

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: P197049

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197049
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-SL2-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 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: 11708 lumens
Efficiency: N/A
Efficacy: 94.4 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

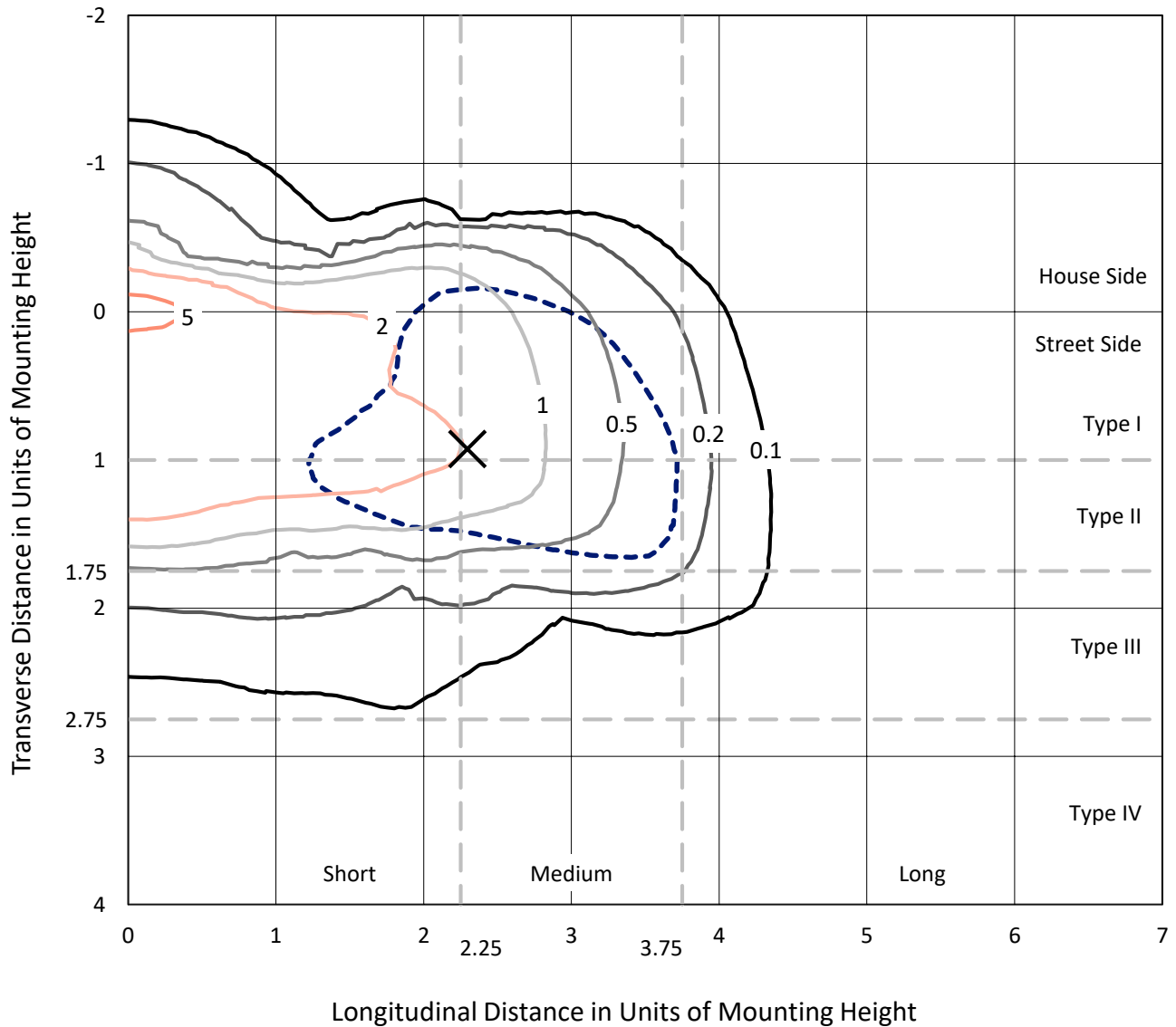
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

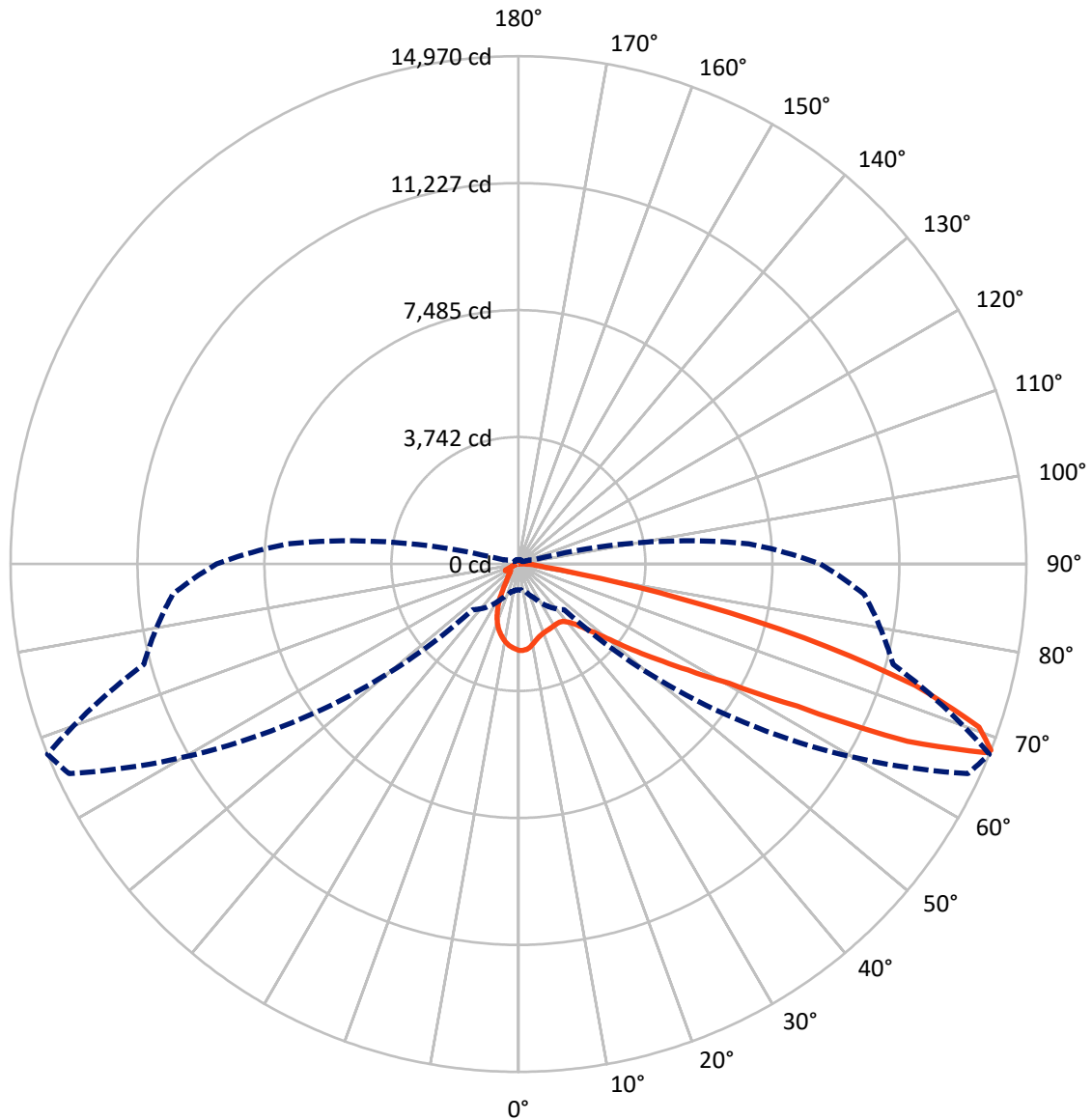
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.4 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	1915.4	0.0	1915.4
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	9792.5	0.0	9792.5
	% Fixture	83.6	0.0	83.6
Total	Lumens	11708.0	0.0	11708.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.3	1.9
10°-20°	506.3	4.3
20°-30°	684.7	5.8
30°-40°	965.4	8.2
40°-50°	1587.5	13.6
50°-60°	2460.8	21.0
60°-70°	3190.6	27.3
70°-80°	1830.9	15.6
80°-90°	263.4	2.3
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°	11708.0	100.0
0°-180°	11708.0	100.0

Coefficient of Utilization



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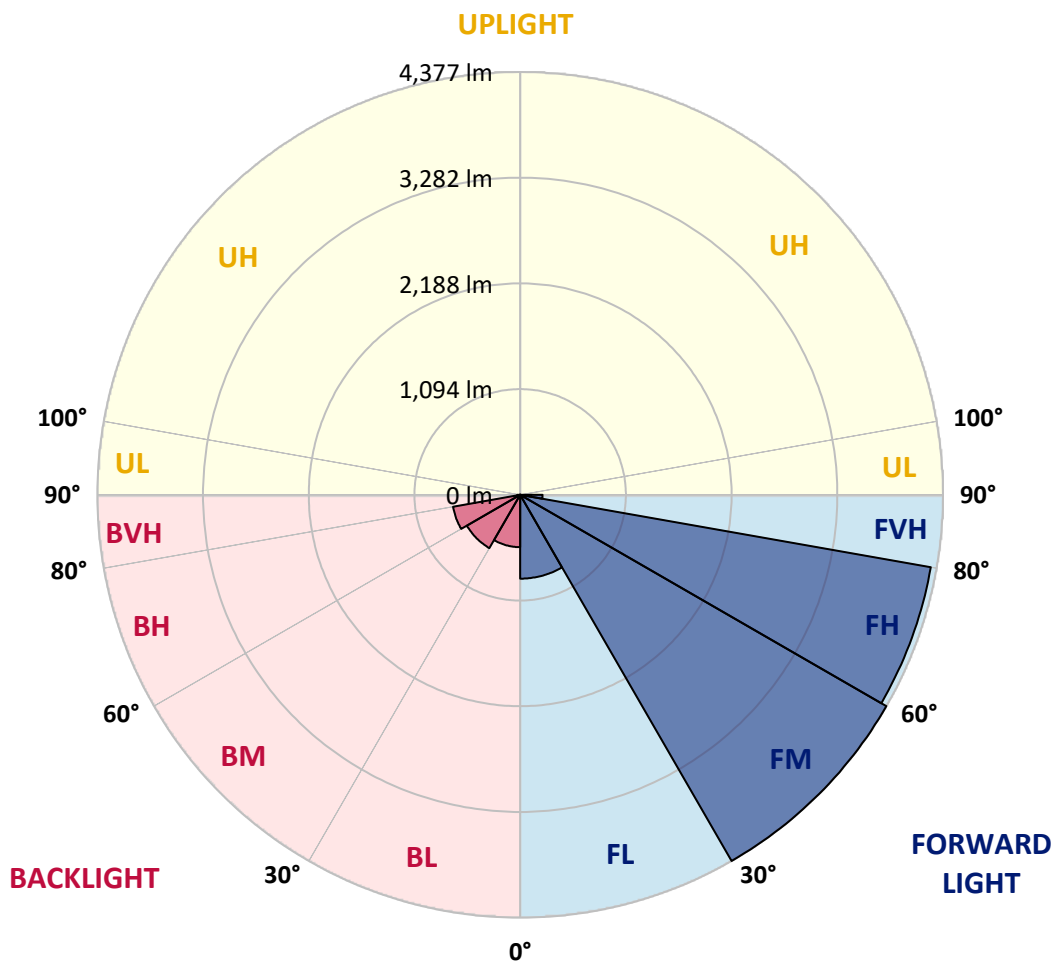
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	867.8	7.4			
FM (30°-60°)	4376.7	37.4			
FH (60°-80°)	4316.1	36.9			G2/5000
FVH (80°-90°)	232.0	2.0			G3/500
BL (0°-30°)	541.5	4.6	B2/1000		
BM (30°-60°)	637.1	5.4	B1/1000		
BH (60°-80°)	705.4	6.0	B2/1000		G2/1000
BVH (80°-90°)	31.4	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°	2547.6	2547.6	2547.6	2547.6	2547.6	2547.6	2547.6	2547.6	2547.6	2547.6	2547.6
2.5°	2479.5	2499.4	2499.4	2513.9	2526.9	2537.6	2546.8	2546.8	2546.8	2540.7	2535.3
5°	2218.7	2245.5	2249.3	2286.0	2334.2	2393.1	2458.8	2517.0	2528.4	2549.9	2558.3
7.5°	2037.4	2045.8	2060.4	2085.6	2134.6	2207.2	2310.5	2440.5	2471.8	2539.1	2574.3
10°	1908.9	1915.8	1928.1	1953.3	1997.7	2063.4	2165.2	2334.2	2386.2	2505.5	2575.1
12.5°	1814.9	1820.2	1831.7	1854.6	1899.8	1958.7	2062.7	2238.6	2302.8	2471.8	2585.8
15°	1741.5	1750.6	1759.8	1782.0	1827.9	1884.5	1990.0	2169.0	2238.6	2445.1	2605.7
17.5°	1712.4	1717.0	1718.5	1730.0	1771.3	1828.6	1934.2	2120.0	2191.9	2423.7	2621.0
20°	1730.7	1731.5	1716.2	1708.6	1732.3	1785.0	1887.5	2083.3	2156.7	2404.5	2627.1
22.5°	1811.1	1811.1	1771.3	1737.6	1721.6	1754.5	1856.2	2058.1	2137.6	2390.0	2627.1
25°	1964.0	1957.1	1895.2	1828.6	1757.5	1743.7	1836.3	2042.0	2123.1	2382.4	2617.2
27.5°	2165.2	2159.0	2080.3	1981.6	1853.1	1766.7	1829.4	2029.0	2108.6	2370.9	2595.7
30°	2409.9	2404.5	2315.1	2185.8	1996.1	1839.3	1845.5	2019.8	2097.1	2351.8	2559.8
32.5°	2653.9	2650.8	2579.7	2447.4	2193.5	1962.5	1887.5	2018.3	2091.0	2328.8	2516.2
35°	2899.4	2899.4	2855.8	2744.1	2458.8	2147.6	1975.5	2046.6	2102.4	2316.6	2478.7
37.5°	3261.9	3247.4	3166.3	3050.8	2793.1	2387.7	2117.7	2106.3	2146.8	2337.2	2466.5
40°	3823.2	3781.2	3578.5	3384.3	3157.9	2695.2	2325.8	2221.8	2246.2	2407.6	2495.5
42.5°	4410.6	4344.1	4075.6	3765.1	3534.9	3074.5	2598.8	2409.1	2408.4	2543.7	2588.1
45°	4914.6	4880.2	4589.6	4195.7	3965.5	3501.3	2943.7	2687.5	2660.0	2754.8	2766.3
47.5°	5207.5	5184.6	5009.5	4651.5	4476.4	4005.3	3381.2	3073.7	3021.7	3078.3	3060.7
50°	5126.5	5148.6	5098.2	4915.4	5025.5	4713.5	3938.7	3603.0	3504.3	3560.9	3518.1
52.5°	4699.7	4759.4	4804.5	4839.7	5341.4	5661.1	4639.3	4263.8	4181.9	4172.0	4130.7
55°	3931.1	4025.9	4168.2	4426.7	5256.5	6422.0	5863.0	5063.0	4943.7	4881.0	4897.0
57.5°	2675.3	2819.1	3125.7	3617.5	4815.2	6746.3	7672.5	6095.5	5893.6	5670.2	5722.3
60°	1473.8	1593.8	1958.7	2454.3	3808.0	6698.1	9276.3	7773.5	7137.9	6545.9	6653.0
62.5°	953.7	979.7	1251.2	1676.4	2337.2	5913.5	10167.3	10578.0	9231.2	7700.8	7851.5
65°	766.3	784.7	917.8	1352.2	1628.3	3804.1	10207.1	13487.3	12599.4	9270.2	9274.8
67.5°	748.7	757.2	834.4	1137.3	1527.3	2071.1	8822.8	14634.5	14840.2	11122.5	10226.9
68°	759.4	769.4	847.4	1102.1	1526.5	1908.9	8154.3	14616.9	14969.5	11432.3	10226.9
70°	670.0	682.2	864.2	1140.3	1461.5	1641.3	5583.8	13840.6	14408.1	12144.3	9703.8
72.5°	350.3	340.3	427.5	900.2	1645.1	1710.1	2949.8	11563.0	12225.4	11247.2	8383.8
75°	273.0	248.6	239.4	355.6	1447.0	1773.6	1713.2	8218.6	8718.7	8107.7	5603.7
77.5°	257.0	227.1	209.6	210.3	637.1	1845.5	1385.8	4836.6	4836.6	3867.6	1788.1
80°	206.5	179.0	167.5	191.2	307.5	1700.9	1446.2	2204.2	1879.9	999.6	492.5
82.5°	136.1	121.6	122.4	155.3	233.3	1135.7	1674.9	1088.3	817.6	442.8	289.9
85°	86.4	74.2	82.6	108.6	174.4	506.3	1658.1	756.4	541.5	248.6	144.5
87.5°	43.6	33.7	41.3	56.6	106.3	145.3	1365.2	675.3	401.5	103.2	78.8
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°	2547.6	2547.6	2547.6	2547.6	2547.6	2547.6	2547.6	2547.6	2547.6	2547.6	2547.6
2.5°	2535.3	2518.5	2510.1	2496.3	2479.5	2462.7	2451.2	2445.8	2442.8	2444.3	2443.5
5°	2553.7	2531.5	2495.5	2444.3	2391.5	2335.7	2292.9	2260.0	2239.3	2233.2	2231.7
7.5°	2567.4	2535.3	2468.0	2374.7	2284.5	2186.6	2103.2	2036.7	1991.5	1970.9	1970.1
10°	2565.1	2523.8	2417.5	2279.9	2147.6	2003.8	1873.0	1761.3	1680.3	1641.3	1639.7
12.5°	2567.4	2510.8	2355.6	2169.0	1979.3	1773.6	1579.3	1405.7	1284.9	1227.5	1225.2
15°	2576.6	2497.1	2292.1	2045.1	1782.8	1492.1	1214.5	996.5	886.4	848.9	848.9
17.5°	2575.9	2474.1	2218.7	1901.3	1549.5	1160.2	829.0	694.4	683.7	718.1	723.5
20°	2560.6	2437.4	2123.9	1730.7	1275.7	803.0	562.1	543.0	628.7	723.5	734.2
22.5°	2536.8	2390.0	2014.5	1532.7	956.8	523.1	433.6	462.7	579.0	696.7	713.6
25°	2504.0	2332.6	1889.1	1302.5	636.3	376.3	361.8	397.7	479.5	558.3	570.5
27.5°	2455.8	2260.0	1752.2	1053.1	406.1	309.7	315.1	340.3	375.5	409.2	416.1
30°	2395.4	2175.1	1603.0	777.0	308.2	276.9	286.0	301.3	316.6	338.0	342.6
32.5°	2334.2	2088.7	1447.8	533.8	269.2	259.3	268.4	276.9	289.9	304.4	307.5
35°	2279.1	2008.4	1287.9	372.5	252.4	247.8	252.4	257.7	270.7	285.3	286.8
37.5°	2239.3	1942.6	1121.2	294.4	242.4	237.9	240.1	242.4	257.7	279.2	281.4
40°	2234.0	1899.0	952.2	264.6	234.8	228.7	227.1	228.7	248.6	273.0	275.3
42.5°	2286.0	1901.3	787.0	252.4	228.7	221.8	215.7	218.7	236.3	255.4	257.0
45°	2409.1	1954.8	644.0	247.0	223.3	218.0	208.8	210.3	218.7	228.7	230.2
47.5°	2626.3	2071.8	534.6	244.0	218.7	214.1	202.7	198.1	198.8	204.2	204.2
50°	2973.6	2267.6	468.1	240.9	214.9	206.5	193.5	184.3	182.0	185.1	185.8
52.5°	3491.3	2603.4	435.9	234.8	208.0	196.6	182.0	172.8	169.0	172.1	172.1
55°	4191.1	3139.5	420.6	226.4	199.6	184.3	171.3	163.7	160.6	162.9	162.9
57.5°	4988.8	3836.2	446.6	214.9	188.9	171.3	162.1	156.8	154.5	156.8	157.5
60°	5936.4	4747.9	625.6	200.4	177.4	159.8	154.5	151.4	149.9	152.2	152.2
62.5°	7196.0	5960.9	968.2	188.9	165.2	149.1	147.6	146.1	144.5	146.8	146.8
65°	8555.8	7064.5	996.5	182.0	154.5	140.0	140.7	140.7	139.2	141.5	141.5
67.5°	8988.7	6968.9	556.8	173.6	141.5	130.8	133.8	133.8	133.1	135.4	134.6
68°	8896.9	6817.4	484.9	171.3	139.2	128.5	131.5	132.3	131.5	133.8	133.1
70°	8213.2	5985.3	318.9	158.3	129.3	120.8	125.4	126.2	125.4	128.5	127.7
72.5°	6780.0	4489.4	235.6	138.4	117.0	110.9	115.5	116.2	117.0	120.1	119.3
75°	4305.8	2479.5	185.8	117.8	104.8	99.4	104.0	106.3	107.8	112.4	110.1
77.5°	1179.3	752.6	150.7	100.2	90.2	88.0	91.0	94.1	95.6	101.0	97.1
80°	413.0	332.7	125.4	84.9	75.0	74.2	77.2	80.3	81.8	86.4	81.8
82.5°	250.9	217.2	100.2	66.5	58.9	58.1	61.9	65.0	66.5	66.5	63.5
85°	130.8	114.7	73.4	46.7	40.5	38.2	45.1	48.9	49.7	48.9	46.7
87.5°	73.4	65.0	39.0	22.2	18.4	19.1	23.7	29.1	31.4	30.6	29.1
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)