

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: P195535

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195535
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-01-D-UNV-AFL-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5057 lumens
Efficiency: N/A
Efficacy: 114.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 44
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

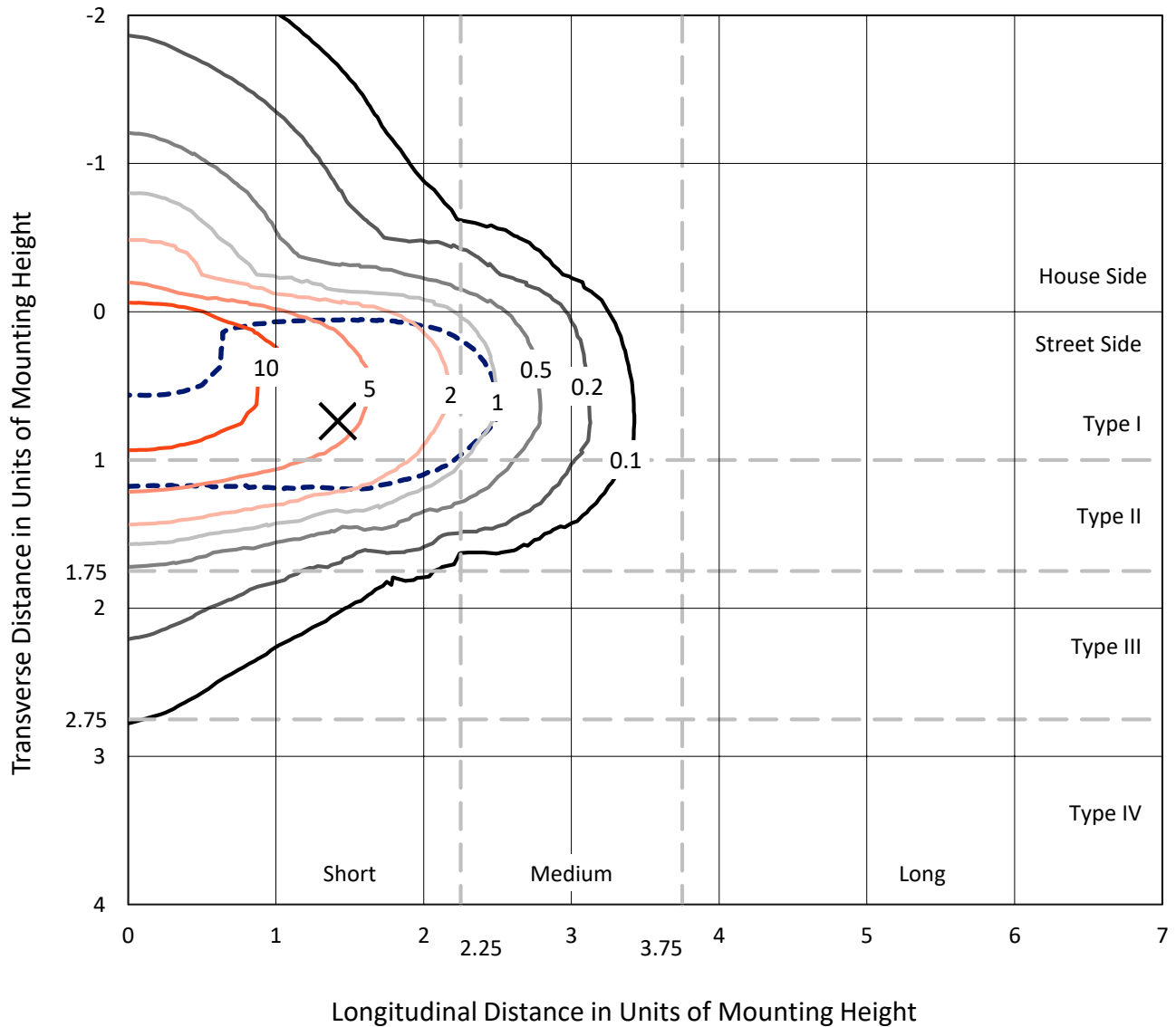


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Iso-Footcandle Lines of Horizontal Illumination

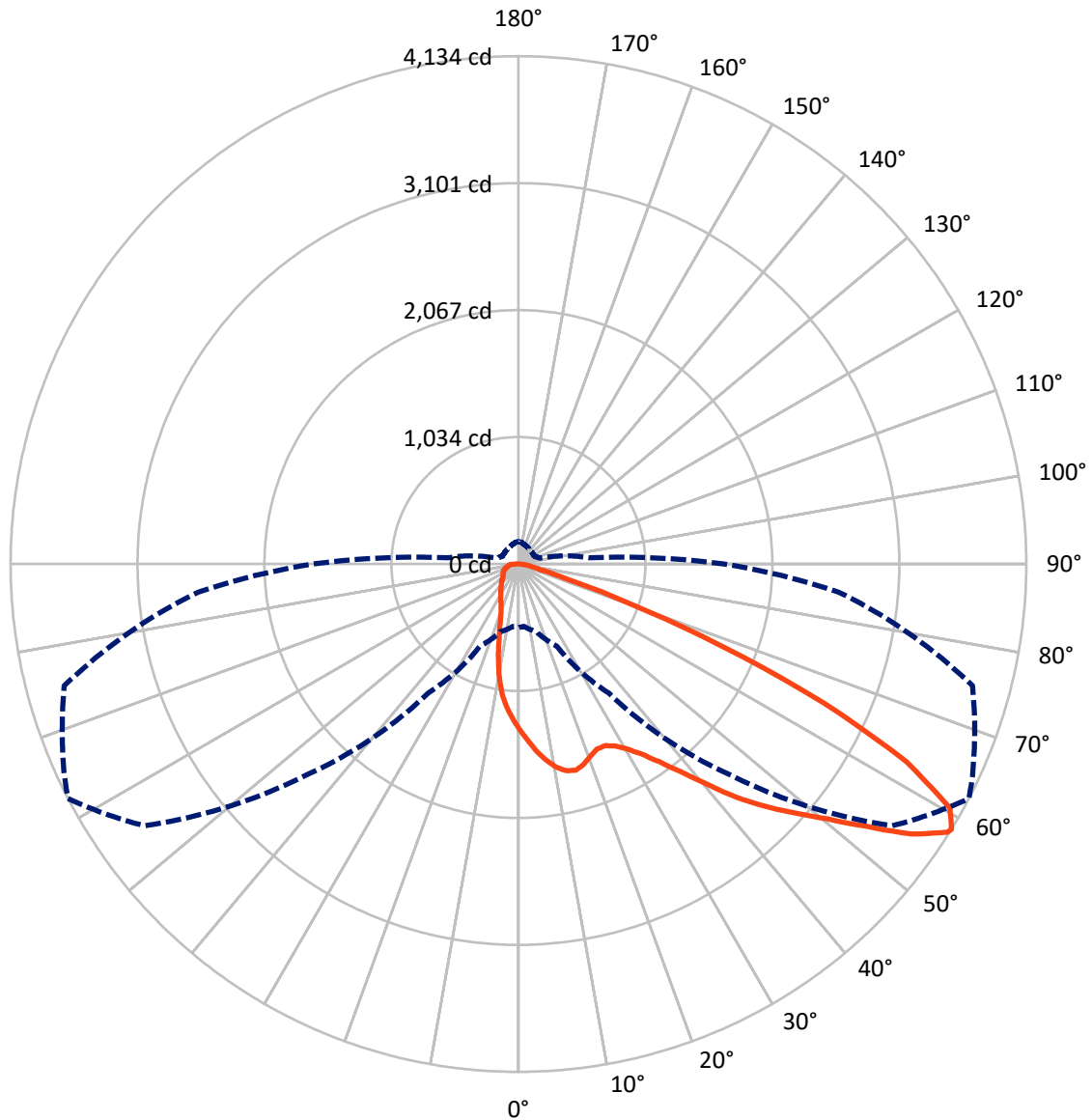
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.8 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	776.4	0.0	776.4
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	4280.6	0.0	4280.6
	% Fixture	84.6	0.0	84.6
Total	Lumens	5057.0	0.0	5057.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.7	2.4
10°-20°	304.6	6.0
20°-30°	493.6	9.8
30°-40°	788.1	15.6
40°-50°	1146.3	22.7
50°-60°	1199.5	23.7
60°-70°	731.2	14.5
70°-80°	204.5	4.0
80°-90°	68.5	1.4
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°	5057.0	100.0
0°-180°	5057.0	100.0



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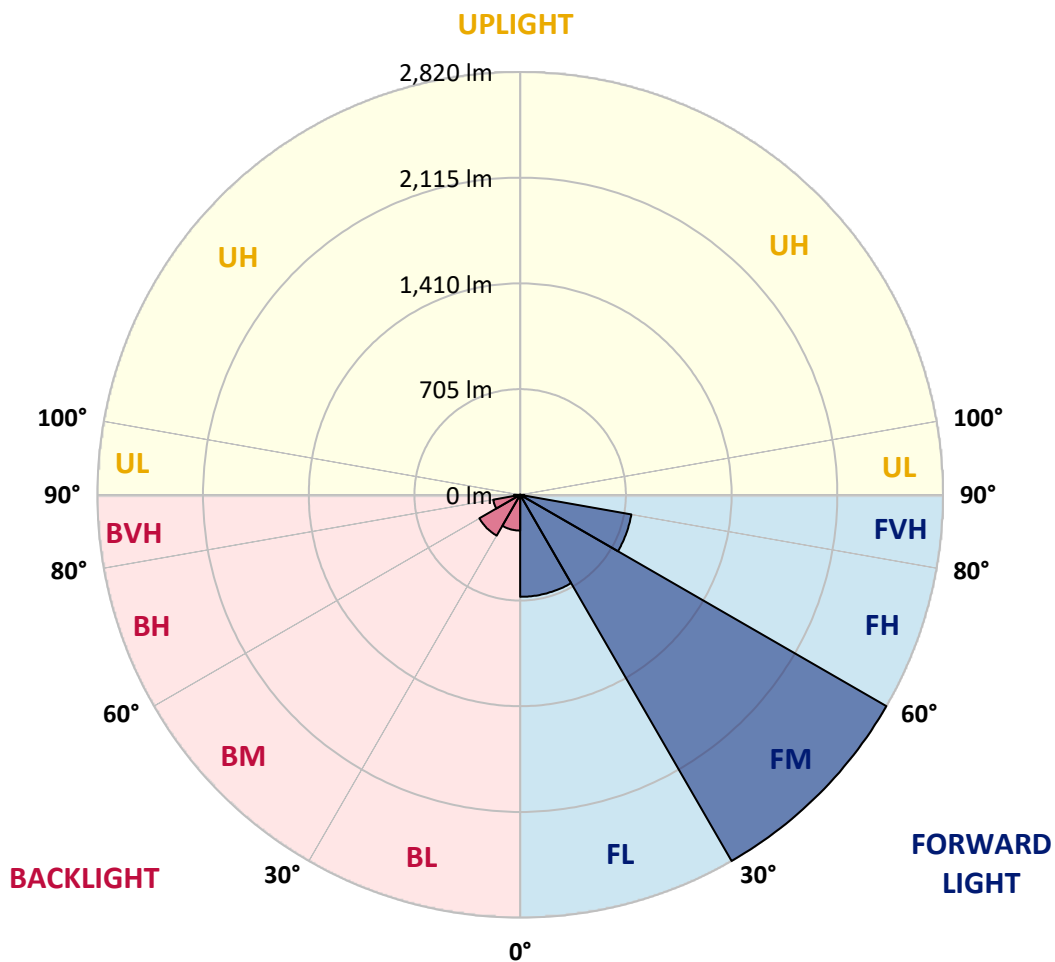
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	680.2	13.5			
FM	(30°-60°)	2819.8	55.8			
FH	(60°-80°)	753.0	14.9			G1/1800
FVH	(80°-90°)	27.6	0.5			G1/100
BL	(0°-30°)	238.7	4.7	B1/500		
BM	(30°-60°)	314.0	6.2	B1/1000		
BH	(60°-80°)	182.8	3.6	B1/500		G1/500
BVH	(80°-90°)	41.0	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	1350.2	1350.2	1350.2	1350.2	1350.2	1350.2	1350.2	1350.2	1350.2	1350.2	1350.2
2.5°	1532.5	1531.6	1518.6	1510.1	1500.0	1476.6	1453.2	1435.8	1427.0	1393.2	1360.3
5°	1659.3	1655.5	1648.2	1639.1	1625.8	1596.4	1559.4	1527.5	1514.9	1454.8	1394.4
7.5°	1592.3	1598.3	1620.7	1646.0	1672.6	1674.5	1648.2	1610.3	1596.4	1516.1	1427.6
10°	1406.8	1404.2	1432.4	1481.7	1569.2	1655.8	1699.1	1680.5	1665.9	1574.3	1460.8
12.5°	1350.5	1349.9	1354.6	1367.3	1422.2	1541.1	1686.2	1726.6	1721.6	1635.9	1496.2
15°	1367.6	1368.2	1367.9	1369.5	1384.6	1441.2	1613.8	1742.1	1757.9	1696.9	1532.2
17.5°	1422.2	1420.0	1413.1	1405.5	1407.7	1427.9	1535.7	1715.5	1763.0	1751.3	1562.6
20°	1506.6	1506.6	1488.0	1466.8	1452.9	1457.3	1503.2	1670.0	1739.6	1797.4	1585.3
22.5°	1612.5	1614.1	1586.6	1548.0	1516.4	1504.4	1521.8	1636.2	1711.1	1840.1	1605.6
25°	1744.0	1743.7	1703.5	1648.2	1598.3	1569.5	1569.2	1637.8	1702.3	1890.0	1626.7
27.5°	1906.8	1891.9	1845.1	1766.4	1695.9	1652.0	1632.1	1677.6	1720.9	1951.3	1655.2
30°	2090.4	2075.2	2013.9	1912.8	1817.3	1753.2	1720.3	1746.5	1777.8	2029.4	1698.2
32.5°	2272.1	2275.6	2203.5	2089.4	1966.8	1876.4	1827.7	1843.9	1865.7	2124.8	1756.3
35°	2538.2	2537.9	2443.7	2301.2	2155.5	2030.3	1968.7	1977.2	1997.1	2259.5	1837.9
37.5°	2736.7	2733.6	2672.9	2546.8	2382.7	2232.6	2143.5	2144.7	2161.8	2428.6	1945.3
40°	2756.9	2756.3	2756.0	2738.0	2625.8	2484.2	2372.6	2349.6	2356.5	2608.1	2059.4
42.5°	2602.4	2625.5	2691.8	2793.6	2824.9	2750.6	2645.1	2593.5	2578.4	2814.2	2180.1
45°	2382.1	2393.8	2510.1	2738.9	2925.1	3000.9	2921.6	2812.9	2787.0	3014.5	2278.4
47.5°	2279.7	2274.6	2342.0	2591.3	2915.3	3200.1	3205.7	3027.5	2983.6	3187.4	2362.2
50°	2060.0	2053.4	2138.4	2374.2	2808.5	3299.0	3497.5	3261.4	3180.1	3351.8	2438.0
52.5°	1622.3	1616.0	1730.1	2033.8	2569.5	3262.0	3743.4	3548.3	3409.9	3510.1	2508.8
55°	1055.6	1056.3	1165.0	1478.2	2079.3	3046.5	3858.7	3879.9	3724.7	3668.4	2566.0
57.5°	581.2	575.9	653.3	845.8	1430.5	2556.9	3762.6	4118.8	4037.9	3804.4	2607.5
58°	516.7	510.4	570.2	736.1	1282.6	2418.8	3714.3	4134.0	4078.1	3826.8	2613.5
60°	368.2	357.5	348.3	415.0	738.9	1744.0	3391.9	4035.7	4089.7	3871.7	2607.8
62.5°	310.4	298.0	265.2	262.6	348.0	853.0	2682.4	3544.2	3695.6	3768.3	2516.1
65°	288.2	275.9	232.6	217.1	236.1	368.2	1658.7	2736.7	2939.0	3409.0	2285.4
67.5°	272.4	257.9	211.4	191.2	195.0	220.3	703.9	1789.8	2024.3	2658.3	1833.4
70°	258.2	242.1	194.7	171.3	168.1	167.5	275.0	934.6	1160.6	1739.6	1228.2
72.5°	242.1	226.3	179.8	154.9	147.9	135.9	165.3	386.2	529.4	852.7	562.9
75°	218.7	205.8	163.4	141.3	129.3	110.3	122.0	185.2	228.2	326.5	261.4
77.5°	192.5	182.0	146.6	129.9	113.8	90.1	93.2	125.5	141.0	183.9	151.4
80°	136.2	140.0	128.0	114.4	100.2	72.7	71.7	92.0	101.1	123.6	101.8
82.5°	93.9	96.7	104.3	90.4	80.9	56.6	52.8	63.8	68.6	74.6	49.3
85°	67.0	65.1	72.4	64.8	59.4	36.0	33.8	40.5	43.3	45.5	23.7
87.5°	40.8	40.5	41.7	33.5	31.0	18.3	16.8	19.3	20.5	19.9	11.4
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°	1350.2	1350.2	1350.2	1350.2	1350.2	1350.2	1350.2	1350.2	1350.2	1350.2	1350.2
2.5°	1348.0	1332.5	1298.7	1271.5	1242.1	1219.7	1197.2	1184.6	1170.7	1162.8	1161.8
5°	1362.8	1331.2	1259.2	1192.2	1123.3	1061.3	1000.6	955.7	919.1	898.2	897.0
7.5°	1379.3	1329.6	1218.4	1102.4	979.8	857.8	750.0	673.8	624.8	602.1	600.5
10°	1391.9	1323.0	1168.8	988.3	793.9	632.7	534.8	489.9	475.0	471.2	470.6
12.5°	1407.1	1318.3	1106.2	842.0	606.8	481.7	452.0	449.1	452.3	454.2	454.5
15°	1421.3	1309.1	1021.8	679.8	475.0	430.5	431.1	437.1	443.4	446.3	446.6
17.5°	1427.9	1286.7	910.9	535.7	415.6	407.4	414.7	422.6	428.3	430.5	430.5
20°	1427.9	1250.6	782.2	433.9	384.6	386.2	395.1	401.1	402.3	400.4	399.5
22.5°	1421.9	1206.1	657.1	378.6	359.4	365.4	372.3	368.2	353.3	342.0	339.8
25°	1416.6	1153.3	536.7	344.8	337.2	345.1	342.3	314.2	291.4	279.7	277.8
27.5°	1407.7	1089.4	436.2	317.0	315.7	322.1	293.9	266.8	255.4	249.1	247.8
30°	1405.5	1020.2	365.0	292.4	294.6	285.7	253.5	244.6	242.1	238.6	237.0
32.5°	1412.8	951.0	320.5	272.1	274.3	245.3	232.9	234.2	233.9	229.5	227.9
35°	1432.7	883.7	292.0	253.8	247.5	219.7	221.2	225.0	225.0	219.7	217.8
37.5°	1467.4	821.1	274.0	238.3	216.5	206.4	210.5	215.5	215.5	211.8	210.2
40°	1504.4	760.1	260.4	226.0	196.9	197.2	201.3	205.1	206.7	207.3	206.1
42.5°	1537.9	696.9	245.9	212.7	188.1	190.3	192.2	195.0	201.6	206.1	205.4
45°	1557.5	633.4	230.1	196.3	182.0	183.0	182.4	187.4	195.3	202.0	202.0
47.5°	1575.5	581.2	217.1	179.8	176.0	176.0	174.1	179.2	186.5	194.4	195.0
50°	1592.6	547.4	208.0	167.2	168.5	167.5	166.9	171.6	181.4	190.9	192.5
52.5°	1610.0	536.0	199.7	158.0	160.6	159.3	159.9	166.6	177.6	187.4	189.0
55°	1634.3	543.3	191.2	151.7	153.0	152.7	155.2	162.8	172.6	182.4	183.0
57.5°	1664.3	569.8	183.9	147.0	145.7	147.6	151.7	159.0	168.5	180.2	181.1
58°	1670.3	576.2	182.7	145.7	144.1	147.0	151.1	158.0	167.8	180.2	181.1
60°	1679.5	598.6	179.5	143.2	138.7	143.8	148.9	155.8	166.6	181.7	183.6
62.5°	1635.3	603.0	178.6	140.3	133.1	139.4	145.4	153.3	165.3	187.1	191.2
65°	1482.0	557.5	171.9	135.6	128.3	135.9	142.2	151.4	169.1	203.2	205.1
67.5°	1189.6	463.0	155.8	128.3	122.9	131.8	139.7	151.4	170.7	205.8	207.0
70°	817.9	348.0	135.6	120.4	116.6	126.7	138.7	154.9	165.3	194.7	190.9
72.5°	427.3	242.1	118.8	111.3	109.0	122.3	147.9	151.4	159.0	181.7	177.9
75°	215.2	164.7	104.6	100.8	100.5	120.7	165.6	145.7	152.3	171.0	179.2
77.5°	127.1	129.0	93.2	91.0	92.6	117.9	165.9	140.0	144.8	157.4	166.2
80°	86.9	106.5	84.4	83.8	85.0	108.4	153.0	133.1	135.9	148.9	158.3
82.5°	49.0	58.8	74.0	78.1	77.4	88.8	132.1	121.0	124.5	176.0	186.2
85°	23.7	35.4	61.9	73.0	66.1	59.1	107.5	107.5	108.4	126.1	127.7
87.5°	8.8	15.8	41.7	57.8	46.1	35.4	73.0	76.2	84.7	87.2	89.1
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)