

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: P196641

Luminaire Tested: **NAV-AF-03-D-UNV-SL4-7030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196641
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)
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-SL4-7030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11530.1 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - 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

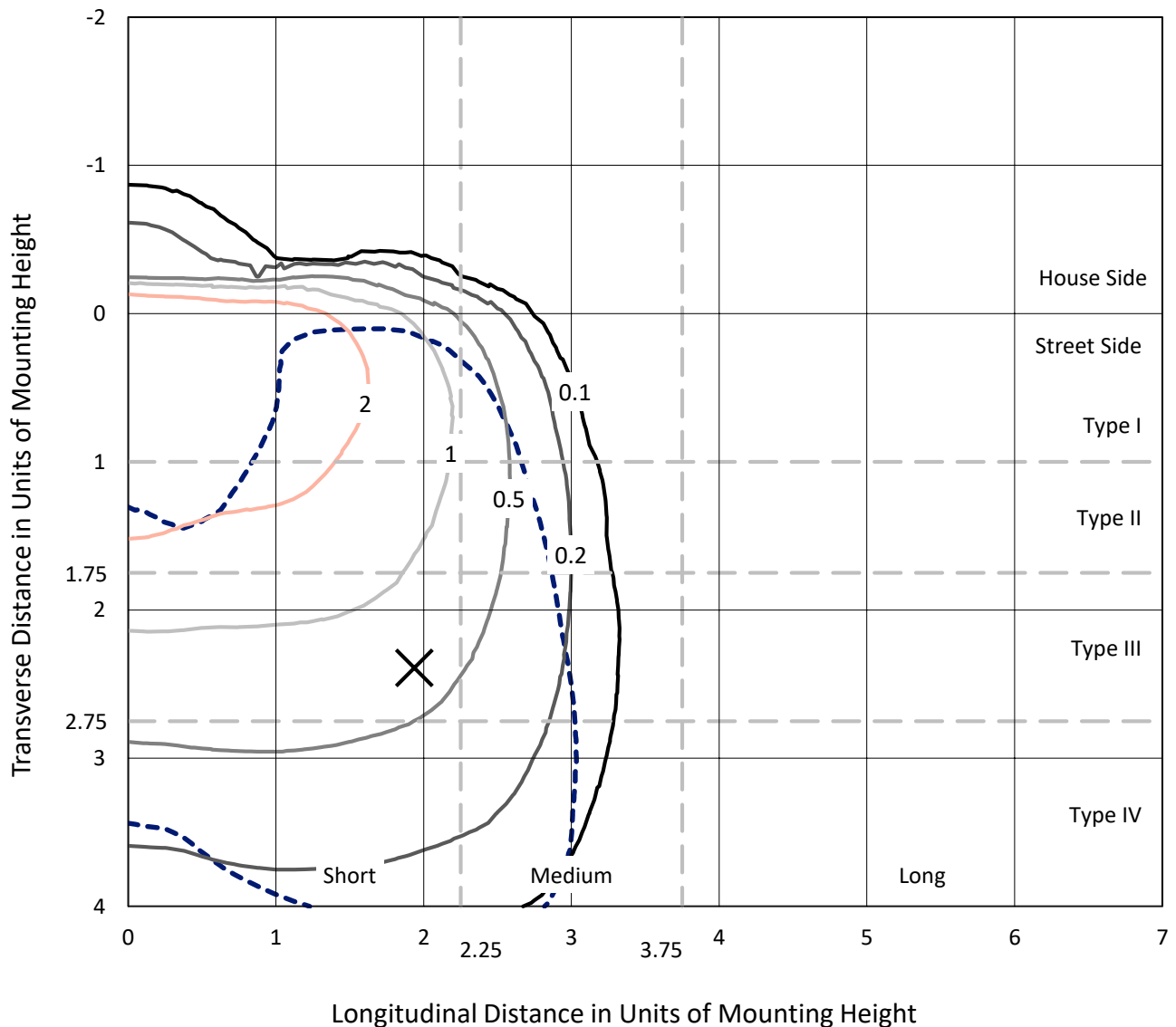


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

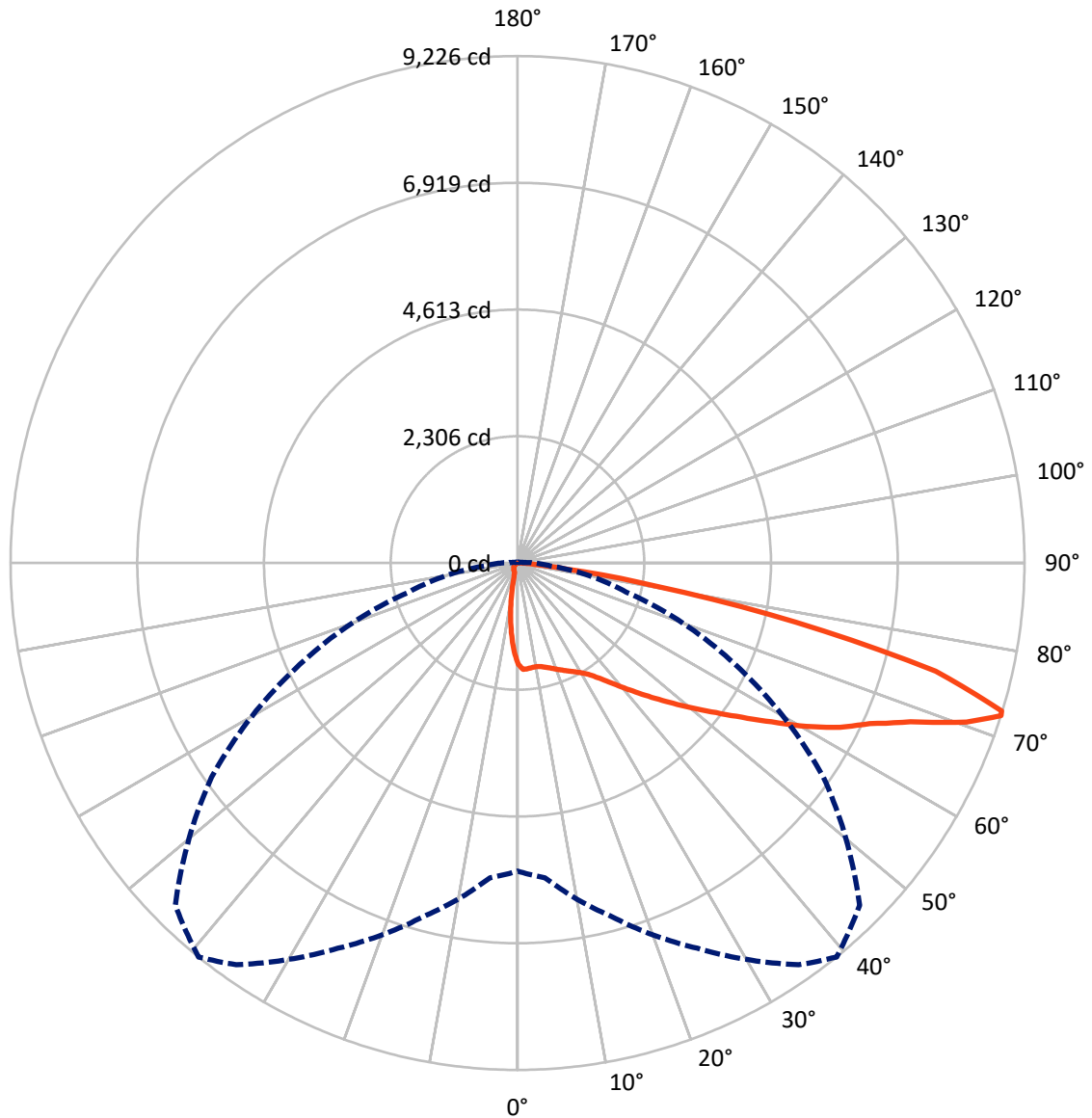


Based on 20 foot mounting height. Maximum calculated value = 4.8 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	755.7	0.0	755.7
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	10774.5	0.0	10774.5
	% Fixture	93.4	0.0	93.4
Total	Lumens	11530.1	0.0	11530.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.1	1.3
10°-20°	363.4	3.2
20°-30°	603.6	5.2
30°-40°	961.9	8.3
40°-50°	1587.8	13.8
50°-60°	2397.9	20.8
60°-70°	3123.6	27.1
70°-80°	2110.7	18.3
80°-90°	231.2	2.0
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°	11530.1	100.0
0°-180°	11530.1	100.0

Coefficient of Utilization



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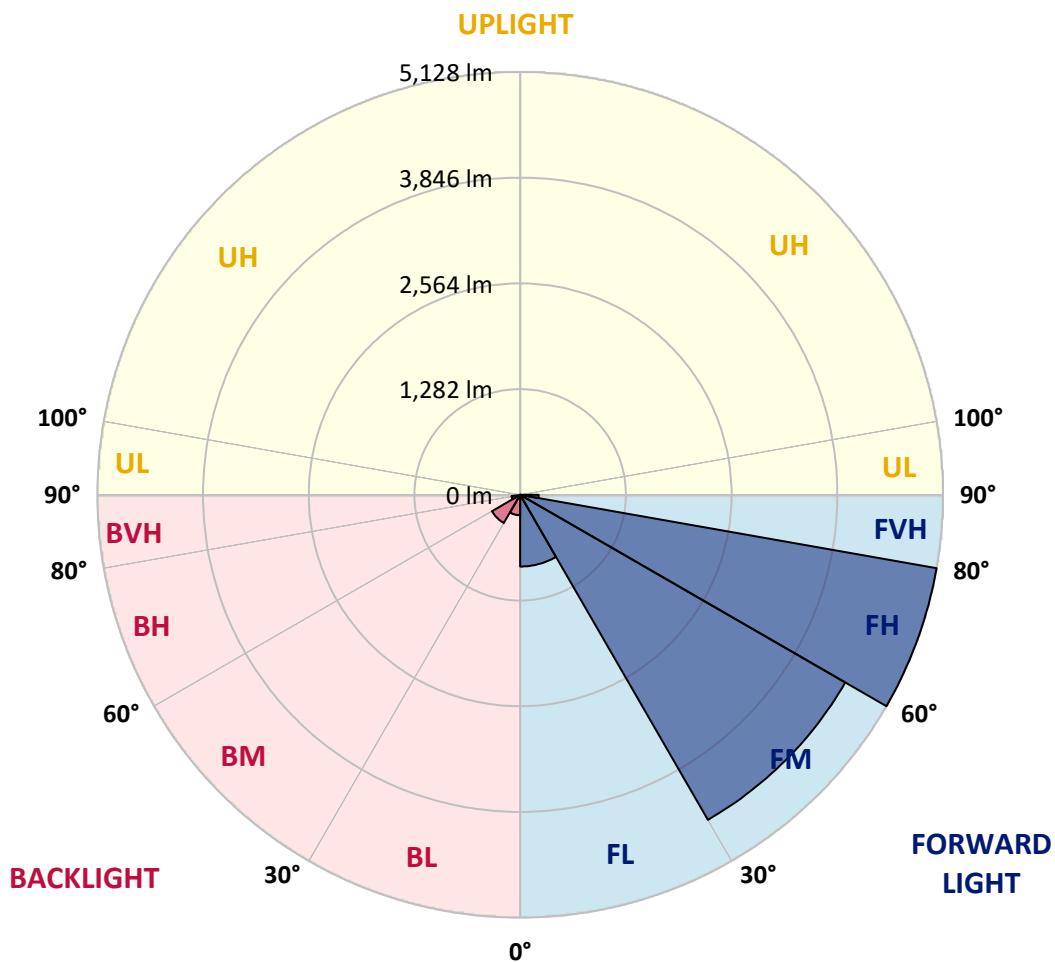
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	869.6	7.5			
FM	(30°-60°)	4552.2	39.5			
FH	(60°-80°)	5128.1	44.5			G3/7500
FVH	(80°-90°)	224.5	1.9			G2/225
BL	(0°-30°)	247.4	2.1	B1/500		
BM	(30°-60°)	395.4	3.4	B1/1000		
BH	(60°-80°)	106.2	0.9	B0/110		G0/110
BVH	(80°-90°)	6.7	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5
2.5°	1965.1	1968.8	1964.3	1956.1	1944.3	1937.0	1927.0	1905.3	1878.0	1854.5	1827.4
5°	1980.6	1982.3	1976.9	1961.5	1943.4	1933.4	1920.7	1897.2	1869.0	1836.4	1787.5
7.5°	1985.0	1984.1	1977.8	1958.8	1930.7	1917.9	1896.2	1867.2	1838.2	1808.4	1753.1
10°	1983.3	1983.3	1978.6	1960.5	1928.9	1917.1	1892.6	1861.8	1825.5	1795.5	1736.6
12.5°	1976.9	1980.6	1977.8	1967.9	1944.3	1935.2	1913.4	1882.6	1848.2	1817.4	1754.8
15°	1985.0	1990.4	1995.9	1992.4	1978.6	1970.6	1950.6	1918.9	1890.8	1858.2	1791.1
17.5°	2017.7	2029.5	2042.2	2043.0	2028.6	2014.0	1991.4	1958.8	1931.6	1901.6	1829.1
20°	2079.3	2088.4	2112.0	2116.5	2087.5	2066.6	2035.0	1996.8	1969.6	1944.3	1864.5
22.5°	2170.9	2180.9	2199.9	2193.5	2144.5	2120.0	2080.2	2036.7	2008.6	1994.1	1905.3
25°	2309.5	2312.3	2316.9	2288.8	2208.0	2180.9	2131.8	2082.9	2060.3	2058.5	1963.3
27.5°	2472.7	2476.4	2456.3	2393.9	2278.7	2243.4	2188.1	2143.6	2132.8	2146.4	2036.7
30°	2659.5	2660.4	2605.1	2503.5	2360.3	2321.3	2264.3	2215.3	2225.3	2258.8	2131.0
32.5°	2850.7	2841.7	2765.5	2633.1	2471.8	2424.7	2375.8	2326.7	2355.7	2423.8	2268.8
35°	3025.6	3022.0	2932.3	2778.1	2616.9	2575.1	2539.8	2488.2	2535.3	2645.8	2456.3
37.5°	3200.5	3197.8	3095.5	2935.0	2795.4	2765.5	2739.2	2699.4	2776.4	2938.6	2707.5
40°	3393.6	3389.1	3263.1	3109.0	3003.0	2986.6	2971.2	2954.1	3085.5	3311.1	3020.2
42.5°	3632.0	3612.1	3440.8	3298.4	3231.4	3235.9	3236.8	3254.1	3459.8	3754.3	3389.1
45°	3905.8	3861.3	3619.3	3501.5	3482.4	3509.6	3536.8	3608.5	3895.7	4264.7	3797.0
47.5°	4171.3	4099.7	3825.0	3720.0	3758.9	3815.2	3880.4	4019.9	4385.2	4798.5	4166.8
50°	4399.8	4326.3	4029.1	3942.1	4066.2	4149.5	4265.6	4476.8	4901.9	5250.0	4399.8
52.5°	4579.3	4521.2	4244.7	4186.7	4407.0	4521.2	4703.4	4980.8	5389.5	5547.3	4562.8
55°	4711.6	4682.6	4451.4	4459.6	4785.9	4950.9	5177.5	5491.1	5801.1	5778.4	4685.2
57.5°	4861.2	4838.4	4668.1	4781.4	5241.8	5454.9	5716.8	5968.8	6100.2	5964.3	4804.9
60°	5014.4	5021.5	4931.0	5171.1	5805.6	6041.3	6269.8	6332.2	6356.7	6152.8	4931.0
62.5°	5130.4	5161.2	5169.3	5591.7	6383.9	6585.2	6683.9	6639.5	6634.1	6405.7	4920.9
65°	5263.6	5344.3	5478.4	6053.1	6909.7	7042.0	7112.7	7177.0	7041.1	6480.9	4436.9
67.5°	5493.8	5620.8	5922.5	6618.7	7516.9	7712.7	7913.1	7845.1	7101.9	5716.8	3380.1
70°	5803.9	5958.8	6491.7	7357.4	8340.9	8668.9	8836.7	7791.6	6029.5	3950.2	1782.9
72°	5608.1	5748.5	6667.6	7734.5	8924.7	9225.6	8805.9	6796.4	4370.8	2047.6	597.3
72.5°	5417.6	5562.7	6611.4	7730.0	8982.6	9212.8	8605.6	6403.9	3867.7	1593.4	411.5
75°	3758.9	3942.1	5667.9	6948.7	8111.5	7858.7	6584.3	3877.7	1401.4	273.7	135.9
77.5°	1943.4	2084.7	3438.1	4910.1	5653.3	5177.5	3891.3	1682.3	388.0	145.0	89.7
80°	1204.6	1274.4	1608.0	2419.2	2936.8	2568.8	1716.8	679.8	248.3	86.1	71.6
82.5°	623.7	677.1	1012.5	976.2	1085.0	901.9	633.6	569.2	153.2	53.4	73.4
85°	204.9	217.5	621.8	649.0	464.2	311.8	281.1	542.9	44.5	34.4	62.5
87.5°	27.2	31.6	218.4	371.6	228.5	141.4	168.6	191.2	15.4	19.0	17.3
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°	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5
2.5°	1809.3	1797.5	1760.2	1723.1	1680.5	1641.5	1610.7	1590.9	1599.9	1569.9	1574.4
5°	1757.6	1727.6	1646.1	1558.1	1463.0	1374.2	1303.5	1250.9	1240.8	1195.6	1197.4
7.5°	1707.7	1658.8	1526.5	1381.4	1223.7	1095.9	979.8	878.3	842.1	804.9	783.2
10°	1680.5	1613.4	1425.9	1214.6	992.5	804.9	641.8	513.9	460.4	421.5	402.4
12.5°	1688.7	1599.9	1350.6	1063.2	771.4	532.9	362.5	269.3	236.5	218.4	212.1
15°	1715.8	1602.5	1282.6	915.5	561.0	322.7	213.0	182.3	179.5	178.5	177.6
17.5°	1741.3	1605.2	1211.0	761.4	375.3	205.7	171.3	168.6	168.6	168.6	168.6
20°	1767.5	1606.2	1132.2	600.1	246.6	168.6	161.3	159.5	161.3	161.3	161.3
22.5°	1798.3	1612.5	1056.0	443.3	182.3	158.7	154.0	153.2	154.0	154.0	153.2
25°	1836.4	1626.1	973.5	317.3	165.0	152.3	147.7	146.9	147.7	146.9	146.9
27.5°	1887.1	1644.3	877.5	227.5	157.8	146.0	141.4	141.4	141.4	140.5	140.5
30°	1952.5	1665.9	748.8	179.5	150.4	139.7	135.9	135.9	135.1	134.2	134.2
32.5°	2045.8	1701.3	608.2	162.2	142.2	131.4	127.9	128.7	127.9	126.8	125.9
35°	2178.1	1756.7	469.5	153.2	134.2	123.3	119.6	119.6	119.6	117.8	117.8
37.5°	2365.8	1840.9	351.7	144.1	125.9	115.2	110.6	110.6	109.7	107.8	108.8
40°	2597.7	1947.0	254.7	135.9	117.8	106.1	102.3	100.6	98.8	97.0	97.0
42.5°	2877.1	2050.4	191.2	127.9	109.7	98.8	94.3	92.5	88.8	87.0	86.1
45°	3189.8	2159.9	158.7	117.8	100.6	90.6	87.0	83.4	78.8	76.2	75.3
47.5°	3453.4	2227.0	141.4	107.8	91.6	82.5	78.8	73.4	68.0	66.2	66.2
50°	3612.1	2199.0	126.8	97.9	82.5	74.3	69.8	62.5	58.9	57.2	56.2
52.5°	3700.9	2115.6	115.2	89.7	74.3	65.2	58.9	52.6	50.8	48.9	48.9
55°	3761.7	1995.1	102.3	81.6	67.0	57.2	49.8	45.4	43.4	42.6	41.7
57.5°	3819.7	1848.2	90.6	74.3	59.9	50.8	42.6	40.8	37.1	36.3	36.3
60°	3836.8	1646.1	79.8	66.2	53.4	44.5	37.1	34.4	30.8	29.9	29.9
62.5°	3617.6	1309.8	70.7	56.2	47.1	38.0	32.7	29.0	25.3	25.3	25.3
65°	3022.8	889.2	60.7	48.9	41.7	32.7	28.1	23.6	21.8	21.8	21.8
67.5°	2105.7	495.8	51.7	41.7	35.4	27.2	23.6	20.0	19.0	20.0	20.0
70°	949.0	196.6	43.4	34.4	29.0	22.6	20.0	17.3	19.0	19.0	19.0
72°	284.6	105.1	36.3	28.1	23.6	20.0	17.3	16.3	18.1	19.0	19.0
72.5°	211.2	94.3	34.4	27.2	23.6	19.0	16.3	16.3	18.1	19.0	19.0
75°	108.8	64.4	26.3	20.0	17.3	15.4	13.5	15.4	18.1	18.1	18.1
77.5°	85.2	52.6	21.8	15.4	14.5	13.5	12.7	14.5	16.3	16.3	16.3
80°	79.8	34.4	17.3	14.5	12.7	11.8	11.8	12.7	14.5	15.4	15.4
82.5°	80.7	28.1	15.4	13.5	11.8	10.9	10.9	11.8	13.5	14.5	14.5
85°	51.7	19.0	13.5	11.8	10.9	10.0	10.0	10.9	12.7	13.5	13.5
87.5°	17.3	14.5	11.8	10.9	9.1	9.1	9.1	9.1	10.9	11.8	12.7
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)