

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: P270458

Luminaire Tested: **NAV-AF-03-D-UNV-T2-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270458
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)
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-T2-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10149.5 lumens
Efficiency: N/A
Efficacy: 105.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B2 - U0 - G2

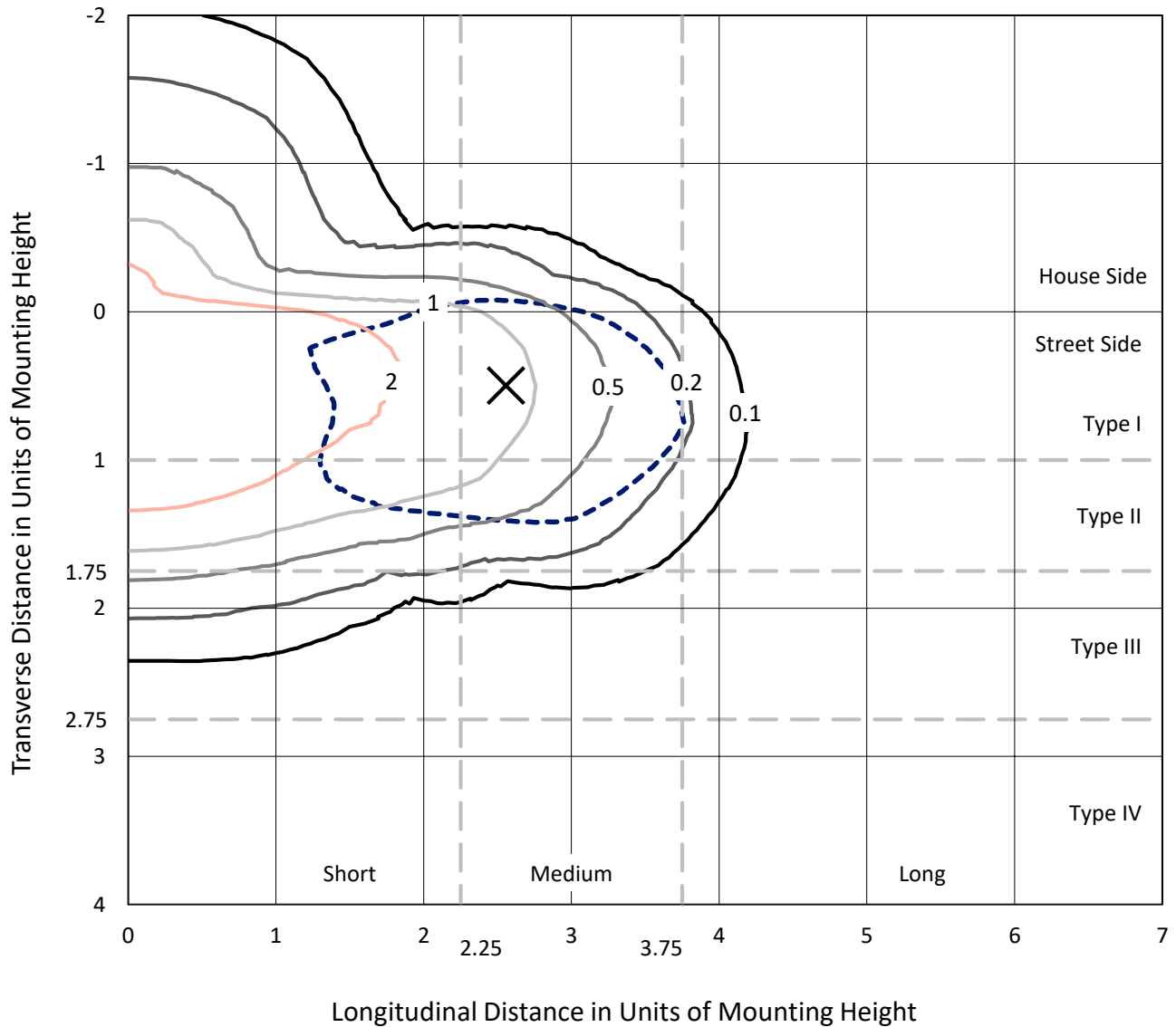
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

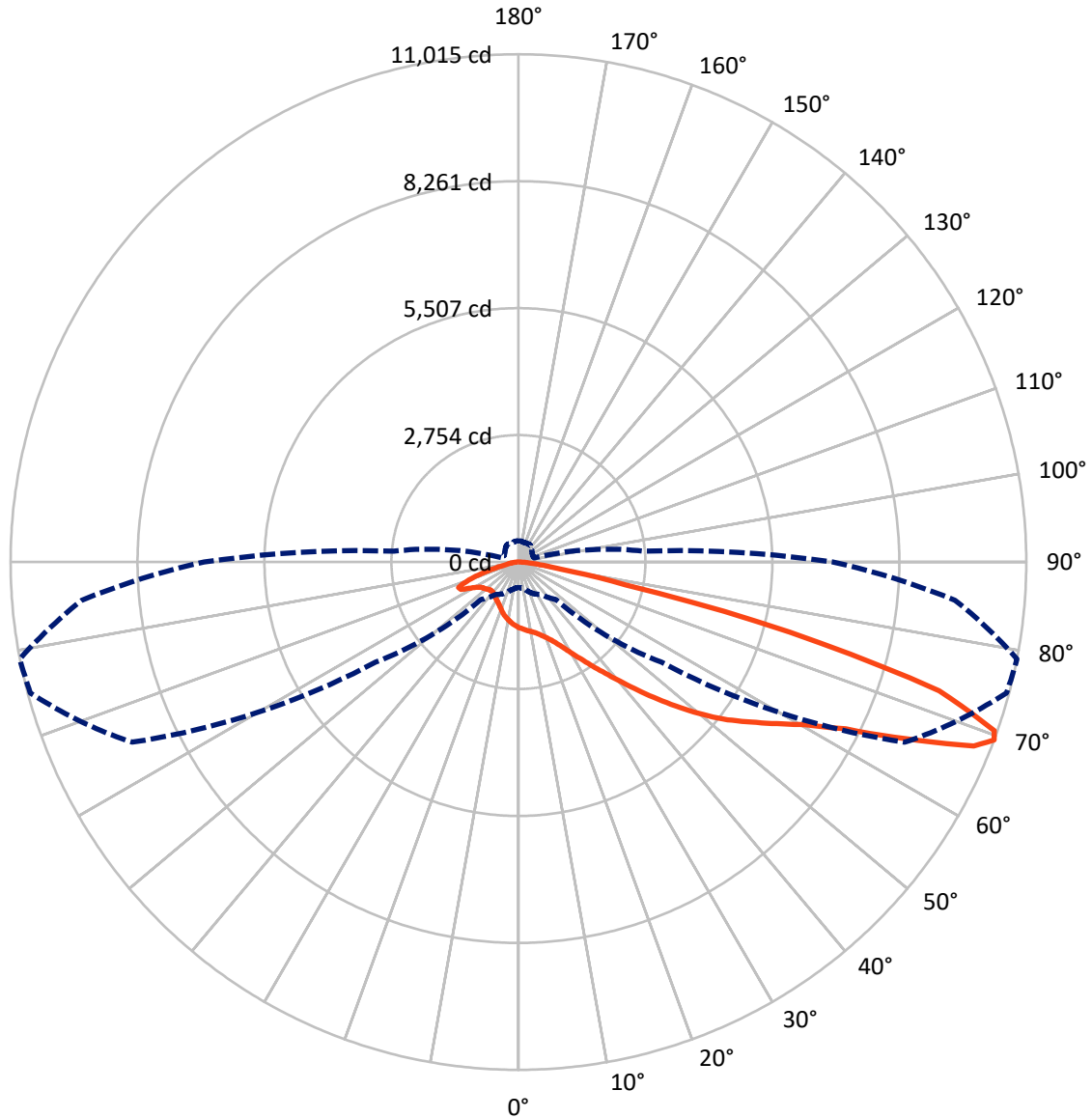
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.3 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1909.3	0.0	1909.3
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	8240.2	0.0	8240.2
	% Fixture	81.2	0.0	81.2
Total	Lumens	10149.5	0.0	10149.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.0	1.3
10°-20°	378.6	3.7
20°-30°	625.5	6.2
30°-40°	1012.9	10.0
40°-50°	1618.1	15.9
50°-60°	2317.3	22.8
60°-70°	2581.8	25.4
70°-80°	1291.6	12.7
80°-90°	191.7	1.9
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°	10149.5	100.0
0°-180°	10149.5	100.0



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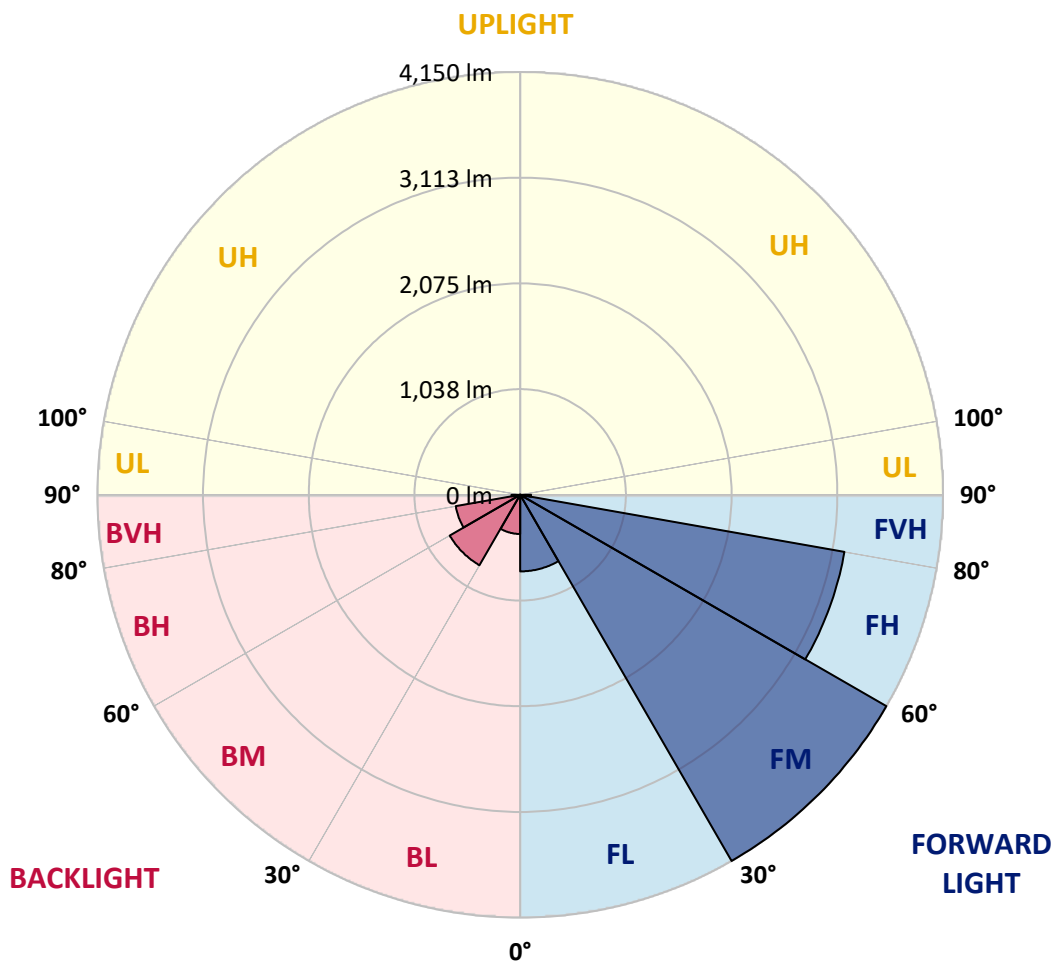
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	751.5	7.4			
FM	(30°-60°)	4150.2	40.9			
FH	(60°-80°)	3231.5	31.8			G2/5000
FVH	(80°-90°)	107.1	1.1			G2/225
BL	(0°-30°)	384.6	3.8	B1/500		
BM	(30°-60°)	798.1	7.9	B1/1000		
BH	(60°-80°)	642.0	6.3	B2/1000		G2/1000
BVH	(80°-90°)	84.6	0.8			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4
2.5°	1563.7	1560.4	1559.7	1549.8	1544.5	1533.1	1506.6	1479.4	1454.1	1440.9	1427.0
5°	1694.6	1687.9	1684.6	1668.1	1653.4	1628.2	1586.2	1543.2	1498.1	1474.7	1446.9
7.5°	1773.6	1774.2	1774.2	1760.9	1746.3	1715.9	1662.7	1603.6	1536.6	1506.0	1462.1
10°	1780.3	1780.9	1790.9	1794.2	1797.5	1781.5	1732.4	1658.0	1571.8	1531.9	1474.7
12.5°	1714.4	1719.1	1735.7	1759.6	1793.5	1810.8	1789.6	1716.4	1616.9	1568.4	1498.6
15°	1626.1	1630.9	1652.1	1688.5	1743.0	1800.8	1830.7	1783.6	1676.0	1618.8	1533.9
17.5°	1583.1	1588.4	1602.9	1632.1	1685.2	1763.0	1852.6	1855.2	1745.6	1679.9	1575.6
20°	1562.4	1566.4	1585.0	1608.9	1649.4	1723.8	1854.6	1930.9	1828.7	1752.4	1626.8
22.5°	1609.6	1610.9	1620.2	1633.5	1660.6	1717.7	1853.3	2009.2	1932.3	1843.3	1692.5
25°	1747.7	1738.9	1732.4	1715.9	1722.4	1763.0	1874.6	2093.0	2065.1	1962.7	1780.3
27.5°	1911.1	1909.6	1892.4	1853.9	1829.4	1855.2	1934.9	2186.6	2227.7	2114.9	1895.1
30°	2093.0	2093.6	2075.8	2028.6	1978.7	1981.4	2031.2	2294.8	2422.3	2298.1	2036.5
32.5°	2283.5	2295.4	2262.3	2215.1	2154.8	2135.5	2169.2	2425.7	2647.3	2514.5	2200.5
35°	2511.3	2513.3	2476.7	2407.6	2347.4	2316.6	2347.9	2588.9	2907.1	2768.9	2400.5
37.5°	2747.6	2749.1	2711.2	2622.8	2546.4	2526.6	2561.1	2787.5	3181.9	3058.4	2635.4
40°	2941.0	2954.9	2924.9	2842.0	2765.0	2752.9	2802.8	3025.2	3533.2	3401.1	2915.0
42.5°	3160.0	3176.0	3140.0	3053.8	2992.7	2988.8	3066.4	3296.2	3882.5	3797.4	3231.7
45°	3407.0	3429.5	3379.9	3282.9	3231.1	3318.7	3323.4	3596.3	4284.8	4241.0	3588.3
47.5°	3676.7	3695.2	3654.8	3550.5	3494.0	3620.8	3575.1	3920.9	4719.8	4716.5	3974.1
50°	3884.5	3905.0	3909.1	3863.3	3804.1	3820.0	3851.3	4262.3	5153.3	5205.1	4373.2
52.5°	3846.6	3866.6	3956.1	4076.4	4171.3	4130.1	4168.0	4624.8	5572.4	5681.9	4752.4
55°	3541.2	3551.8	3719.8	4005.4	4409.7	4606.1	4608.8	5019.2	5970.8	6124.1	5112.2
57.5°	2990.6	2992.1	3210.5	3631.5	4270.9	4914.9	5304.8	5514.5	6386.4	6612.9	5558.4
60°	2116.1	2121.4	2375.7	2926.3	3773.6	4877.7	6053.0	6401.1	6867.8	7161.9	6133.4
62.5°	1256.3	1268.2	1460.1	1901.7	2802.8	4399.7	6495.4	7978.0	7576.9	7967.4	7053.8
65°	817.4	827.3	942.2	1164.1	1656.0	3201.2	6349.8	9505.2	8918.9	9234.3	8376.4
67.5°	629.5	637.4	727.7	861.8	1016.0	1730.5	5077.0	9825.3	10552.4	10650.7	9492.7
69°	553.1	559.7	626.2	754.9	855.2	1145.3	3783.5	9244.3	10960.8	11014.6	9506.7
70°	512.7	518.0	580.3	692.0	785.5	914.4	2895.7	8569.7	10811.5	10948.8	9232.4
72.5°	422.4	427.0	471.4	557.0	642.1	651.5	1282.9	6257.7	9103.6	9543.1	7812.6
75°	352.6	355.2	384.5	446.8	519.8	518.6	655.4	3544.4	5555.1	6079.0	4824.0
77.5°	294.1	296.1	315.5	353.9	410.3	408.4	461.5	1529.9	2452.8	2366.6	1660.6
80°	259.6	261.0	270.8	280.9	316.7	314.8	342.0	702.6	997.9	922.3	628.2
82.5°	197.2	199.9	250.4	254.9	245.6	237.1	238.4	409.0	511.2	465.5	337.4
85°	111.6	112.2	160.6	187.9	213.7	160.6	154.7	211.1	252.3	221.2	147.4
87.5°	49.8	51.8	77.1	89.0	115.5	94.3	88.4	89.7	109.0	90.3	58.4
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°	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4
2.5°	1413.7	1402.3	1375.8	1348.5	1321.3	1304.1	1286.2	1269.6	1262.9	1262.3	1249.6
5°	1419.6	1393.1	1332.6	1266.3	1203.2	1154.1	1112.9	1086.3	1060.4	1055.8	1044.5
7.5°	1421.7	1378.4	1280.3	1173.9	1077.6	1010.0	968.8	950.9	938.2	935.0	931.0
10°	1420.9	1359.9	1221.8	1076.3	966.8	915.6	900.5	904.4	909.8	912.4	912.4
12.5°	1431.5	1351.3	1163.3	984.7	895.2	870.5	882.5	903.1	919.0	925.7	927.0
15°	1450.9	1345.9	1098.9	905.0	844.6	850.5	879.8	909.8	932.4	942.2	944.8
17.5°	1474.7	1338.7	1024.5	839.2	815.4	836.1	873.8	911.7	938.9	951.6	953.6
20°	1501.2	1328.1	947.5	790.1	789.5	815.4	853.2	895.7	925.0	938.9	938.2
22.5°	1537.2	1318.1	875.8	754.2	761.0	784.8	816.1	854.6	881.7	894.4	891.7
25°	1585.0	1308.8	811.3	722.4	728.4	744.3	766.3	795.4	814.8	821.4	816.6
27.5°	1649.4	1301.5	761.0	693.2	692.6	699.9	713.2	729.1	738.3	736.4	729.1
30°	1728.3	1294.2	723.8	667.4	658.0	657.4	663.4	672.7	678.6	666.6	660.8
32.5°	1816.7	1281.5	690.5	644.8	628.2	622.2	624.9	637.4	662.1	650.1	645.4
35°	1920.9	1266.9	657.4	620.2	607.6	596.3	598.4	625.5	699.9	691.2	686.6
37.5°	2046.5	1253.7	626.7	593.6	592.9	579.0	577.7	610.2	709.8	691.2	687.3
40°	2197.3	1251.0	599.6	564.5	575.0	569.7	565.0	584.9	654.8	616.9	609.6
42.5°	2379.2	1262.9	579.6	536.5	554.4	567.1	558.4	563.1	591.7	557.8	551.7
45°	2591.6	1295.4	565.0	511.9	532.5	565.0	555.2	551.1	555.8	537.1	533.2
47.5°	2839.4	1353.2	555.2	491.4	511.9	559.7	553.7	545.8	543.8	533.2	530.5
50°	3104.3	1430.9	548.4	472.8	493.3	550.4	553.1	541.9	538.5	533.9	532.5
52.5°	3367.1	1515.4	540.5	456.9	478.1	539.2	553.7	537.8	533.2	530.5	529.2
55°	3628.9	1602.9	525.9	442.9	466.8	525.9	553.1	532.5	527.2	527.2	527.2
57.5°	3968.2	1736.3	506.6	431.5	452.1	508.6	544.6	526.5	519.3	519.8	520.6
60°	4458.2	1960.1	485.4	419.0	433.0	488.7	531.2	515.9	507.4	510.0	510.6
62.5°	5276.9	2351.3	456.2	401.1	413.0	467.5	513.9	501.3	493.3	498.0	498.6
65°	6368.5	2824.7	417.6	378.5	392.4	443.6	492.0	484.0	475.5	486.7	486.1
67.5°	7034.4	2963.5	377.2	354.7	372.4	418.3	464.9	461.5	455.5	475.5	474.0
69°	6816.0	2712.4	353.9	339.3	358.6	401.1	447.5	446.2	441.5	460.8	459.6
70°	6476.7	2478.1	339.3	329.4	351.2	390.5	436.2	436.2	431.5	448.3	444.9
72.5°	5202.5	1838.0	305.5	304.2	326.1	361.2	405.8	409.0	406.4	412.3	409.0
75°	3054.4	1107.6	272.2	276.1	295.5	329.9	371.9	374.6	371.9	371.2	371.9
77.5°	1059.1	496.7	240.3	246.3	262.9	298.1	334.7	340.0	336.0	331.4	332.6
80°	414.4	288.9	205.8	214.4	228.3	262.2	297.5	300.8	294.9	294.1	288.9
82.5°	249.0	176.0	160.0	174.0	191.2	227.8	256.9	255.7	250.9	278.3	243.7
85°	108.2	97.6	116.9	130.9	139.4	170.7	217.1	211.1	199.9	176.0	171.9
87.5°	43.8	50.5	64.4	77.8	83.6	110.2	148.7	143.4	145.4	119.6	118.8
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)