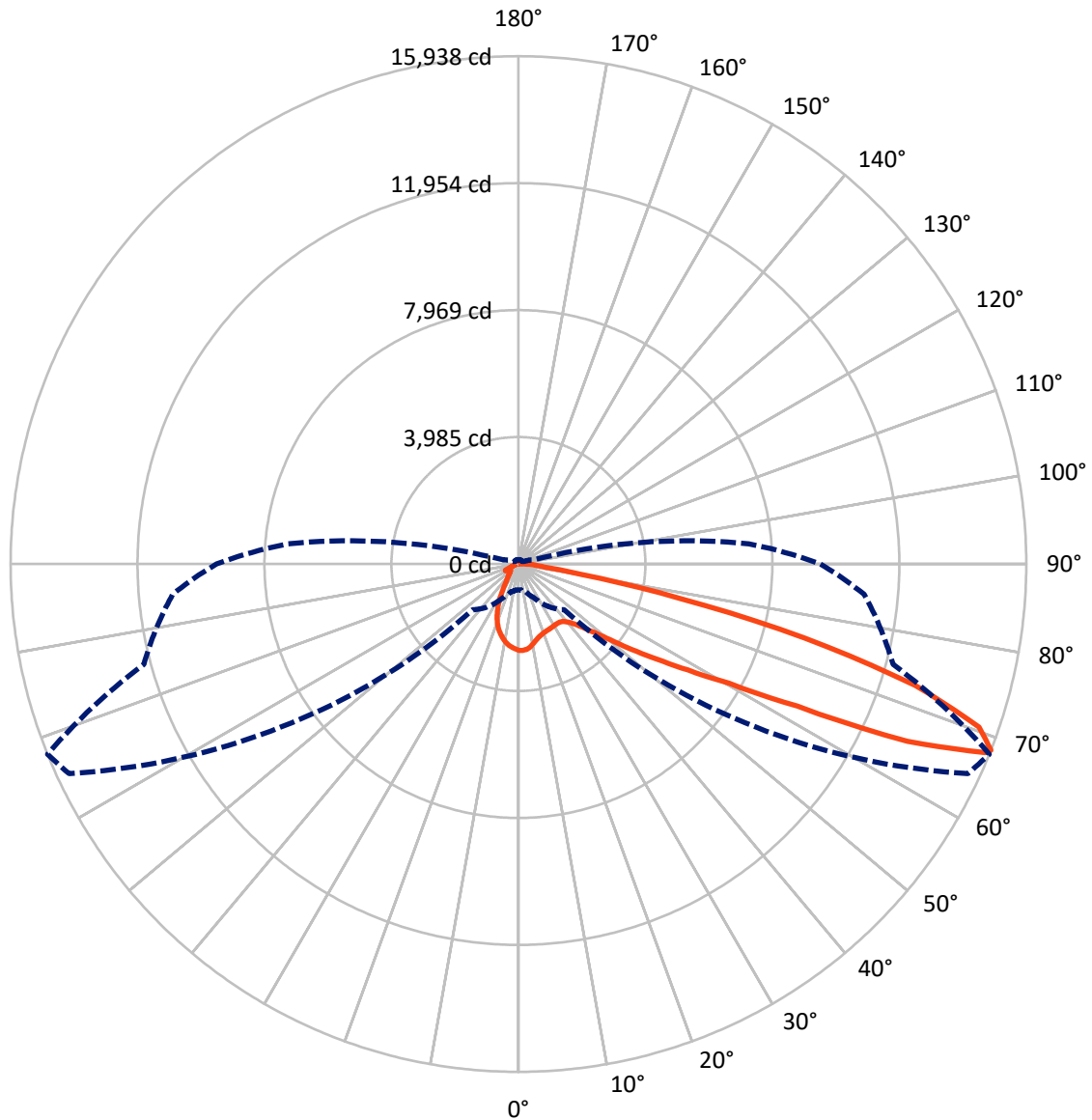
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.8 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2039.4	0.0	2039.4
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	10426.3	0.0	10426.3
	% Fixture	83.6	0.0	83.6
Total	Lumens	12465.8	0.0	12465.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.4	1.9
10°-20°	539.0	4.3
20°-30°	729.0	5.8
30°-40°	1027.9	8.2
40°-50°	1690.3	13.6
50°-60°	2620.1	21.0
60°-70°	3397.1	27.3
70°-80°	1949.4	15.6
80°-90°	280.5	2.2
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°	12465.8	100.0
0°-180°	12465.8	100.0

Coefficient of Utilization



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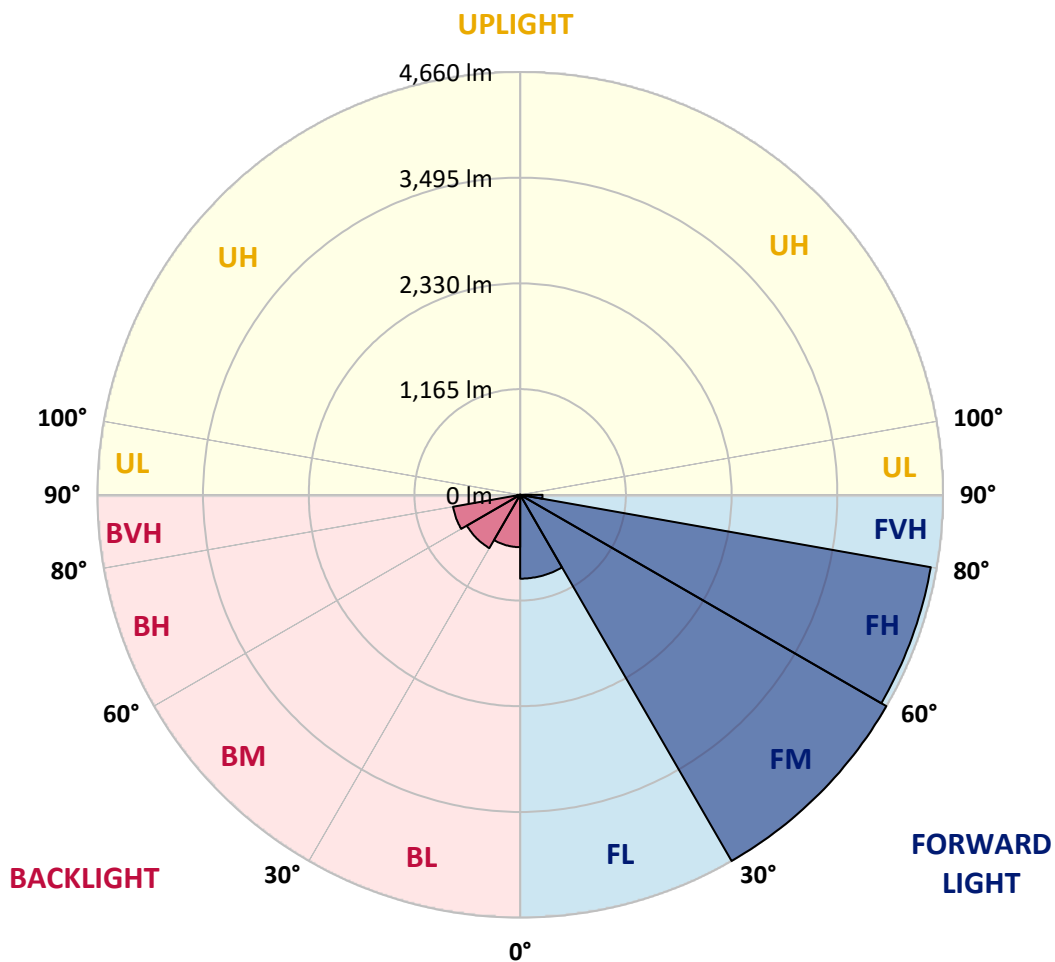
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	923.9	7.4			
FM (30°-60°)	4659.9	37.4			
FH (60°-80°)	4595.5	36.9			G2/5000
FVH (80°-90°)	247.0	2.0			G3/500
BL (0°-30°)	576.6	4.6	B2/1000		
BM (30°-60°)	678.3	5.4	B1/1000		
BH (60°-80°)	751.1	6.0	B2/1000		G2/1000
BVH (80°-90°)	33.4	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	2712.4	2712.4	2712.4	2712.4	2712.4	2712.4	2712.4	2712.4	2712.4	2712.4	2712.4
2.5°	2639.9	2661.1	2661.1	2676.6	2690.5	2701.8	2711.7	2711.7	2711.7	2705.2	2699.3
5°	2362.4	2390.7	2394.9	2434.0	2485.3	2548.0	2618.0	2679.9	2692.1	2714.9	2723.8
7.5°	2169.2	2178.3	2193.8	2220.6	2272.7	2350.1	2460.0	2598.4	2631.9	2703.4	2741.0
10°	2032.5	2039.8	2052.8	2079.8	2126.9	2197.0	2305.3	2485.3	2540.6	2667.6	2741.7
12.5°	1932.3	1938.1	1950.3	1974.7	2022.8	2085.4	2196.1	2383.5	2451.8	2631.9	2753.1
15°	1854.2	1864.0	1873.8	1897.3	1946.2	2006.5	2118.8	2309.4	2383.5	2603.3	2774.3
17.5°	1823.2	1828.1	1829.8	1842.0	1885.9	1946.9	2059.4	2257.3	2333.7	2580.6	2790.7
20°	1842.8	1843.6	1827.3	1819.2	1844.4	1900.5	2009.7	2218.2	2296.3	2560.2	2797.1
22.5°	1928.3	1928.3	1885.9	1850.1	1833.0	1868.0	1976.4	2191.2	2275.9	2544.7	2797.1
25°	2091.2	2083.8	2017.9	1946.9	1871.3	1856.5	1955.2	2174.2	2260.6	2536.5	2786.5
27.5°	2305.3	2298.9	2215.0	2109.8	1973.0	1881.1	1947.9	2160.3	2245.0	2524.3	2763.7
30°	2565.9	2560.2	2464.9	2327.2	2125.3	1958.5	1965.0	2150.6	2232.7	2503.9	2725.5
32.5°	2825.6	2822.4	2746.7	2605.8	2335.5	2089.5	2009.7	2148.9	2226.3	2479.5	2679.0
35°	3087.0	3087.0	3040.7	2921.6	2618.0	2286.5	2103.3	2179.1	2238.5	2466.6	2639.2
37.5°	3472.9	3457.5	3371.2	3248.2	2973.7	2542.3	2254.8	2242.6	2285.7	2488.6	2626.1
40°	4070.7	4025.9	3810.2	3603.3	3362.3	2869.6	2476.3	2365.5	2391.6	2563.5	2657.0
42.5°	4696.1	4625.3	4339.4	4008.9	3763.7	3273.6	2767.0	2565.1	2564.2	2708.4	2755.6
45°	5232.6	5196.1	4886.6	4467.4	4222.2	3727.8	3134.2	2861.6	2832.1	2933.1	2945.4
47.5°	5544.6	5520.2	5333.6	4952.5	4766.0	4264.6	3600.0	3272.6	3217.3	3277.6	3258.8
50°	5458.3	5481.8	5428.2	5233.5	5350.8	5018.6	4193.6	3836.2	3731.1	3791.3	3745.8
52.5°	5003.9	5067.3	5115.5	5152.9	5687.1	6027.4	4939.6	4539.8	4452.5	4441.9	4398.0
55°	4185.6	4286.5	4437.9	4713.1	5596.7	6837.7	6242.4	5390.6	5263.7	5196.9	5214.0
57.5°	2848.4	3001.5	3328.1	3851.7	5126.8	7182.9	8169.0	6490.1	6275.0	6037.2	6092.7
60°	1569.2	1697.0	2085.4	2613.1	4054.4	7131.6	9876.7	8276.5	7599.9	6969.6	7083.7
62.5°	1015.4	1043.1	1332.1	1784.9	2488.6	6296.2	10825.4	11262.6	9828.6	8199.2	8359.6
65°	815.9	835.5	977.1	1439.8	1733.6	4050.4	10867.6	14360.2	13414.8	9870.1	9875.1
67.5°	797.2	806.1	888.5	1210.8	1626.1	2205.1	9393.8	15581.7	15800.7	11842.4	10888.9
68°	808.7	819.2	902.3	1173.5	1625.4	2032.5	8682.1	15563.0	15938.4	12172.3	10888.9
70°	713.3	726.4	920.1	1214.1	1556.1	1747.6	5945.3	14736.4	15340.6	12930.4	10331.9
72.5°	372.9	362.3	455.3	958.4	1751.5	1820.8	3140.7	12311.5	13016.6	11975.1	8926.4
75°	290.7	264.6	254.8	378.6	1540.7	1888.3	1824.1	8750.5	9283.1	8632.4	5966.5
77.5°	273.7	241.9	223.0	223.9	678.3	1965.0	1475.6	5149.7	5149.7	4117.9	1903.9
80°	219.8	190.5	178.4	203.6	327.3	1811.1	1539.9	2346.8	2001.6	1064.3	524.4
82.5°	144.9	129.4	130.3	165.3	248.3	1209.3	1783.3	1158.8	870.5	471.5	308.6
85°	92.0	79.1	87.9	115.6	185.7	539.1	1765.3	805.3	576.5	264.6	153.9
87.5°	46.4	35.8	43.9	60.2	113.1	154.7	1453.5	719.1	427.6	110.0	83.9
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°	2712.4	2712.4	2712.4	2712.4	2712.4	2712.4	2712.4	2712.4	2712.4	2712.4	2712.4
2.5°	2699.3	2681.5	2672.5	2657.8	2639.9	2622.1	2609.8	2604.1	2601.0	2602.5	2601.8
5°	2719.0	2695.4	2657.0	2602.5	2546.3	2486.9	2441.2	2406.3	2384.3	2377.8	2376.1
7.5°	2733.6	2699.3	2627.7	2528.4	2432.3	2328.0	2239.4	2168.5	2120.4	2098.5	2097.6
10°	2731.1	2687.2	2574.1	2427.4	2286.5	2133.5	1994.2	1875.3	1789.1	1747.6	1745.9
12.5°	2733.6	2673.4	2508.1	2309.4	2107.5	1888.3	1681.5	1496.7	1367.9	1306.9	1304.5
15°	2743.5	2658.8	2440.4	2177.4	1898.2	1588.7	1293.1	1061.1	943.8	903.9	903.9
17.5°	2742.5	2634.3	2362.4	2024.4	1649.7	1235.3	882.8	739.3	727.9	764.6	770.3
20°	2726.3	2595.3	2261.4	1842.8	1358.2	855.0	598.5	578.1	669.3	770.3	781.7
22.5°	2701.1	2544.7	2144.9	1632.0	1018.7	556.9	461.6	492.6	616.4	741.8	759.7
25°	2666.0	2483.6	2011.3	1386.8	677.5	400.6	385.2	423.5	510.5	594.5	607.4
27.5°	2614.7	2406.3	1865.6	1121.4	432.4	329.8	335.4	362.3	399.8	435.7	443.0
30°	2550.4	2315.9	1706.8	827.2	328.2	294.7	304.5	320.9	337.1	360.0	364.8
32.5°	2485.3	2223.8	1541.5	568.4	286.6	276.0	285.8	294.7	308.6	324.1	327.3
35°	2426.6	2138.3	1371.4	396.5	268.8	263.8	268.8	274.4	288.3	303.7	305.3
37.5°	2384.3	2068.3	1193.8	313.5	258.2	253.2	255.7	258.2	274.4	297.2	299.7
40°	2378.6	2021.9	1013.7	281.8	250.0	243.5	241.9	243.5	264.6	290.7	293.1
42.5°	2434.0	2024.4	837.8	268.8	243.5	236.2	229.6	232.9	251.6	271.9	273.7
45°	2565.1	2081.4	685.6	263.1	237.8	232.1	222.3	223.9	232.9	243.5	245.1
47.5°	2796.3	2206.0	569.2	259.8	232.9	228.0	215.9	210.9	211.7	217.4	217.4
50°	3165.9	2414.5	498.4	256.5	228.8	219.8	206.0	196.3	193.9	197.1	197.8
52.5°	3717.2	2771.9	464.2	250.0	221.5	209.2	193.9	184.1	180.0	183.3	183.3
55°	4462.4	3342.8	447.9	241.0	212.4	196.3	182.4	174.2	170.9	173.5	173.5
57.5°	5311.7	4084.6	475.6	228.8	201.1	182.4	172.7	166.9	164.5	166.9	167.8
60°	6320.7	5055.2	666.2	213.3	189.0	170.1	164.5	161.2	159.5	162.1	162.1
62.5°	7661.7	6346.6	1031.0	201.1	175.9	158.8	157.2	155.5	153.9	156.3	156.3
65°	9109.6	7521.7	1061.1	193.9	164.5	148.9	149.8	149.8	148.2	150.6	150.6
67.5°	9570.5	7419.9	592.8	184.8	150.6	139.2	142.6	142.6	141.8	144.2	143.3
68°	9472.7	7258.8	516.3	182.4	148.2	136.8	140.0	140.9	140.0	142.6	141.8
70°	8744.8	6372.8	339.6	168.5	137.6	128.6	133.6	134.3	133.6	136.8	136.1
72.5°	7218.8	4780.1	250.7	147.4	124.5	118.0	123.0	123.7	124.5	127.9	127.0
75°	4584.5	2639.9	197.8	125.5	111.6	105.9	110.8	113.1	114.9	119.7	117.3
77.5°	1255.7	801.3	160.3	106.7	96.1	93.7	96.8	100.2	101.8	107.4	103.5
80°	439.7	354.2	133.6	90.4	79.8	79.1	82.3	85.5	87.1	92.0	87.1
82.5°	267.1	231.3	106.7	70.8	62.7	62.0	65.9	69.2	70.8	70.8	67.6
85°	139.2	122.2	78.2	49.6	43.2	40.8	48.1	52.1	52.9	52.1	49.6
87.5°	78.2	69.2	41.5	23.6	19.6	20.3	25.2	30.9	33.3	32.6	30.9
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)