

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: P196900

Luminaire Tested: **NAV-AF-04-D-UNV-5NQ-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196900
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
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-5NQ-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13484 lumens
Efficiency: N/A
Efficacy: 104.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - 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

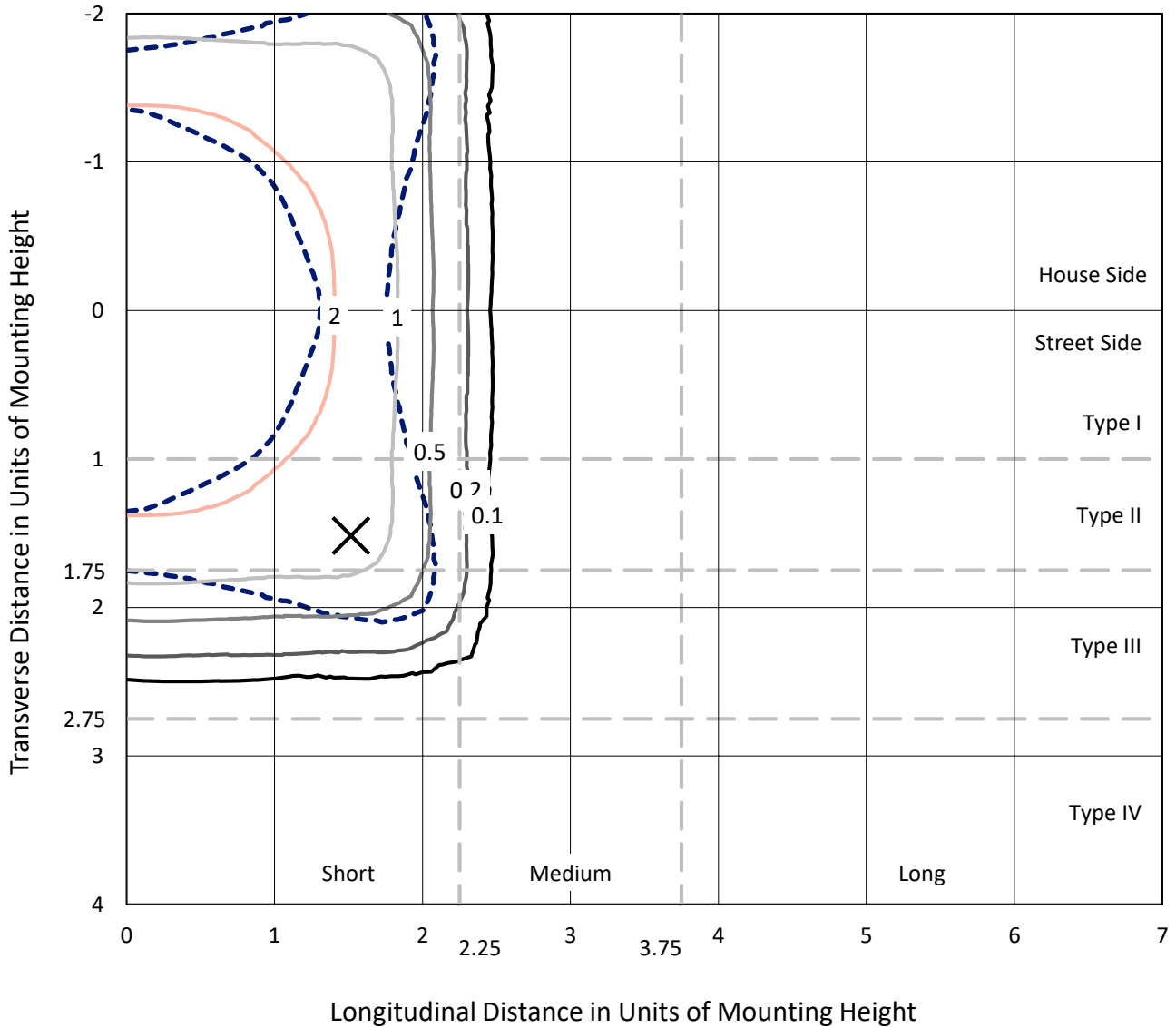


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Iso-Footcandle Lines of Horizontal Illumination

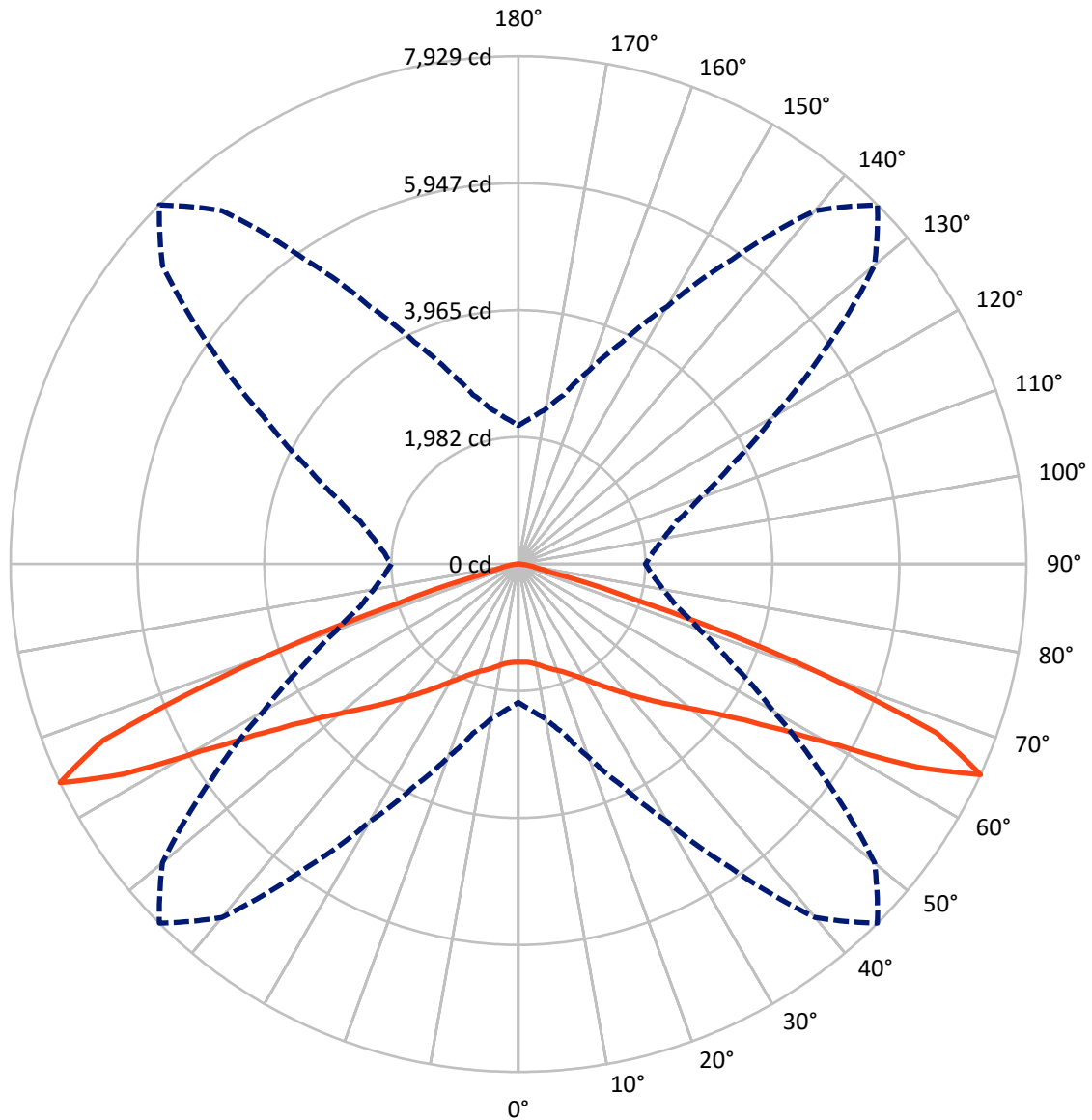
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.8 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6742.0	0.0	6742.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6742.0	0.0	6742.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	13484.0	0.0	13484.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.4	1.1
10°-20°	478.7	3.6
20°-30°	893.0	6.6
30°-40°	1505.8	11.2
40°-50°	2445.8	18.1
50°-60°	3832.2	28.4
60°-70°	3617.4	26.8
70°-80°	487.5	3.6
80°-90°	74.3	0.6
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°	13484.0	100.0
0°-180°	13484.0	100.0

Coefficient of Utilization



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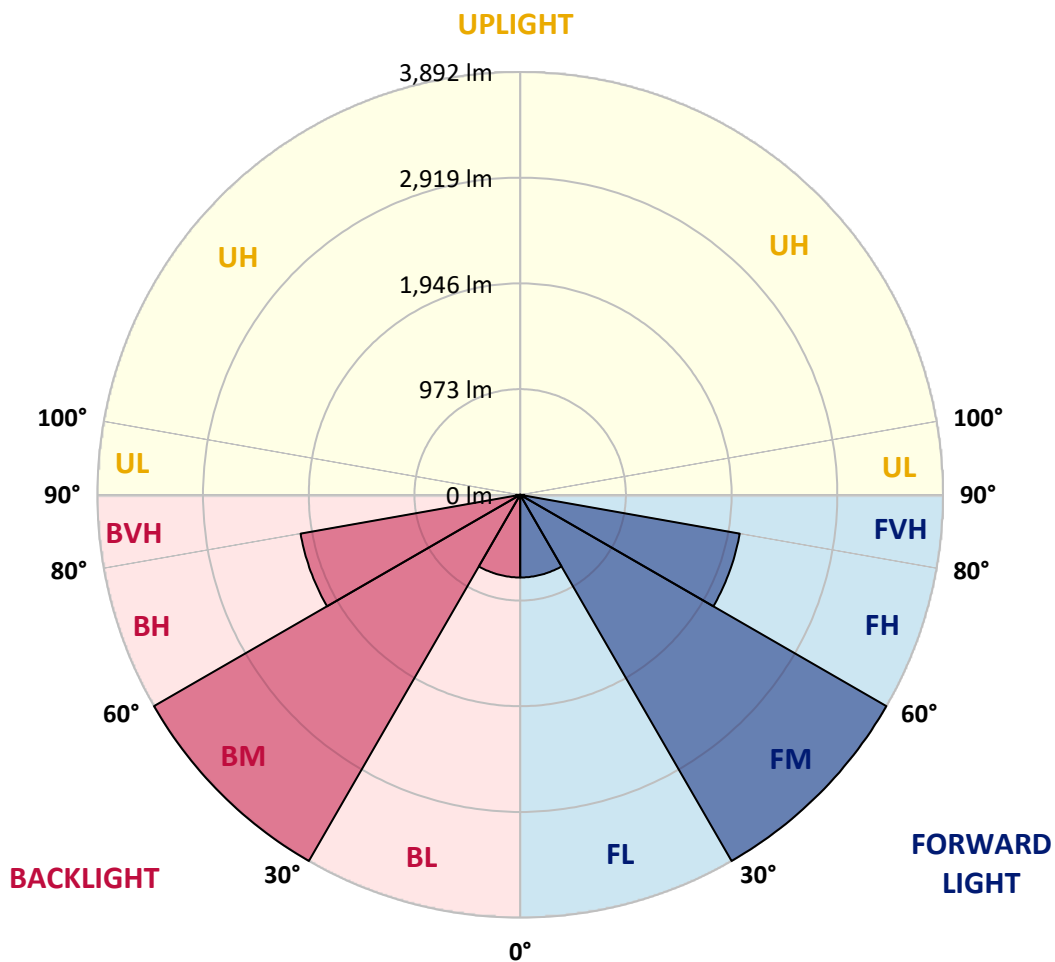
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	760.5	5.6			
FM	(30°-60°)	3891.9	28.9			
FH	(60°-80°)	2052.4	15.2			G2/5000
FVH	(80°-90°)	37.1	0.3			G1/100
BL	(0°-30°)	760.5	5.6	B2/1000		
BM	(30°-60°)	3891.9	28.9	B3/5000		
BH	(60°-80°)	2052.4	15.2	B3/2500		G2/5000
BVH	(80°-90°)	37.1	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8
2.5°	1546.4	1546.4	1548.9	1548.1	1544.7	1542.2	1539.7	1536.3	1534.6	1532.9	1532.1
5°	1554.8	1554.8	1557.3	1556.5	1553.9	1550.6	1548.9	1546.4	1543.9	1542.2	1543.0
7.5°	1575.8	1576.6	1577.5	1576.6	1574.1	1571.6	1568.2	1567.4	1564.0	1561.5	1563.2
10°	1607.7	1607.7	1608.5	1609.4	1607.7	1601.8	1601.8	1600.1	1596.8	1593.4	1594.3
12.5°	1643.0	1643.0	1643.8	1643.8	1643.8	1640.5	1641.3	1640.5	1636.3	1634.6	1636.3
15°	1677.4	1678.3	1678.3	1679.9	1679.9	1680.8	1684.1	1684.1	1682.5	1681.6	1681.6
17.5°	1717.7	1719.4	1720.3	1722.8	1723.6	1725.3	1728.7	1729.5	1730.3	1727.8	1728.7
20°	1771.5	1772.3	1774.9	1775.7	1779.1	1779.1	1780.7	1779.9	1778.2	1774.9	1774.9
22.5°	1832.0	1833.7	1838.7	1838.7	1842.9	1840.4	1841.2	1838.7	1834.5	1832.8	1831.1
25°	1910.9	1913.5	1917.7	1916.0	1917.7	1913.5	1913.5	1913.5	1910.9	1908.4	1907.6
27.5°	2010.9	2006.7	2010.9	2007.5	2006.7	2003.3	2004.2	2002.5	2000.0	1999.1	1995.8
30°	2115.0	2110.0	2112.5	2113.4	2111.7	2110.8	2107.5	2105.0	2100.8	2101.6	2099.1
32.5°	2234.3	2229.3	2231.8	2232.6	2231.0	2232.6	2231.8	2225.9	2220.9	2224.2	2224.2
35°	2376.3	2372.9	2379.6	2382.2	2377.1	2374.6	2371.2	2364.5	2357.0	2362.0	2362.8
37.5°	2546.8	2542.6	2547.6	2554.4	2545.1	2540.1	2526.6	2516.6	2511.5	2514.0	2517.4
40°	2724.0	2724.9	2739.1	2740.8	2730.7	2724.9	2711.4	2696.3	2682.0	2682.0	2686.2
42.5°	2910.5	2913.0	2929.8	2935.7	2932.3	2921.4	2902.9	2884.5	2866.0	2869.3	2874.4
45°	3121.3	3118.0	3135.6	3149.9	3147.4	3144.0	3126.4	3092.8	3076.0	3075.1	3083.5
47.5°	3343.1	3349.8	3368.3	3392.6	3391.8	3383.4	3360.7	3329.6	3298.6	3301.1	3311.2
50°	3601.8	3611.0	3642.1	3666.5	3669.8	3667.3	3640.4	3604.3	3560.6	3563.2	3576.6
52.5°	3833.6	3847.1	3883.2	3933.6	3964.7	3978.9	3961.3	3927.7	3883.2	3885.7	3900.0
55°	4043.6	4064.6	4118.4	4187.3	4249.4	4307.4	4333.4	4332.6	4299.8	4307.4	4325.9
57.5°	4175.5	4204.9	4286.4	4397.3	4520.7	4637.5	4738.3	4833.2	4854.2	4893.7	4893.7
60°	3998.3	4067.1	4175.5	4365.3	4608.1	4870.2	5154.1	5430.4	5608.5	5748.8	5673.2
62.5°	3338.9	3440.5	3592.6	3842.9	4220.9	4688.7	5259.1	5901.6	6571.9	6981.8	6681.1
65°	2160.4	2288.1	2453.6	2734.9	3211.2	3813.5	4644.2	5799.2	7201.9	7929.3	7257.4
67.5°	855.9	942.4	1043.2	1243.2	1656.4	2247.8	3180.1	4604.7	6359.4	7045.7	6292.2
70°	409.1	423.3	442.7	485.5	588.8	794.6	1277.6	2268.8	3900.0	4623.2	3806.8
72.5°	295.7	298.2	307.4	321.7	351.9	393.9	478.8	693.8	1344.8	1955.5	1346.5
75°	224.3	227.6	232.7	240.2	256.2	276.4	308.3	369.6	460.3	530.9	459.5
77.5°	170.5	173.9	178.1	185.6	194.0	208.3	220.1	244.4	283.1	298.2	296.5
80°	124.3	130.2	136.9	143.6	149.5	156.2	157.1	168.8	190.7	205.0	200.8
82.5°	79.0	84.0	101.6	109.2	110.0	111.7	110.9	111.7	123.5	133.6	130.2
85°	50.4	53.8	63.0	71.4	69.7	73.1	73.1	71.4	66.4	57.1	68.0
87.5°	25.2	26.0	30.2	37.8	36.1	31.9	31.1	31.1	22.7	19.3	21.0
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8	1533.8
2.5°	1529.6	1531.3	1528.7	1528.7	1527.9	1529.6	1527.1	1527.1
5°	1541.3	1543.9	1543.0	1543.0	1544.7	1546.4	1545.5	1544.7
7.5°	1562.3	1564.0	1565.7	1566.5	1568.2	1567.4	1569.1	1568.2
10°	1594.3	1592.6	1595.1	1592.6	1593.4	1591.7	1592.6	1592.6
12.5°	1634.6	1632.1	1630.4	1628.7	1628.7	1625.3	1625.3	1626.2
15°	1680.8	1676.6	1673.2	1671.5	1669.9	1669.9	1667.3	1669.0
17.5°	1726.1	1721.9	1716.1	1716.1	1713.5	1711.9	1710.2	1714.4
20°	1774.0	1769.8	1766.5	1765.6	1760.6	1758.9	1759.7	1764.8
22.5°	1829.5	1826.9	1826.9	1825.3	1821.9	1819.4	1819.4	1825.3
25°	1904.2	1899.2	1900.0	1900.9	1899.2	1899.2	1897.5	1901.7
27.5°	1995.8	1991.6	1994.1	1995.8	1994.1	1996.6	1994.1	1997.5
30°	2103.3	2100.8	2103.3	2105.8	2101.6	2101.6	2099.9	2102.4
32.5°	2231.8	2228.4	2230.1	2230.1	2224.2	2219.2	2212.5	2217.5
35°	2372.9	2368.7	2372.1	2374.6	2367.9	2362.8	2352.8	2357.0
37.5°	2528.3	2530.0	2534.2	2545.1	2543.4	2535.0	2527.5	2530.8
40°	2702.2	2710.6	2729.1	2736.6	2734.9	2726.5	2716.5	2718.1
42.5°	2898.7	2909.7	2929.0	2941.6	2935.7	2923.9	2911.3	2916.4
45°	3112.9	3129.7	3154.9	3167.5	3160.0	3147.4	3129.7	3139.0
47.5°	3339.7	3373.3	3406.9	3423.7	3421.2	3403.6	3380.9	3383.4
50°	3611.0	3655.6	3698.4	3715.2	3702.6	3675.7	3643.8	3643.0
52.5°	3948.7	3996.6	4031.9	4027.7	3996.6	3954.6	3918.5	3916.8
55°	4370.4	4386.3	4381.3	4345.2	4290.6	4225.1	4178.9	4171.3
57.5°	4880.2	4826.5	4747.5	4638.3	4515.7	4391.4	4307.4	4276.3
60°	5503.5	5260.7	4978.5	4681.2	4409.9	4206.6	4078.1	3999.9
62.5°	6018.4	5315.3	4684.5	4167.9	3745.4	3494.3	3318.7	3210.4
65°	5842.0	4592.1	3678.2	3012.1	2551.0	2291.4	2105.8	1982.3
67.5°	4513.2	3068.4	2135.2	1480.0	1122.2	950.0	829.9	751.8
70°	2275.5	1176.8	713.1	503.1	430.1	399.8	379.7	367.9
72.5°	667.8	446.0	370.4	327.6	301.5	283.1	271.3	265.4
75°	369.6	301.5	266.3	241.9	225.1	212.5	205.0	199.9
77.5°	254.5	219.2	201.6	185.6	172.2	163.0	157.1	152.0
80°	178.1	160.4	152.9	144.5	134.4	126.8	118.4	115.1
82.5°	118.4	110.9	109.2	102.5	96.6	88.2	73.1	68.0
85°	69.7	68.9	68.9	66.4	62.2	54.6	43.7	43.7
87.5°	24.4	25.2	26.0	27.7	26.9	22.7	18.5	17.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)