

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: P270547

Luminaire Tested: **NAV-AF-04-D-UNV-T3-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270547
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-04-D-UNV-T3-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17129.8 lumens
Efficiency: N/A
Efficacy: 100.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

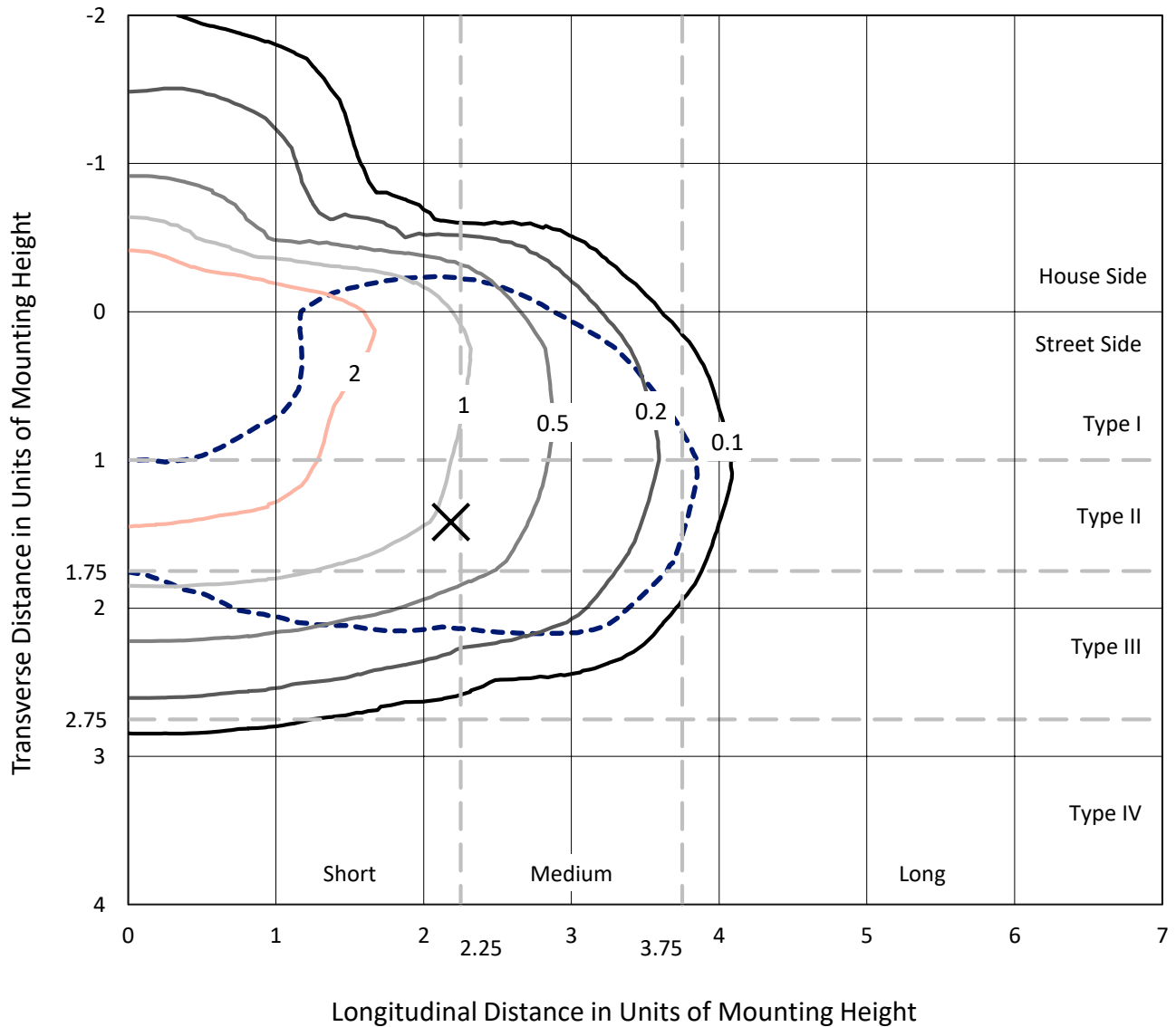
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

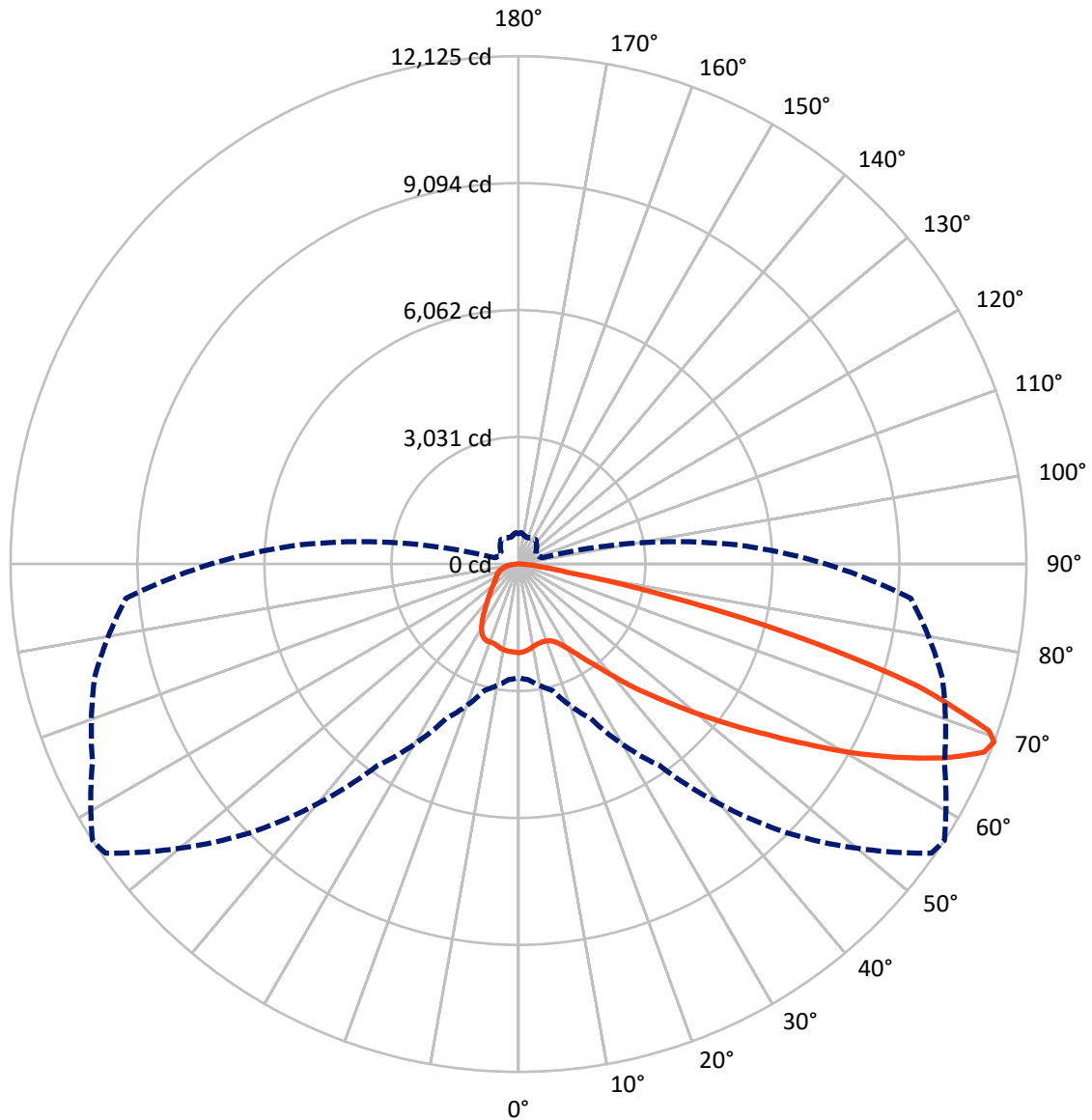
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3779.9	0.0	3779.9
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	13349.9	0.0	13349.9
	% Fixture	77.9	0.0	77.9
Total	Lumens	17129.8	0.0	17129.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.2	1.2
10°-20°	563.4	3.3
20°-30°	937.2	5.5
30°-40°	1530.4	8.9
40°-50°	2583.0	15.1
50°-60°	4018.0	23.5
60°-70°	4786.3	27.9
70°-80°	2229.8	13.0
80°-90°	283.6	1.7
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°	17129.8	100.0
0°-180°	17129.8	100.0



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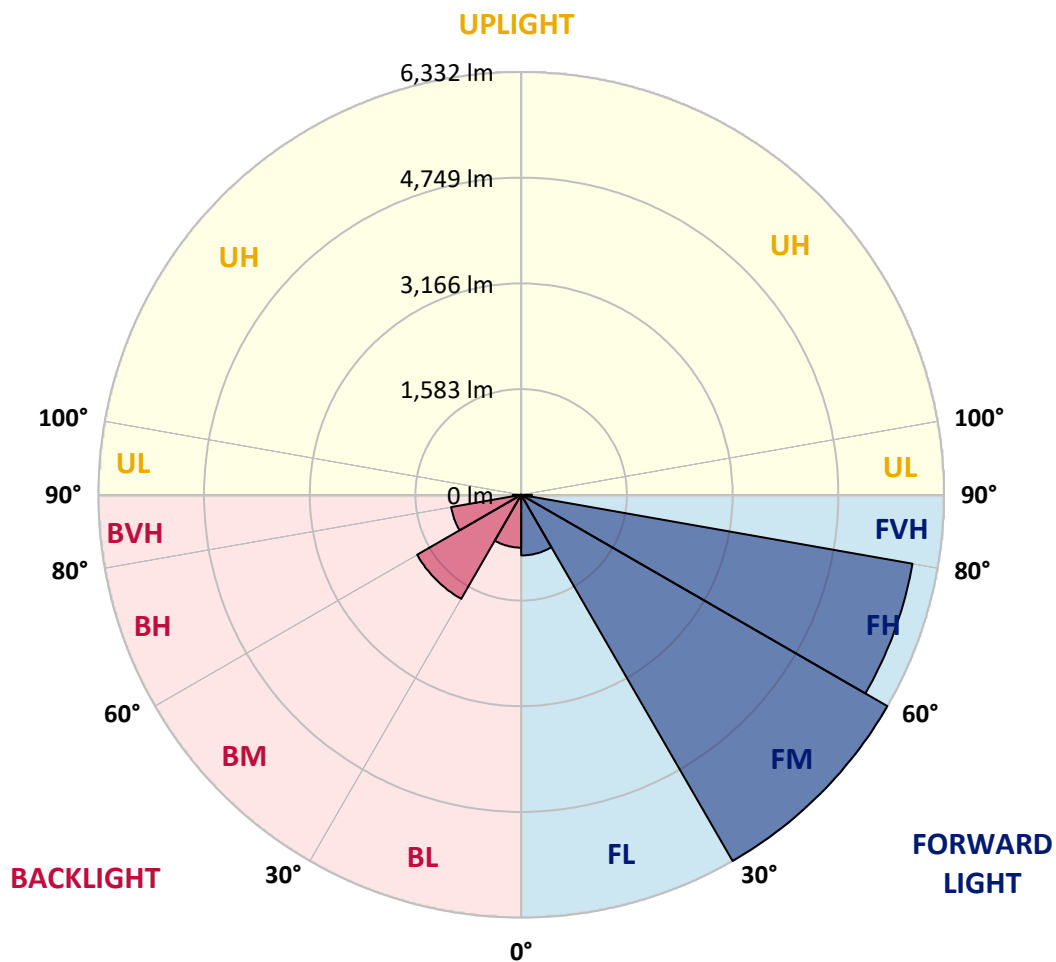
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	907.2	5.3			
FM	(30°-60°)	6332.4	37.0			
FH	(60°-80°)	5950.9	34.7			G3/7500
FVH	(80°-90°)	159.4	0.9			G2/225
BL	(0°-30°)	791.6	4.6	B2/1000		
BM	(30°-60°)	1799.0	10.5	B2/2500		
BH	(60°-80°)	1065.1	6.2	B3/2500		G3/2500
BVH	(80°-90°)	124.2	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	2116.5	2116.5	2116.5	2116.5	2116.5	2116.5	2116.5	2116.5	2116.5	2116.5	2116.5
2.5°	2104.5	2104.5	2109.9	2109.9	2109.9	2107.8	2101.1	2103.4	2099.0	2095.7	2090.3
5°	2061.7	2063.9	2070.6	2072.7	2076.0	2077.2	2077.2	2076.0	2077.2	2077.2	2073.7
7.5°	2002.5	2004.7	2012.4	2016.8	2026.7	2035.4	2039.8	2039.8	2045.4	2049.7	2050.7
10°	1966.3	1966.3	1970.7	1970.7	1978.3	1982.7	1997.0	1995.9	2011.2	2025.5	2032.1
12.5°	1961.9	1961.9	1959.7	1952.0	1947.6	1946.5	1960.8	1963.1	1986.1	2011.2	2023.3
15°	1976.2	1976.2	1969.7	1954.3	1937.9	1930.1	1944.4	1948.8	1973.9	2003.6	2022.3
17.5°	2022.3	2021.1	2007.0	1976.2	1947.6	1935.6	1940.0	1944.4	1967.4	2001.5	2024.4
20°	2124.2	2124.2	2093.5	2037.5	1988.3	1959.7	1953.2	1956.5	1972.9	2004.7	2034.3
22.5°	2303.0	2306.3	2251.4	2159.3	2074.8	2014.5	1988.3	1991.5	1999.2	2029.9	2062.8
25°	2566.2	2557.5	2479.5	2349.1	2217.5	2114.4	2060.6	2063.9	2063.9	2092.4	2126.4
27.5°	2844.8	2846.9	2735.1	2594.8	2421.4	2268.0	2182.3	2181.3	2180.1	2207.6	2243.7
30°	3159.5	3160.5	3031.2	2868.8	2670.4	2474.0	2345.7	2344.7	2334.8	2368.8	2415.9
32.5°	3503.7	3502.8	3352.5	3169.3	2949.0	2726.3	2559.6	2558.6	2550.8	2596.9	2654.0
35°	3885.4	3885.4	3736.3	3510.3	3272.4	3024.7	2831.5	2830.5	2835.0	2897.4	2951.1
37.5°	4344.9	4354.9	4175.1	3900.8	3640.9	3376.5	3151.9	3145.2	3112.3	3217.5	3306.4
40°	4824.2	4851.7	4665.2	4344.9	4064.2	3791.1	3543.4	3539.0	3510.3	3622.2	3766.0
42.5°	5342.8	5405.5	5198.1	4871.4	4565.4	4270.5	4021.4	4009.3	3899.7	4074.2	4298.8
45°	6022.9	6063.4	5762.9	5466.8	5178.4	4841.8	4545.7	4480.9	4371.3	4595.0	4886.7
47.5°	6485.7	6465.9	6278.3	6079.9	5894.6	5572.1	5117.0	5034.8	4901.0	5197.1	5518.4
50°	6773.0	6787.2	6682.0	6672.2	6662.2	6437.4	5761.9	5663.2	5508.5	5859.5	6234.4
52.5°	6962.8	6897.9	6916.6	7140.4	7411.2	7303.8	6491.2	6381.5	6222.5	6573.3	6996.7
55°	6883.7	6798.3	6970.4	7411.2	8048.4	8072.4	7291.7	7178.7	7042.7	7332.2	7913.4
57.5°	6556.9	6599.7	6871.7	7484.7	8483.8	8761.2	8211.8	8096.7	7829.1	8123.0	8784.3
60°	6097.4	6184.0	6599.7	7368.4	8788.7	9297.5	9221.8	9145.0	8684.5	8892.9	9698.9
62.5°	5603.9	5689.4	6200.6	7169.9	8651.5	9772.3	10213.2	10165.9	9628.7	9634.1	10278.9
65°	4874.7	4909.7	5431.7	6628.2	8271.1	10201.2	11205.6	11164.0	10531.2	10266.9	10441.3
67.5°	3681.4	3725.4	4154.1	5232.2	7112.9	9968.6	11998.5	11992.0	11074.0	10501.6	10055.3
69°	2718.6	2772.3	3122.1	4062.0	5881.5	9082.6	12035.9	12124.7	11221.0	10477.6	9402.7
70°	1989.3	2050.7	2374.3	3224.1	4898.7	8104.2	11716.8	11907.6	11165.2	10325.1	8893.8
72.5°	845.6	866.3	1025.3	1455.3	2485.0	4886.7	9596.9	9998.2	10083.7	9251.5	6948.4
75°	529.7	536.3	598.8	746.9	1105.5	2021.1	6214.7	6762.0	7528.5	7177.6	4652.1
77.5°	399.1	404.6	440.9	514.3	686.6	754.4	2883.1	3438.1	4312.0	4222.2	2315.0
80°	306.0	309.2	333.5	374.0	483.6	472.7	935.5	1175.6	1799.7	1587.9	819.3
82.5°	240.1	241.3	262.0	269.9	337.8	318.0	469.4	523.2	727.1	604.3	400.3
85°	212.8	216.0	236.9	197.4	216.0	191.9	257.8	279.6	386.0	364.2	151.4
87.5°	108.5	114.1	198.4	168.9	108.5	91.0	112.9	121.7	156.8	170.0	73.5
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°	2116.5	2116.5	2116.5	2116.5	2116.5	2116.5	2116.5	2116.5	2116.5	2116.5	2116.5
2.5°	2091.3	2092.4	2095.7	2101.1	2109.9	2121.0	2134.2	2147.3	2154.9	2160.5	2158.2
5°	2073.7	2074.8	2081.5	2091.3	2102.4	2118.7	2140.8	2157.1	2169.1	2176.9	2175.8
7.5°	2051.9	2055.1	2068.3	2079.2	2094.6	2107.8	2125.3	2140.8	2152.8	2160.5	2159.3
10°	2035.4	2038.8	2055.1	2069.3	2082.6	2084.7	2081.5	2077.2	2076.0	2081.5	2079.2
12.5°	2027.7	2034.3	2049.7	2059.5	2054.1	2033.3	2009.1	1999.2	1995.9	2007.0	2008.0
15°	2029.9	2035.4	2048.6	2041.9	2012.4	1977.3	1964.1	1971.8	1978.3	1985.0	1986.1
17.5°	2035.4	2038.8	2041.9	2017.9	1976.2	1953.2	1948.8	1941.1	1921.4	1910.3	1909.3
20°	2045.4	2049.7	2044.2	2005.7	1968.5	1937.9	1885.2	1838.0	1793.0	1768.9	1759.1
22.5°	2079.2	2082.6	2066.1	2028.8	1971.8	1872.0	1765.6	1684.5	1615.4	1578.1	1563.8
25°	2146.2	2151.6	2128.7	2081.5	1932.3	1758.0	1607.6	1498.1	1411.3	1366.4	1354.4
27.5°	2263.5	2268.9	2243.7	2121.0	1840.2	1605.5	1423.5	1314.8	1240.3	1201.9	1196.5
30°	2439.0	2446.7	2423.5	2119.8	1699.9	1411.3	1243.7	1180.1	1137.3	1110.9	1109.9
32.5°	2682.3	2710.9	2616.7	2082.6	1526.6	1215.0	1107.6	1085.7	1064.9	1047.3	1047.3
35°	2991.6	3058.5	2807.5	2004.7	1335.7	1081.3	1032.0	1011.1	984.8	966.1	964.1
37.5°	3361.3	3465.4	2943.4	1866.5	1171.2	1016.6	985.9	951.9	910.3	874.1	865.2
40°	3869.0	3893.2	3010.3	1641.7	1048.4	981.5	943.1	900.3	847.7	807.1	802.7
42.5°	4379.0	4299.9	2997.1	1400.5	978.3	949.7	899.3	852.1	804.9	770.9	770.9
45°	4959.2	4655.3	2897.4	1158.0	914.7	913.5	858.7	813.8	777.6	752.3	746.9
47.5°	5513.9	4974.5	2725.2	979.3	848.8	877.4	832.4	796.2	763.3	739.1	734.8
50°	6187.3	5344.0	2542.1	854.3	785.2	845.6	821.4	802.7	770.9	729.2	724.9
52.5°	6856.4	5776.1	2400.6	760.0	729.2	820.3	828.0	830.2	800.6	719.5	714.0
55°	7574.6	6237.8	2251.4	686.6	683.3	808.2	843.2	841.2	826.9	721.6	712.9
57.5°	8257.8	6701.6	2028.8	634.9	647.0	796.2	846.7	811.4	786.2	732.6	718.4
60°	8823.7	7085.6	1702.0	598.8	616.3	772.1	824.6	772.1	729.2	730.4	717.1
62.5°	9099.0	7193.0	1301.7	557.0	591.2	732.6	792.8	742.4	703.0	734.8	727.1
65°	8889.5	6887.0	927.8	518.7	560.5	686.6	774.2	717.1	689.8	756.7	747.8
67.5°	8137.1	6053.6	673.4	484.7	530.8	639.4	739.1	694.2	676.7	773.1	753.4
69°	7337.7	5226.7	583.4	465.1	510.0	614.1	716.0	682.2	666.7	750.2	721.6
70°	6673.1	4589.5	538.4	452.9	492.5	599.9	698.6	674.4	656.9	722.6	688.7
72.5°	4784.7	2966.5	452.9	416.8	446.4	568.1	660.2	645.9	619.7	652.4	630.6
75°	2890.7	1548.5	385.0	379.4	398.0	524.3	615.2	597.7	571.3	574.6	563.6
77.5°	1328.1	715.1	322.4	335.5	347.6	469.4	560.5	540.7	516.5	507.7	508.9
80°	582.3	417.8	269.9	286.2	292.8	422.3	501.2	479.2	452.9	500.0	463.9
82.5°	314.8	242.4	210.6	221.5	240.1	367.3	435.4	406.8	381.6	444.1	358.7
85°	127.2	124.0	142.7	153.5	166.6	264.3	364.2	334.4	303.7	271.9	265.4
87.5°	54.8	59.2	70.2	74.6	88.8	164.5	244.6	213.8	215.0	184.2	181.0
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)