

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: P195158

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-7060-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195158
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
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-SL3-7060-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10340 lumens
Efficiency: N/A
Efficacy: 91.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

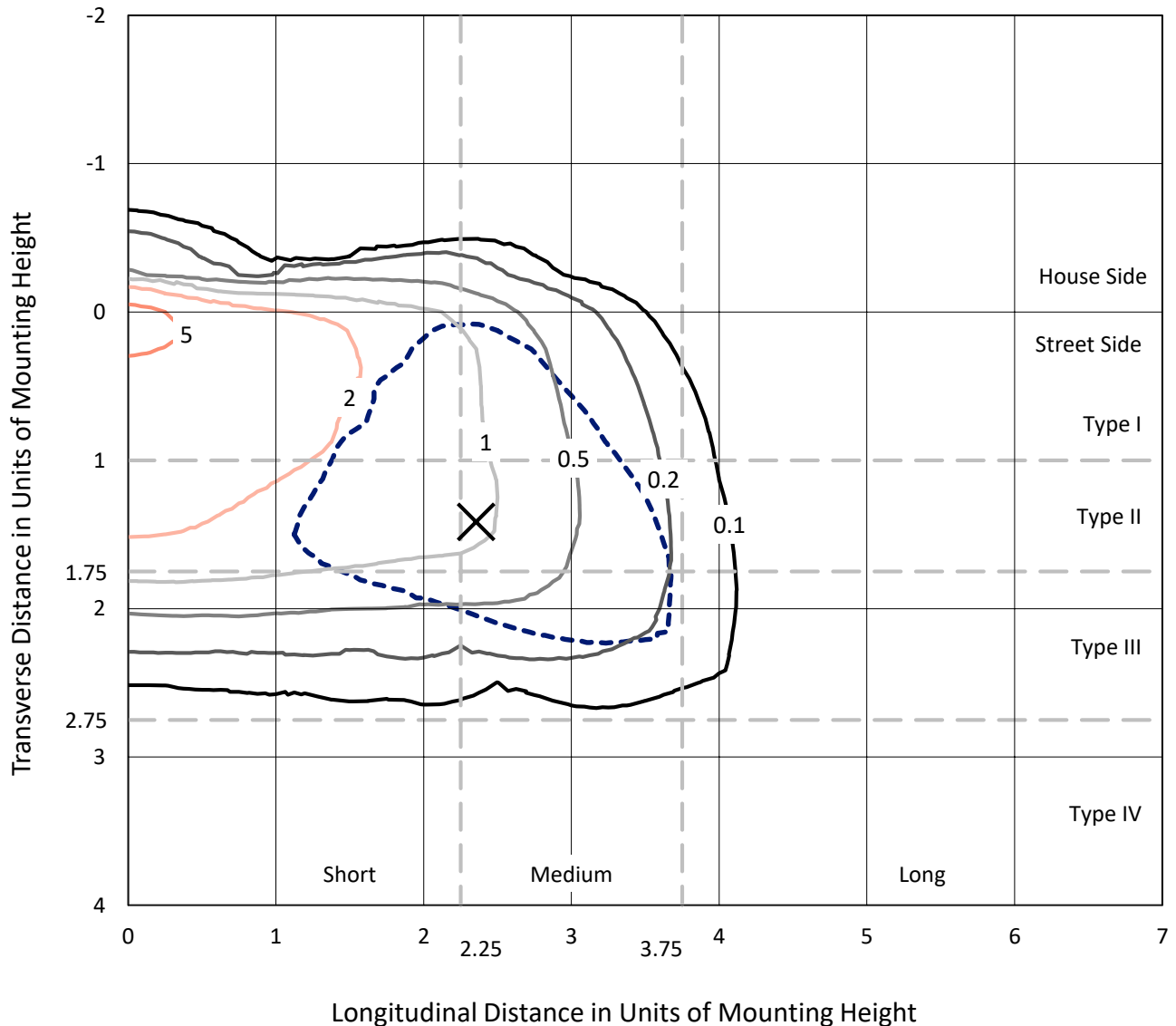
Input Watts (W): 113
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

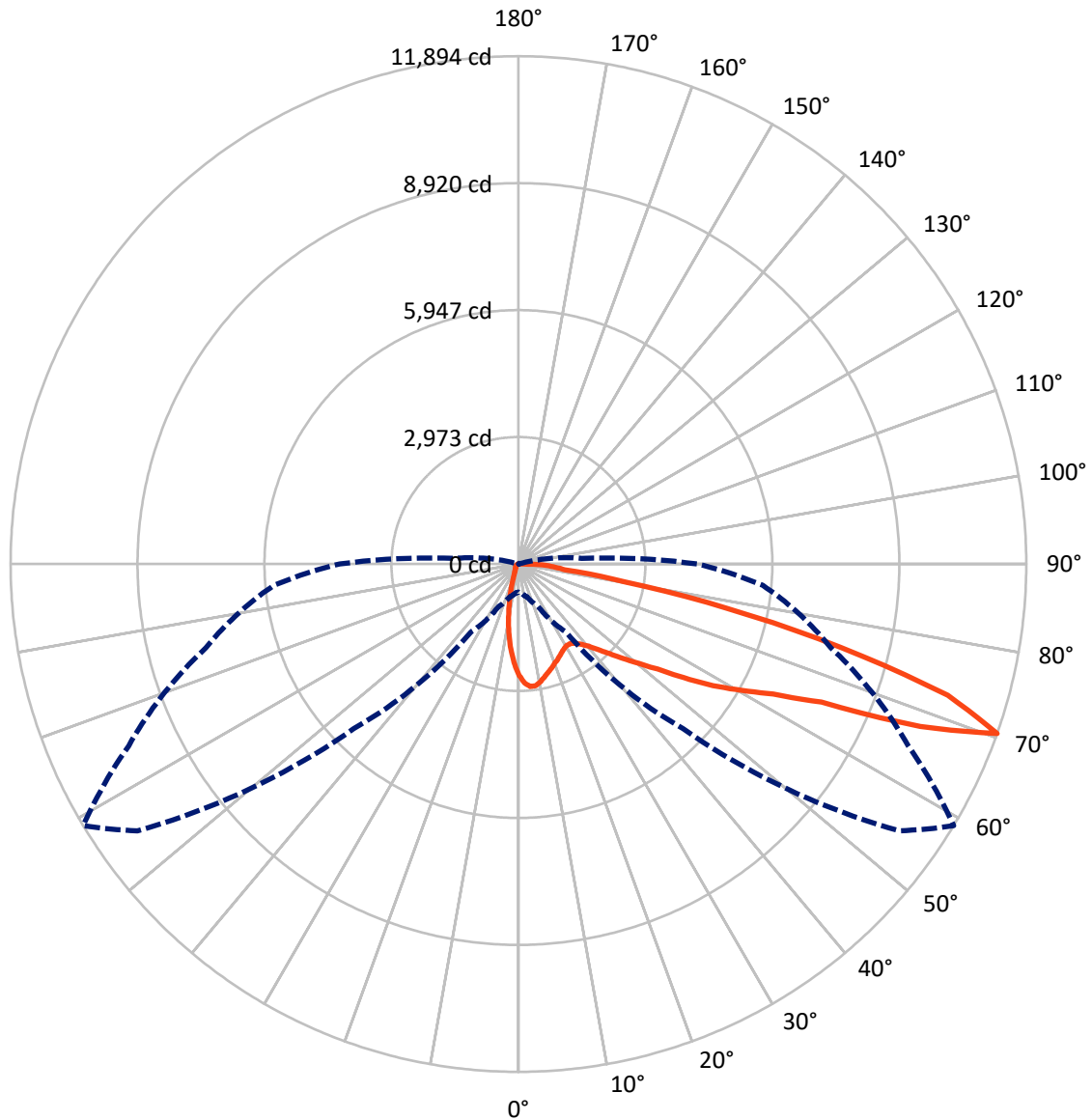
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	794.9	0.0	794.9
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	9545.1	0.0	9545.1
	% Fixture	92.3	0.0	92.3
Total	Lumens	10340.0	0.0	10340.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.0	2.1
10°-20°	450.9	4.4
20°-30°	610.4	5.9
30°-40°	881.0	8.5
40°-50°	1463.1	14.1
50°-60°	2237.9	21.6
60°-70°	2783.4	26.9
70°-80°	1538.7	14.9
80°-90°	159.5	1.5
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°	10340.0	100.0
0°-180°	10340.0	100.0



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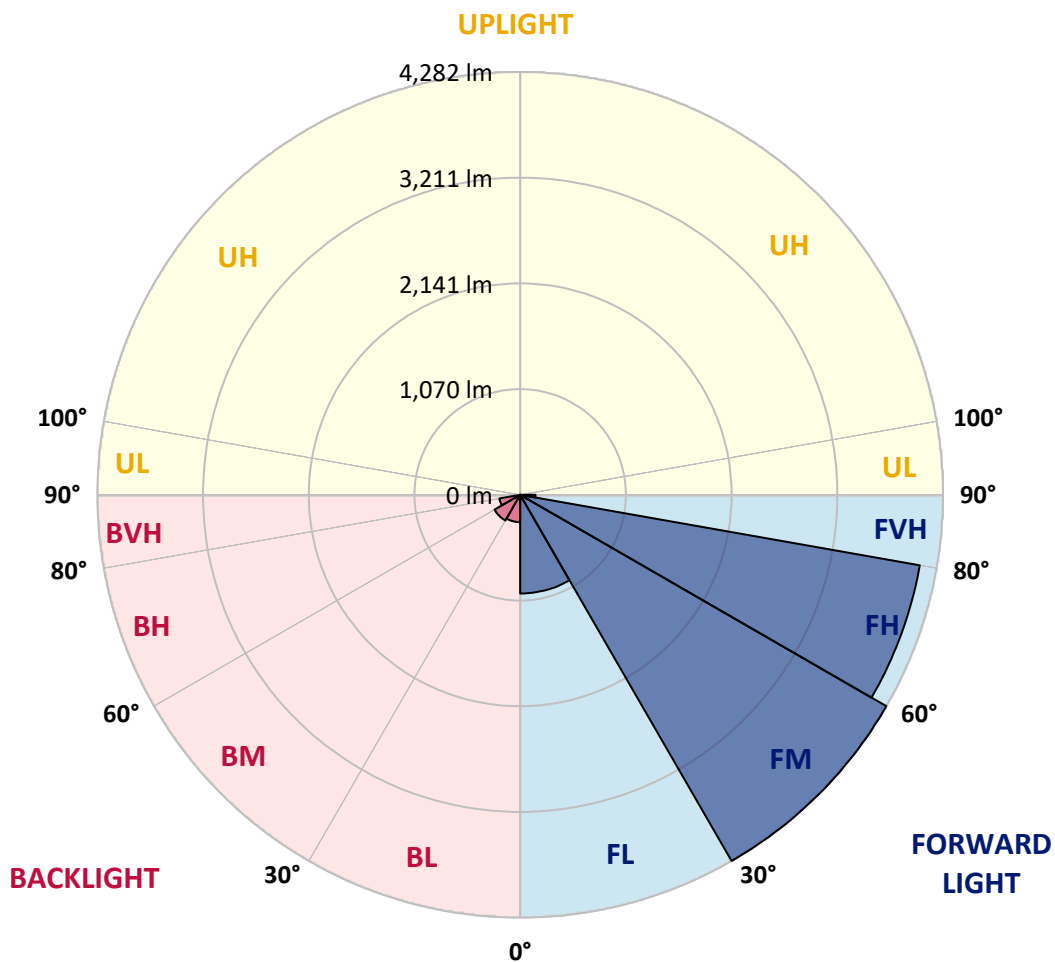
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	999.4	9.7			
FM	(30°-60°)	4281.9	41.4			
FH	(60°-80°)	4108.9	39.7			G2/5000
FVH	(80°-90°)	154.9	1.5			G2/225
BL	(0°-30°)	277.0	2.7	B1/500		
BM	(30°-60°)	300.0	2.9	B1/1000		
BH	(60°-80°)	213.2	2.1	B1/500		G1/500
BVH	(80°-90°)	4.6	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-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	2614.6	2614.6	2614.6	2614.6	2614.6	2614.6	2614.6	2614.6	2614.6	2614.6	2614.6
2.5°	2955.5	2950.8	2931.3	2927.4	2905.6	2861.9	2811.2	2790.9	2749.6	2684.0	2611.5
5°	3004.6	3007.0	3008.5	2999.9	2996.8	2960.9	2904.8	2880.6	2825.2	2717.6	2585.0
7.5°	2820.5	2826.8	2846.3	2854.9	2892.3	2906.3	2894.6	2879.0	2835.4	2708.2	2521.8
10°	2626.3	2638.0	2659.1	2673.1	2719.1	2756.6	2804.2	2808.1	2798.7	2677.0	2450.8
12.5°	2459.4	2470.3	2493.7	2521.8	2568.6	2617.0	2687.9	2712.9	2744.1	2656.7	2400.1
15°	2315.9	2319.0	2341.6	2376.7	2438.3	2504.6	2588.9	2625.5	2686.4	2648.9	2361.1
17.5°	2190.3	2191.1	2205.9	2237.9	2312.7	2400.1	2498.4	2546.8	2624.0	2638.0	2326.8
20°	2107.6	2106.8	2107.6	2124.8	2191.1	2294.8	2414.1	2464.9	2563.9	2624.8	2291.7
22.5°	2079.5	2075.6	2057.7	2051.4	2093.6	2184.8	2327.6	2393.9	2510.1	2620.9	2265.9
25°	2113.8	2111.5	2073.3	2037.4	2041.3	2098.2	2239.4	2320.5	2468.0	2634.9	2259.7
27.5°	2224.6	2219.9	2161.4	2091.2	2046.8	2056.9	2173.9	2258.9	2434.4	2669.2	2268.3
30°	2369.7	2370.5	2308.1	2223.0	2118.5	2060.8	2138.8	2219.1	2411.8	2720.7	2287.0
32.5°	2531.2	2530.4	2485.9	2387.6	2254.2	2132.6	2154.4	2222.3	2414.9	2796.4	2322.9
35°	2698.1	2689.5	2674.7	2588.1	2432.1	2258.1	2225.4	2275.3	2447.7	2896.2	2383.7
37.5°	2890.7	2887.6	2902.4	2811.2	2652.1	2443.0	2350.2	2383.7	2530.4	3043.6	2482.0
40°	3197.3	3180.1	3187.1	3063.1	2900.1	2691.8	2524.9	2533.5	2662.2	3238.6	2637.2
42.5°	3781.5	3712.1	3581.8	3349.4	3173.1	2968.0	2753.5	2738.6	2848.6	3475.0	2841.6
45°	4479.6	4400.1	4071.7	3665.3	3446.1	3264.4	3035.8	2996.0	3077.9	3756.6	3105.2
47.5°	5062.3	4976.5	4541.3	3995.2	3723.8	3570.1	3348.6	3301.8	3352.5	4083.4	3421.9
50°	5261.2	5213.6	4831.4	4269.8	4003.8	3913.3	3741.0	3663.0	3675.4	4436.0	3791.7
52.5°	5169.9	5153.6	4897.7	4457.8	4262.8	4292.4	4170.7	4088.8	4074.8	4821.3	4200.4
55°	4977.3	4969.5	4844.7	4562.3	4491.3	4639.5	4773.7	4702.7	4570.1	5230.8	4538.1
57.5°	4701.9	4731.6	4821.3	4763.6	4772.1	5006.1	5333.7	5370.4	5172.3	5556.8	4788.5
60°	3966.4	4045.9	4457.0	4979.6	5379.8	5616.1	5933.6	6002.2	5682.4	5779.9	5077.9
62.5°	2932.1	3046.0	3631.8	4592.0	5714.4	6776.0	6731.5	6701.1	6169.1	6078.7	5604.4
65°	1722.3	1855.7	2351.0	3588.1	5209.7	7521.7	8221.4	7800.2	6910.9	6699.6	6442.9
67.5°	858.0	858.8	1082.7	1893.9	3850.2	7001.4	10396.1	10152.7	8488.1	7614.5	6773.7
70°	659.9	677.8	801.1	1100.6	1946.9	5453.1	10894.5	11893.7	10073.1	7574.0	5747.2
72.5°	559.3	571.0	712.9	957.9	1455.5	2993.7	9431.2	10513.1	9612.1	6399.3	4236.3
75°	402.5	411.8	631.0	868.9	1340.1	1485.2	6469.5	7797.0	7212.0	4501.5	2331.5
77.5°	99.8	99.1	220.0	705.1	1198.9	1237.1	3712.1	4999.9	4138.0	1843.2	599.1
80°	44.5	42.9	49.9	148.2	1115.4	1167.7	1632.6	2524.9	1587.3	298.7	183.3
82.5°	31.2	29.6	31.2	54.6	372.8	1083.4	986.7	1094.4	581.1	102.2	78.0
85°	10.1	9.4	17.2	46.0	104.5	624.8	962.5	817.5	432.1	43.7	52.3
87.5°	1.6	1.6	6.2	25.0	30.4	208.3	564.7	566.3	194.2	25.7	23.4
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°	2614.6	2614.6	2614.6	2614.6	2614.6	2614.6	2614.6	2614.6	2614.6	2614.6	2614.6
2.5°	2574.8	2528.8	2464.1	2399.3	2340.8	2280.8	2232.4	2209.8	2199.6	2185.6	2155.2
5°	2515.6	2432.1	2290.1	2150.5	2020.2	1895.4	1788.6	1727.7	1662.2	1659.1	1627.1
7.5°	2420.4	2301.8	2078.0	1861.1	1662.2	1471.9	1308.1	1202.0	1129.5	1084.2	1053.0
10°	2314.3	2162.2	1865.8	1560.8	1290.1	1035.9	825.3	688.0	604.5	562.4	538.2
12.5°	2230.1	2039.0	1656.8	1273.0	933.7	642.0	446.2	346.3	301.9	284.7	276.9
15°	2157.5	1925.9	1461.0	1015.6	623.2	368.9	258.2	225.4	218.4	218.4	217.6
17.5°	2084.2	1816.7	1270.6	762.9	392.3	241.8	203.6	198.9	199.7	202.0	202.0
20°	2014.8	1712.9	1087.3	543.7	257.4	193.4	184.9	183.3	185.6	188.8	188.0
22.5°	1958.6	1621.7	915.7	373.6	198.1	175.5	170.0	167.7	169.3	171.6	170.8
25°	1918.8	1543.7	758.2	260.5	172.4	159.9	153.7	150.5	149.0	150.5	149.8
27.5°	1894.7	1478.1	610.0	195.8	154.4	144.3	136.5	130.3	126.4	126.4	124.8
30°	1879.1	1416.5	478.1	162.2	139.6	128.7	117.8	109.2	103.0	101.4	100.6
32.5°	1878.3	1363.5	357.2	143.5	125.6	113.1	99.8	88.9	81.9	80.3	79.6
35°	1897.8	1320.6	262.9	129.5	113.1	98.3	83.5	71.8	65.5	65.5	64.7
37.5°	1948.5	1295.6	198.9	118.6	103.0	85.8	70.2	59.3	53.8	55.4	55.4
40°	2042.9	1290.9	162.2	110.0	94.4	74.9	56.9	48.4	46.0	48.4	48.4
42.5°	2187.2	1315.9	144.3	103.7	86.6	64.0	47.6	41.3	40.6	42.9	42.9
45°	2375.1	1365.0	134.2	98.3	78.0	53.0	39.8	35.9	35.1	38.2	38.2
47.5°	2602.9	1431.3	124.8	92.0	69.4	43.7	33.5	30.4	30.4	33.5	34.3
50°	2872.8	1521.0	115.4	85.8	62.4	36.7	28.1	25.7	26.5	29.6	30.4
52.5°	3183.2	1631.0	106.9	80.3	54.6	29.6	23.4	21.8	22.6	25.7	26.5
55°	3450.8	1727.0	96.7	74.9	44.5	24.2	19.5	18.7	19.5	23.4	23.4
57.5°	3684.0	1819.0	87.4	66.3	35.1	19.5	15.6	15.6	17.2	21.1	21.8
60°	3993.7	1964.1	79.6	56.2	26.5	14.8	12.5	13.3	15.6	18.7	19.5
62.5°	4542.0	2210.6	69.4	46.8	19.5	11.7	10.1	10.9	14.0	17.9	18.7
65°	5228.4	2443.8	57.7	39.0	14.8	8.6	7.8	10.1	14.0	17.9	18.7
67.5°	5158.2	2125.5	45.2	31.2	10.9	7.0	6.2	9.4	13.3	17.9	18.7
70°	4183.2	1489.8	33.5	21.1	8.6	6.2	6.2	9.4	13.3	17.2	17.9
72.5°	2901.7	829.2	25.7	14.0	7.8	6.2	5.5	8.6	12.5	17.2	17.9
75°	1380.6	254.3	20.3	10.1	7.0	5.5	4.7	8.6	12.5	17.2	17.9
77.5°	265.2	64.7	16.4	8.6	6.2	5.5	4.7	7.8	12.5	16.4	17.2
80°	89.7	28.9	13.3	7.8	6.2	5.5	4.7	7.8	11.7	15.6	16.4
82.5°	49.1	16.4	11.7	7.0	6.2	4.7	3.9	7.0	10.9	15.6	16.4
85°	38.2	11.7	9.4	7.0	6.2	4.7	3.9	7.0	10.9	14.8	15.6
87.5°	19.5	8.6	7.8	7.0	6.2	4.7	3.9	6.2	10.1	14.0	15.6
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)