

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: P197006

Luminaire Tested: **NAV-AF-02-D-UNV-RW-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197006
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-RW-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10157 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

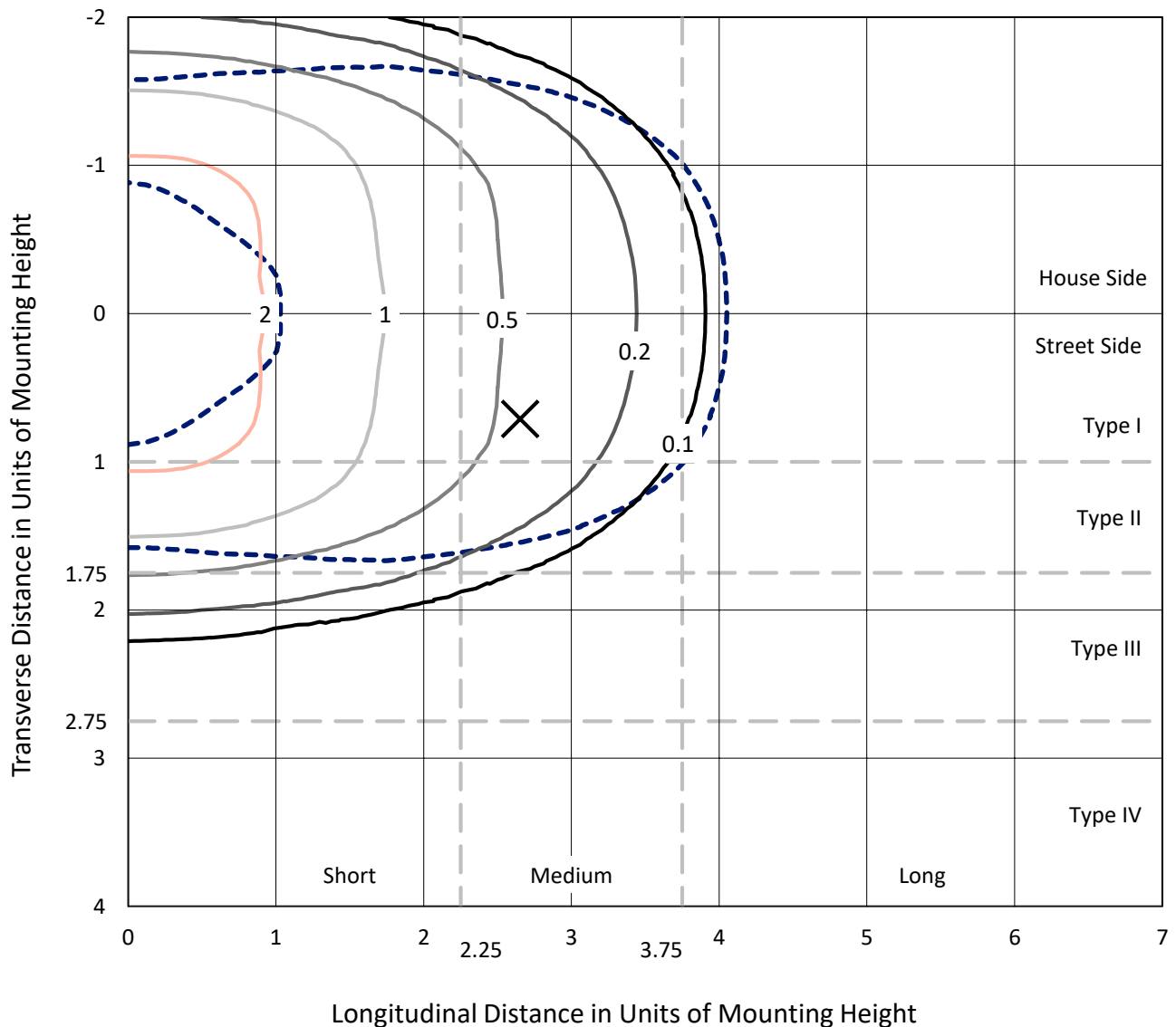
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

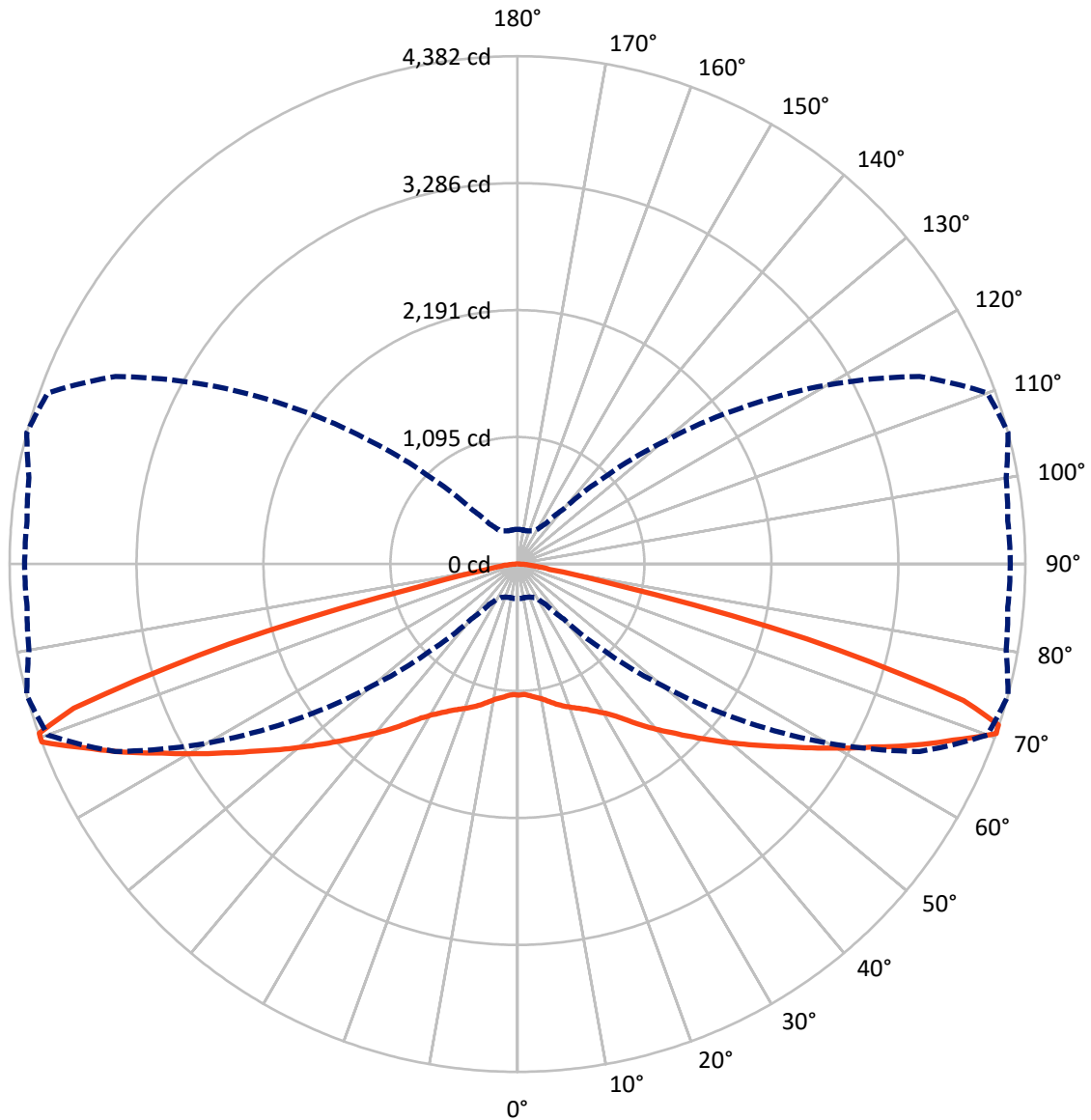
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2.8 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5078.5	0.0	5078.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5078.5	0.0	5078.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	10157.0	0.0	10157.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.5	1.1
10°-20°	336.5	3.3
20°-30°	631.9	6.2
30°-40°	1113.2	11.0
40°-50°	1844.9	18.2
50°-60°	2566.5	25.3
60°-70°	2422.9	23.9
70°-80°	1034.8	10.2
80°-90°	97.8	1.0
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°	10157.0	100.0
0°-180°	10157.0	100.0



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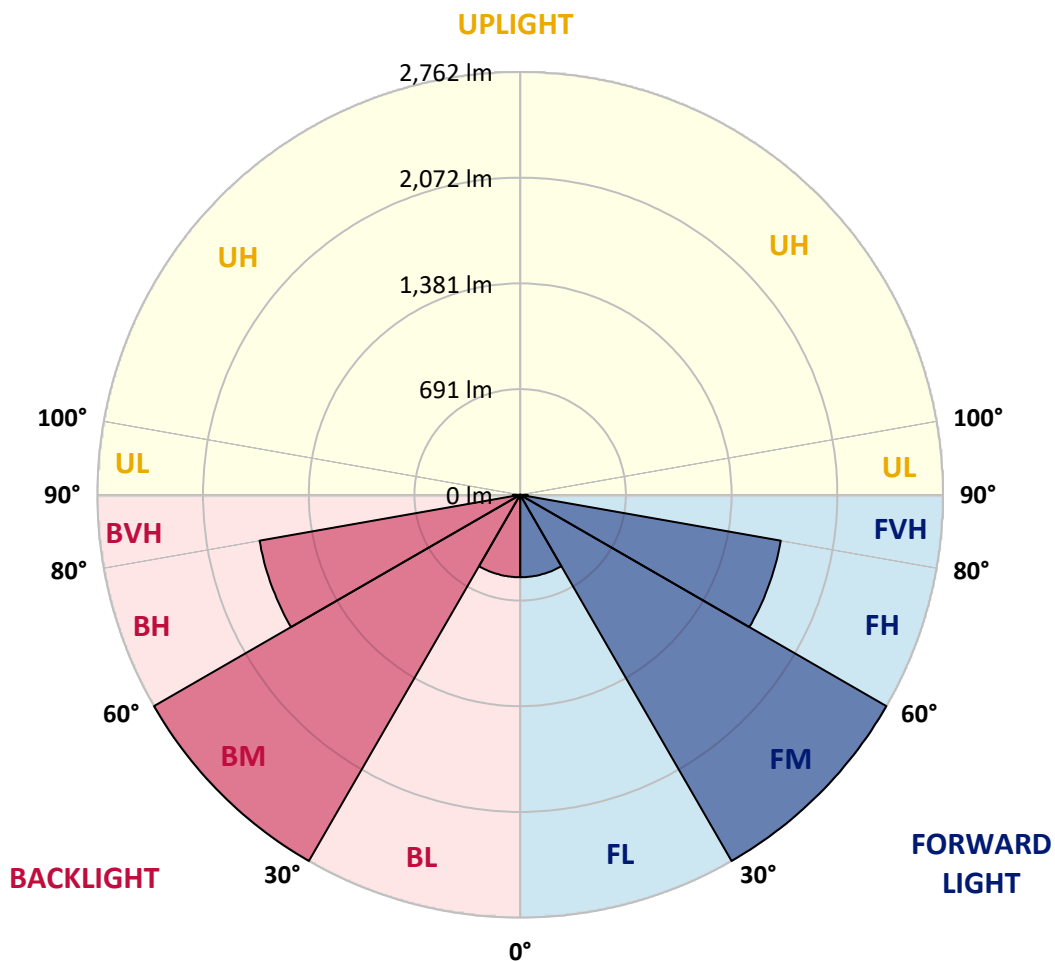
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	538.5	5.3			
FM	(30°-60°)	2762.3	27.2			
FH	(60°-80°)	1728.8	17.0			G1/1800
FVH	(80°-90°)	48.9	0.5			G1/100
BL	(0°-30°)	538.5	5.3	B2/1000		
BM	(30°-60°)	2762.3	27.2	B3/5000		
BH	(60°-80°)	1728.8	17.0	B3/2500		G3/2500
BVH	(80°-90°)	48.9	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1131.1	1131.1	1131.1	1131.1	1131.1	1131.1	1131.1	1131.1	1131.1	1131.1	1131.1
2.5°	1138.1	1137.4	1138.1	1136.2	1136.8	1136.2	1136.2	1133.6	1133.6	1132.4	1130.4
5°	1125.4	1126.6	1126.6	1126.6	1128.5	1128.5	1131.1	1131.7	1133.6	1135.5	1136.8
7.5°	1104.3	1105.0	1106.9	1108.2	1112.0	1117.1	1122.2	1127.9	1133.0	1139.4	1146.4
10°	1086.5	1087.8	1091.0	1094.2	1101.2	1107.5	1116.4	1125.4	1134.3	1145.1	1155.9
12.5°	1077.0	1078.9	1084.0	1089.1	1099.9	1108.2	1120.3	1134.3	1146.4	1156.5	1168.6
15°	1078.3	1078.9	1085.9	1092.9	1108.2	1119.6	1136.8	1153.4	1168.0	1179.5	1193.5
17.5°	1096.7	1098.0	1105.0	1115.2	1129.8	1144.4	1162.9	1180.1	1199.8	1213.2	1229.7
20°	1133.0	1134.9	1142.5	1153.4	1169.3	1184.5	1203.6	1221.5	1241.8	1257.7	1274.3
22.5°	1180.1	1183.3	1191.5	1204.9	1220.8	1239.3	1259.0	1277.5	1296.6	1312.5	1326.5
25°	1243.1	1246.9	1255.8	1269.2	1285.1	1304.8	1325.2	1344.3	1364.0	1376.1	1387.6
27.5°	1327.8	1334.1	1343.7	1354.5	1368.5	1389.5	1408.6	1424.5	1443.6	1457.0	1464.6
30°	1441.7	1450.6	1458.2	1469.7	1479.9	1502.2	1517.4	1530.2	1544.8	1552.5	1554.4
32.5°	1581.1	1589.4	1597.0	1605.3	1619.3	1639.7	1654.3	1661.3	1668.9	1667.7	1660.7
35°	1738.3	1744.7	1749.1	1763.8	1786.7	1800.1	1810.9	1813.4	1814.7	1801.3	1788.0
37.5°	1903.8	1911.4	1915.3	1938.2	1959.8	1975.1	1980.2	1985.9	1982.1	1959.8	1935.6
40°	2082.7	2090.9	2102.4	2122.1	2147.6	2162.2	2168.6	2168.0	2164.8	2138.7	2099.2
42.5°	2258.3	2268.5	2278.1	2312.4	2333.5	2358.3	2361.5	2360.8	2353.8	2323.9	2278.1
45°	2407.3	2419.4	2439.1	2477.3	2511.0	2541.0	2553.0	2557.5	2550.5	2518.7	2466.5
47.5°	2530.1	2538.4	2563.2	2609.7	2653.0	2696.9	2721.1	2738.3	2737.6	2714.7	2659.3
50°	2614.2	2623.7	2654.3	2706.4	2760.6	2812.1	2859.8	2898.7	2917.1	2900.6	2849.0
52.5°	2638.3	2650.4	2690.5	2752.9	2815.9	2885.3	2956.6	3025.3	3066.7	3076.9	3036.8
55°	2536.5	2549.9	2608.4	2695.0	2798.7	2901.2	3009.4	3107.4	3192.7	3232.2	3216.3
57.5°	2239.9	2249.4	2323.9	2435.9	2584.2	2764.4	2946.4	3125.9	3272.3	3374.8	3392.6
60°	1771.4	1783.5	1865.0	1983.4	2152.0	2379.9	2634.5	2928.6	3215.7	3450.5	3567.0
62.5°	1195.4	1203.6	1281.9	1390.1	1574.7	1794.3	2078.2	2450.6	2859.8	3279.3	3607.7
65°	627.6	627.6	680.4	756.2	903.2	1099.9	1390.8	1772.7	2259.6	2783.5	3332.8
67.5°	364.1	363.4	375.5	392.7	439.2	518.8	679.2	959.9	1420.7	2030.5	2655.5
70°	300.4	298.5	296.6	296.6	303.6	315.7	346.3	423.3	619.3	1047.1	1633.9
71°	287.1	285.8	280.7	278.8	282.0	288.3	301.7	337.4	439.8	714.2	1220.2
72.5°	271.2	268.0	260.3	257.2	257.8	260.3	264.2	278.2	309.3	406.1	695.7
75°	247.0	239.3	229.8	225.3	223.4	222.8	222.8	226.6	233.6	245.1	285.2
77.5°	219.0	208.1	198.0	193.5	190.3	188.4	187.1	184.6	183.3	188.4	203.0
80°	185.2	173.8	165.5	162.9	161.0	157.2	152.1	147.0	143.9	146.4	155.3
82.5°	143.2	131.8	133.0	133.7	130.5	124.1	119.0	113.3	107.6	106.3	110.8
85°	113.9	108.2	104.4	112.7	105.7	98.0	91.0	81.5	68.1	56.0	61.1
87.5°	49.0	49.6	71.3	107.6	94.2	75.7	63.0	50.9	32.5	24.2	24.8
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°	1131.1	1131.1	1131.1	1131.1	1131.1	1131.1	1131.1	1131.1
2.5°	1129.8	1129.8	1127.9	1126.6	1126.6	1126.6	1125.4	1126.0
5°	1137.4	1138.7	1140.0	1139.4	1141.3	1143.2	1142.5	1141.9
7.5°	1150.2	1154.0	1157.8	1159.7	1162.3	1164.8	1165.5	1163.5
10°	1162.9	1170.5	1176.3	1181.4	1184.5	1187.1	1189.0	1188.4
12.5°	1178.8	1189.6	1199.8	1210.0	1217.0	1220.8	1224.6	1223.4
15°	1204.9	1217.0	1229.7	1243.1	1253.9	1259.7	1265.4	1264.1
17.5°	1240.6	1251.4	1261.6	1274.9	1288.3	1294.7	1301.0	1300.4
20°	1285.1	1293.4	1299.1	1306.8	1319.5	1326.5	1332.2	1330.3
22.5°	1336.0	1338.6	1339.2	1341.8	1352.0	1360.2	1367.9	1369.8
25°	1391.4	1389.5	1385.7	1383.8	1390.8	1399.7	1409.2	1411.8
27.5°	1460.2	1453.8	1444.2	1436.6	1438.5	1450.0	1460.8	1463.3
30°	1546.7	1532.1	1511.7	1497.1	1494.5	1506.6	1518.1	1521.9
32.5°	1645.4	1625.7	1597.6	1575.4	1565.8	1576.6	1586.8	1592.6
35°	1762.5	1740.9	1707.1	1678.5	1663.2	1670.2	1688.0	1694.4
37.5°	1901.3	1871.3	1833.8	1797.5	1772.0	1773.3	1792.4	1800.1
40°	2054.7	2011.4	1963.6	1918.4	1881.5	1879.0	1896.2	1901.9
42.5°	2214.4	2159.0	2103.0	2043.8	1998.0	1989.7	2012.0	2012.6
45°	2386.3	2315.0	2245.6	2176.9	2129.1	2114.5	2136.1	2138.7
47.5°	2569.6	2480.5	2398.4	2323.9	2272.3	2249.4	2270.4	2274.3
50°	2760.6	2668.3	2572.8	2490.0	2429.6	2401.6	2426.4	2428.9
52.5°	2949.6	2862.4	2767.6	2672.7	2599.5	2567.7	2597.0	2605.9
55°	3139.9	3055.9	2966.8	2871.9	2779.6	2751.6	2783.5	2793.0
57.5°	3337.9	3257.0	3176.2	3080.7	2991.0	2948.3	2982.7	2996.1
60°	3556.2	3484.9	3408.5	3312.4	3223.9	3174.3	3203.6	3218.8
62.5°	3770.7	3756.1	3686.7	3586.7	3474.7	3425.1	3449.9	3460.7
65°	3788.5	4025.9	4022.8	3923.5	3766.9	3683.5	3690.5	3695.6
67.5°	3306.7	3851.5	4199.7	4230.9	4056.5	3926.0	3910.7	3913.9
70°	2341.1	3089.0	3828.0	4313.0	4381.7	4280.5	4247.4	4252.5
71°	1875.8	2650.4	3463.9	4116.3	4376.7	4347.4	4328.9	4342.3
72.5°	1197.3	1952.8	2744.6	3525.0	4024.7	4167.9	4188.9	4197.2
75°	434.7	840.2	1422.0	2037.5	2582.3	2957.2	3163.5	3180.0
77.5°	233.6	301.1	465.3	695.1	873.3	968.8	980.2	984.7
80°	171.9	199.2	227.9	260.3	280.7	284.5	277.5	262.9
82.5°	121.6	137.5	148.9	160.4	168.7	161.7	134.3	102.5
85°	70.7	77.7	84.0	89.7	91.0	85.9	56.6	46.5
87.5°	28.0	30.6	29.9	33.7	32.5	29.9	22.3	19.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)