

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: P197284

Luminaire Tested: **NAV-AF-04-D-UNV-T3R-8030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197284  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)  
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-T3R-8030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13342 lumens  
Efficiency: N/A  
Efficacy: 103.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Full Cutoff  
BUG Rating: B2 - U0 - G2

Input Watts (W): 129  
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

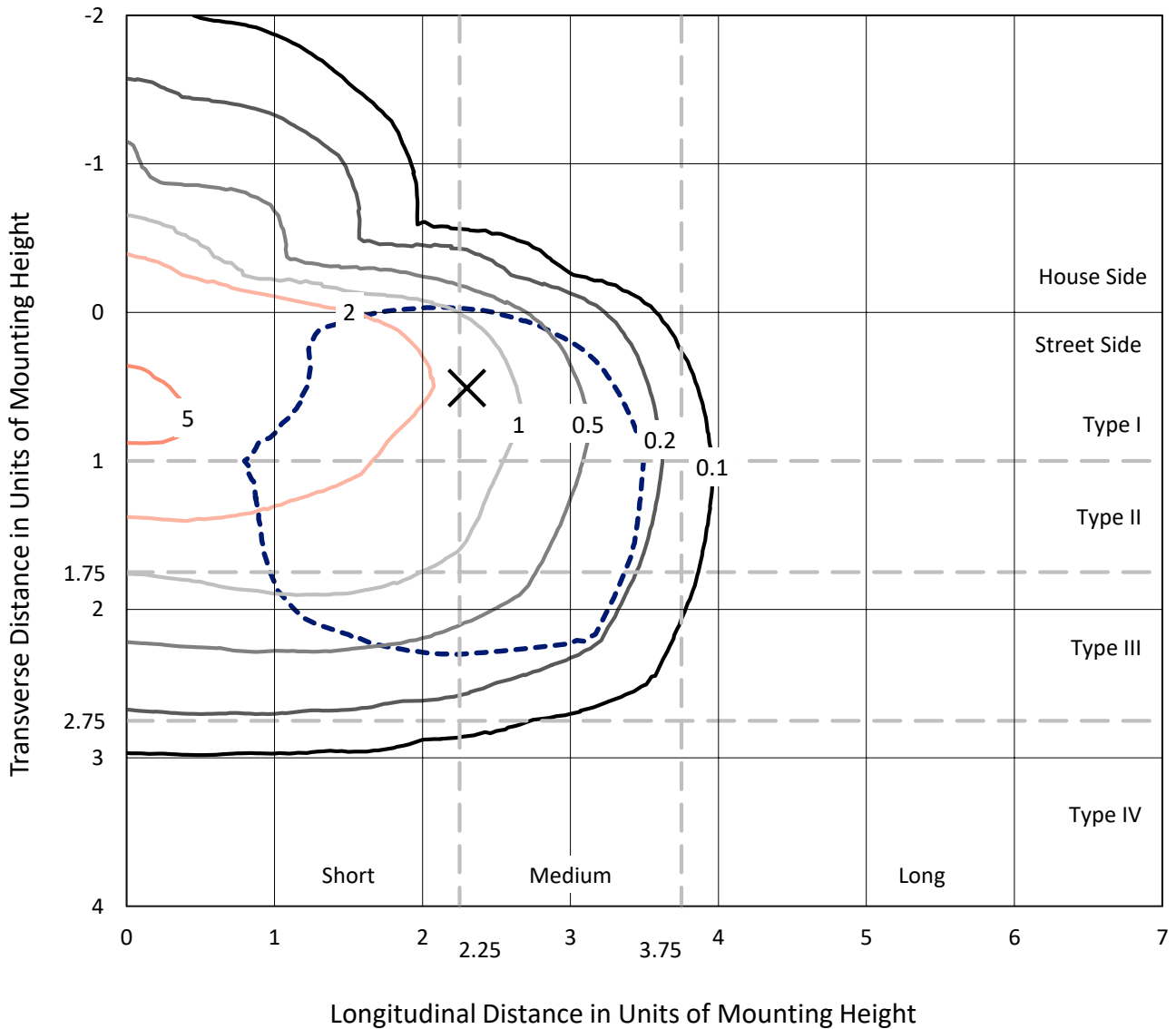


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### Iso-Footcandle Lines of Horizontal Illumination

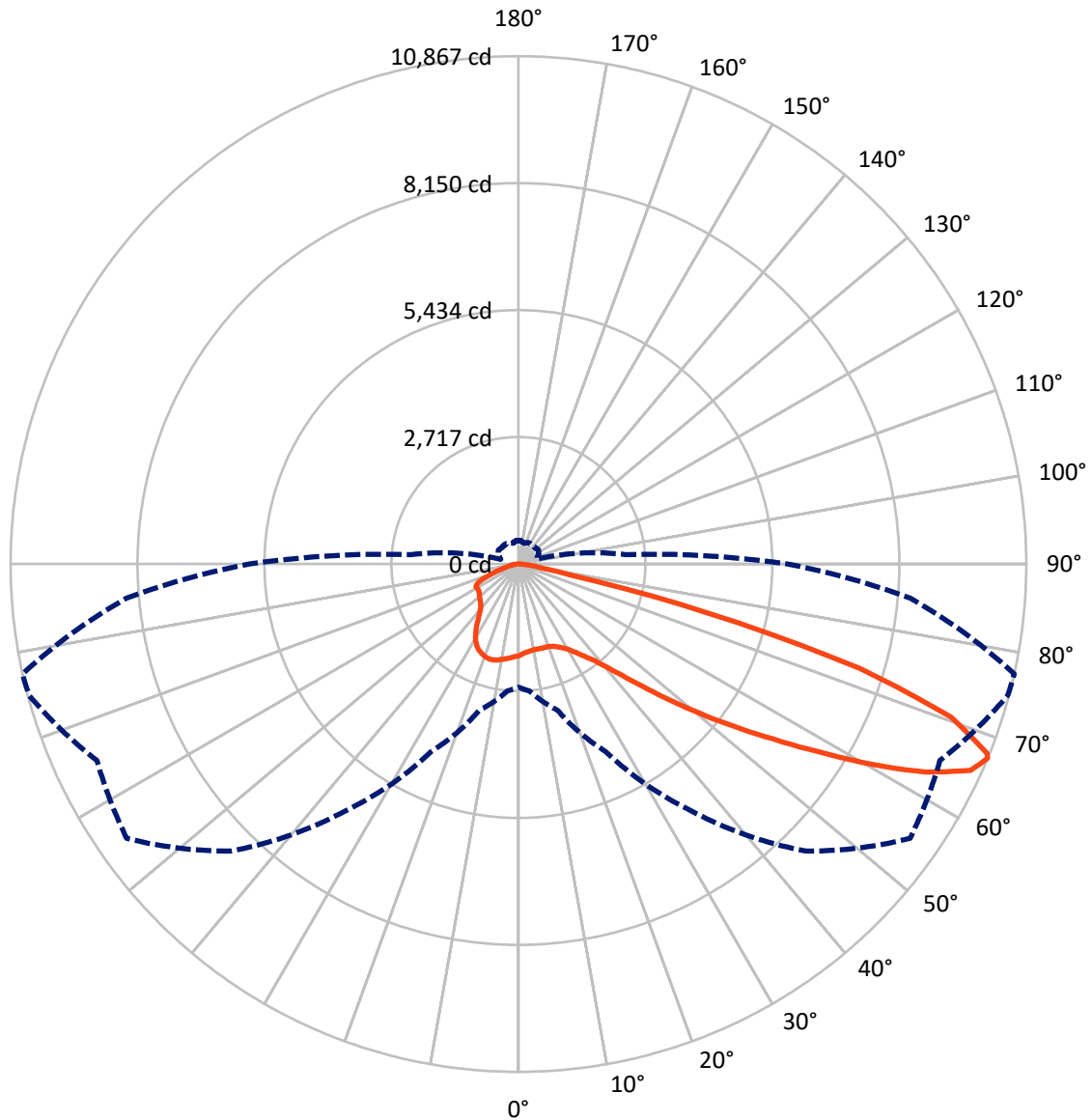
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.9 fc  
 Type III - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral    - - - Horizontal Cone Through 67-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2292.8	0.0	2292.8
	% Fixture	17.2	0.0	17.2
<b>Street Side</b>	Lumens	11049.2	0.0	11049.2
	% Fixture	82.8	0.0	82.8
<b>Total</b>	Lumens	13342.0	0.0	13342.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.9	1.3
10°-20°	484.3	3.6
20°-30°	822.9	6.2
30°-40°	1316.5	9.9
40°-50°	2026.7	15.2
50°-60°	2811.9	21.1
60°-70°	3750.8	28.1
70°-80°	1785.0	13.4
80°-90°	169.0	1.3
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°	13342.0	100.0
0°-180°	13342.0	100.0



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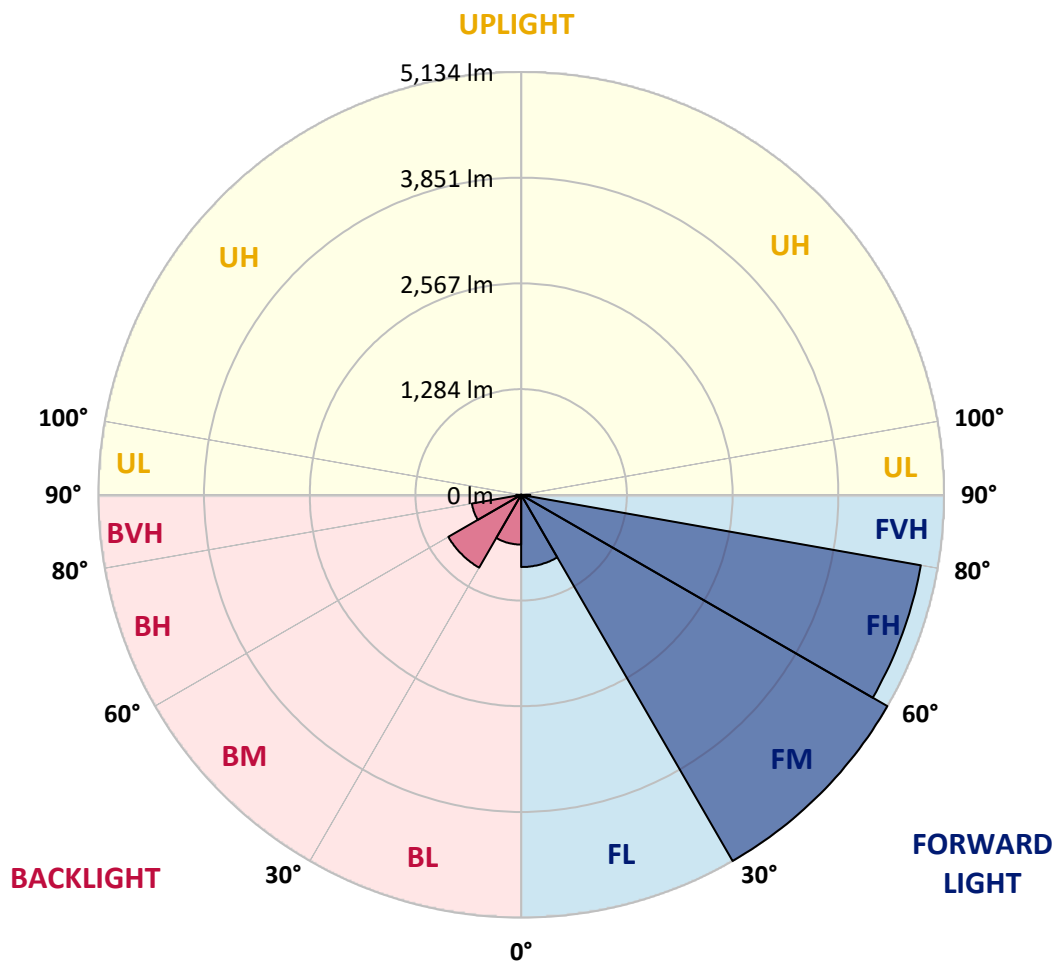
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	877.4	6.6			
FM	(30°-60°)	5134.1	38.5			
FH	(60°-80°)	4927.9	36.9			G2/5000
FVH	(80°-90°)	109.8	0.8			G2/225
BL	(0°-30°)	604.8	4.5	B2/1000		
BM	(30°-60°)	1020.9	7.7	B2/2500		
BH	(60°-80°)	607.9	4.6	B2/1000		G2/1000
BVH	(80°-90°)	59.2	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	1963.6	1963.6	1963.6	1963.6	1963.6	1963.6	1963.6	1963.6	1963.6	1963.6	1963.6
2.5°	1760.7	1769.0	1769.8	1793.7	1804.4	1831.6	1861.3	1887.7	1910.8	1919.1	1933.9
5°	1584.2	1584.2	1586.7	1602.4	1632.9	1676.6	1738.5	1806.1	1877.0	1894.3	1938.0
7.5°	1491.9	1493.5	1495.2	1510.8	1534.8	1573.5	1635.4	1727.7	1845.7	1874.5	1951.2
10°	1500.1	1497.6	1489.4	1486.1	1496.0	1520.7	1574.3	1669.2	1819.3	1863.8	1975.1
12.5°	1629.6	1624.6	1597.4	1557.8	1521.6	1512.5	1549.6	1639.5	1806.9	1863.8	2015.5
15°	1851.4	1854.7	1801.1	1718.7	1623.8	1559.5	1554.5	1628.8	1802.8	1868.8	2062.6
17.5°	2140.1	2141.7	2067.5	1947.9	1790.4	1657.6	1588.4	1628.8	1802.8	1873.7	2107.9
20°	2446.9	2435.3	2351.2	2201.1	1996.6	1793.7	1650.2	1638.7	1807.7	1881.1	2150.8
22.5°	2709.9	2699.2	2611.0	2453.5	2219.2	1954.5	1733.5	1671.7	1834.9	1911.6	2211.0
25°	2940.0	2946.6	2860.9	2683.5	2441.1	2136.0	1858.0	1747.5	1891.8	1966.9	2285.2
27.5°	3219.6	3207.2	3108.3	2939.2	2669.5	2324.0	2013.9	1843.2	1959.5	2033.7	2375.9
30°	3542.9	3537.1	3403.5	3229.5	2921.1	2534.3	2168.1	1946.3	2047.7	2125.2	2489.7
32.5°	3935.4	3934.6	3791.1	3577.5	3203.9	2771.8	2350.4	2087.3	2176.4	2254.7	2640.7
35°	4379.9	4379.1	4230.7	3948.6	3529.7	3034.9	2564.8	2258.8	2335.5	2418.0	2820.4
37.5°	4688.4	4683.4	4605.9	4332.1	3890.1	3340.8	2832.8	2489.7	2516.1	2608.5	3037.3
40°	4747.8	4777.4	4844.2	4682.6	4283.5	3680.6	3101.7	2738.0	2762.7	2881.5	3310.3
42.5°	4683.4	4722.2	4944.0	4989.4	4676.8	4092.1	3438.1	3081.9	3113.2	3260.8	3631.1
45°	4627.3	4661.2	4939.1	5159.3	5065.3	4540.8	3857.9	3501.6	3561.0	3744.1	3997.3
47.5°	4531.7	4563.0	4841.8	5189.8	5287.1	4972.9	4363.4	4006.4	4108.6	4330.5	4414.6
50°	4526.7	4540.8	4709.0	5087.5	5363.8	5301.1	4923.4	4596.8	4753.5	5009.2	4876.4
52.5°	4401.4	4499.5	4652.1	4924.2	5365.4	5492.4	5475.1	5244.2	5485.9	5768.7	5382.8
55°	3634.4	3747.4	4462.4	4844.2	5355.6	5656.6	5979.0	5932.8	6310.5	6608.3	5950.2
57.5°	3393.6	3441.4	3914.8	4868.2	5438.0	5927.9	6482.9	6672.6	7254.0	7578.9	6630.5
60°	3327.6	3377.9	3805.1	4879.7	5661.5	6421.9	7166.6	7508.0	8363.2	8707.9	7403.3
62.5°	3254.2	3319.4	3813.4	4890.4	6054.1	7152.6	8073.7	8414.3	9502.1	9809.7	8127.3
65°	3039.8	3126.4	3660.8	4822.8	6483.7	8069.6	9272.8	9359.4	10443.1	10638.5	8564.4
67°	2633.2	2728.1	3241.9	4431.9	6444.1	8687.3	10232.0	9950.7	10843.1	10867.0	8422.6
67.5°	2504.6	2602.7	3100.0	4269.4	6331.2	8768.1	10401.8	10032.4	10839.8	10813.4	8290.6
70°	1686.5	1797.0	2195.3	3134.7	5078.5	8160.3	10360.6	9780.8	10128.9	9826.2	7122.9
72.5°	837.1	840.4	1095.2	1717.0	3076.9	5852.8	8642.8	8367.3	8210.6	7639.1	5226.9
75°	403.3	410.7	517.1	758.7	1297.2	3021.7	5894.1	5645.8	4807.1	4162.2	2615.9
77.5°	307.6	315.0	401.6	494.0	541.0	985.5	2919.4	2359.4	1392.9	1112.5	737.3
80°	237.5	251.5	338.9	379.4	357.9	395.0	917.9	722.4	541.8	497.3	365.3
82.5°	185.6	193.8	287.8	287.8	247.4	264.7	427.2	417.3	336.5	303.5	196.3
85°	131.1	147.6	231.7	214.4	162.5	164.1	255.7	244.9	173.2	139.4	76.7
87.5°	58.6	75.0	164.9	140.2	86.6	66.8	104.7	89.9	68.4	52.8	35.5
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°	1963.6	1963.6	1963.6	1963.6	1963.6	1963.6	1963.6	1963.6	1963.6	1963.6	1963.6
2.5°	1950.4	1963.6	1984.2	1996.6	2013.1	2019.7	2026.3	2037.8	2046.9	2044.4	2040.3
5°	1968.5	1990.8	2016.4	2024.6	2024.6	2016.4	2011.4	2012.2	2009.8	2008.1	2003.2
7.5°	1994.9	2025.4	2043.6	2035.3	2009.8	1977.6	1947.1	1929.0	1911.6	1900.9	1904.2
10°	2032.0	2065.9	2066.7	2030.4	1969.4	1899.3	1839.1	1800.3	1763.2	1746.7	1751.6
12.5°	2085.6	2119.5	2090.6	2012.2	1905.0	1795.4	1684.8	1604.9	1533.1	1515.8	1510.8
15°	2143.4	2169.8	2105.4	1973.5	1812.7	1632.1	1446.5	1326.9	1246.9	1232.9	1228.0
17.5°	2193.7	2208.5	2098.0	1904.2	1666.7	1382.2	1166.1	1085.3	1068.8	1077.0	1077.0
20°	2238.2	2233.3	2065.9	1797.0	1436.6	1105.1	979.7	978.9	1001.2	1021.8	1023.4
22.5°	2294.3	2255.5	2014.7	1637.8	1162.0	922.0	900.6	922.0	946.7	969.8	972.3
25°	2361.1	2280.3	1946.3	1411.0	934.4	837.1	846.1	864.3	879.9	898.1	898.9
27.5°	2427.9	2299.2	1849.8	1144.7	810.7	782.6	792.5	800.0	804.1	815.6	815.6
30°	2505.4	2314.1	1710.4	917.1	753.8	734.8	729.0	725.7	729.0	744.7	745.5
32.5°	2602.7	2340.5	1519.9	786.8	727.4	701.0	671.3	654.8	666.4	694.4	699.3
35°	2713.2	2371.8	1291.5	734.8	718.3	684.5	630.1	604.5	608.6	634.2	638.3
37.5°	2851.8	2412.2	1066.3	722.4	727.4	682.8	611.1	574.8	556.7	557.5	556.7
40°	3029.1	2452.6	888.2	725.7	747.2	687.0	602.0	545.1	507.2	508.8	512.1
42.5°	3214.6	2479.0	775.2	735.6	771.1	692.7	598.7	516.3	483.3	511.3	536.9
45°	3431.5	2471.6	716.7	744.7	789.2	695.2	586.4	513.0	485.7	569.9	617.7
47.5°	3680.6	2439.4	683.7	748.8	794.2	694.4	577.3	523.7	506.4	652.3	706.8
50°	3951.1	2389.1	657.3	742.2	791.7	691.1	587.2	536.9	514.6	670.5	712.5
52.5°	4247.2	2343.0	630.1	727.4	779.3	681.2	599.6	531.1	491.5	617.7	649.9
55°	4597.7	2332.2	599.6	701.8	758.7	670.5	593.0	513.0	466.0	547.6	567.4
57.5°	4998.5	2399.0	560.0	670.5	730.7	649.0	577.3	503.1	456.9	498.1	508.8
60°	5507.3	2546.6	517.9	637.5	696.0	616.9	563.3	505.5	459.4	490.7	493.2
62.5°	5904.8	2679.4	480.0	597.1	649.9	578.1	548.4	508.0	466.8	500.6	496.5
65°	6049.1	2614.3	433.0	536.9	584.7	535.2	527.8	509.7	466.8	506.4	497.3
67°	5753.1	2303.4	388.4	476.7	522.9	497.3	508.0	503.1	458.5	505.5	489.9
67.5°	5612.0	2193.7	376.9	466.8	506.4	485.7	503.1	499.8	456.1	503.9	485.7
70°	4628.2	1573.5	318.3	391.7	423.9	428.0	472.5	478.3	436.3	473.4	440.4
72.5°	3293.0	984.7	274.6	303.5	342.2	366.2	431.3	449.5	409.9	411.5	384.3
75°	1629.6	528.6	244.9	234.2	266.4	305.1	376.1	409.9	371.1	343.1	334.0
77.5°	550.1	299.4	207.0	188.9	207.0	244.9	311.7	357.9	327.4	290.3	284.5
80°	284.5	217.7	161.6	151.7	163.3	189.7	244.1	297.7	279.6	281.2	231.7
82.5°	177.3	132.8	116.3	115.5	123.7	145.1	179.8	241.6	240.0	205.3	149.3
85°	82.5	76.7	74.2	76.7	79.2	82.5	117.1	172.4	182.3	110.5	98.1
87.5°	34.6	33.8	29.7	32.2	35.5	34.6	47.0	73.4	102.3	69.3	63.5
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)