

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: P270324

Luminaire Tested: **NAV-AF-02-D-UNV-5MQ-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270324
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
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-5MQ-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12362.7 lumens
Efficiency: N/A
Efficacy: 95.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - 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

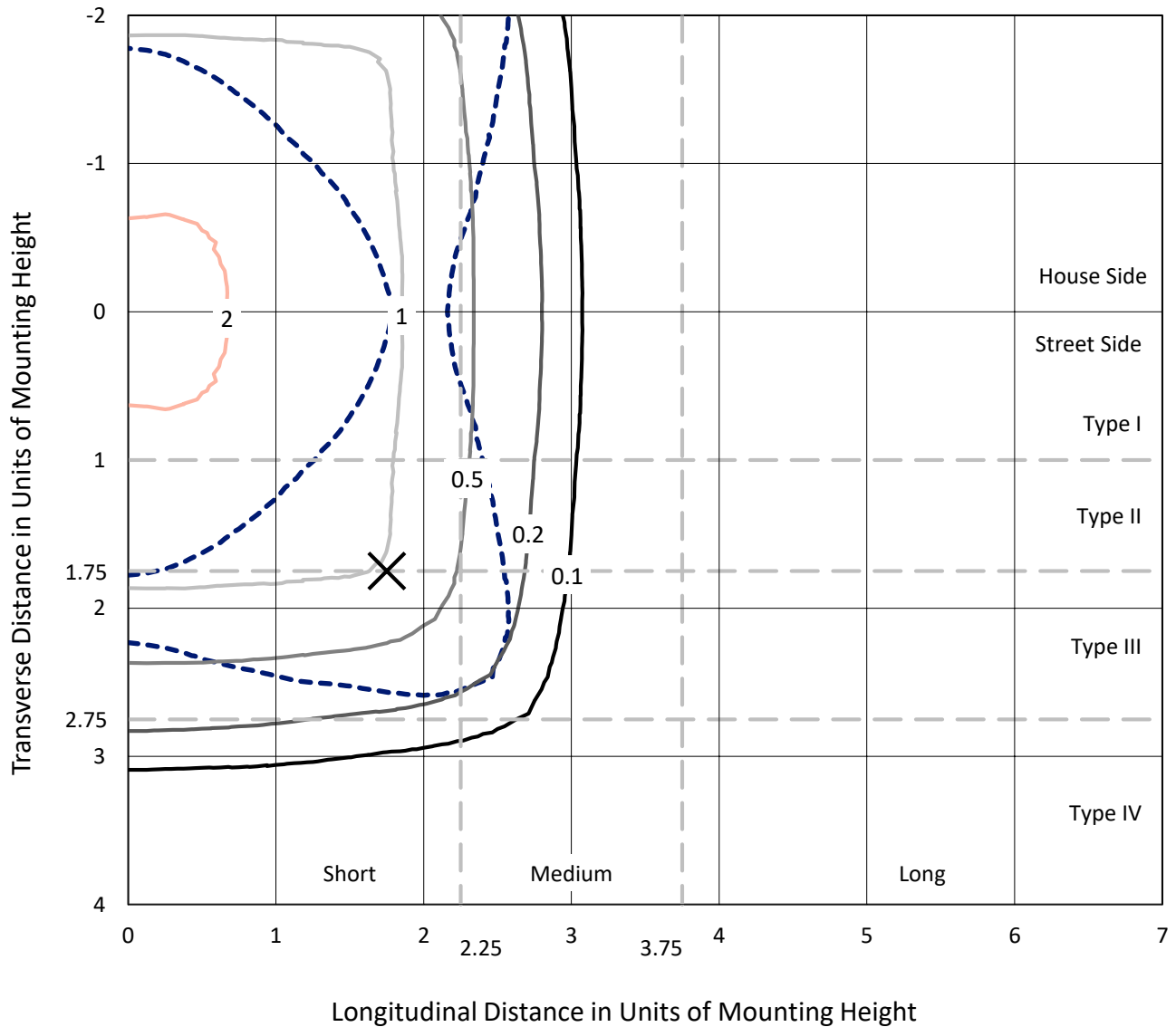


REPORT NUMBER: P270324

CATALOG NUMBER: NAV-AF-02-D-UNV-5MQ-7027-1200

Iso-Footcandle Lines of Horizontal Illumination

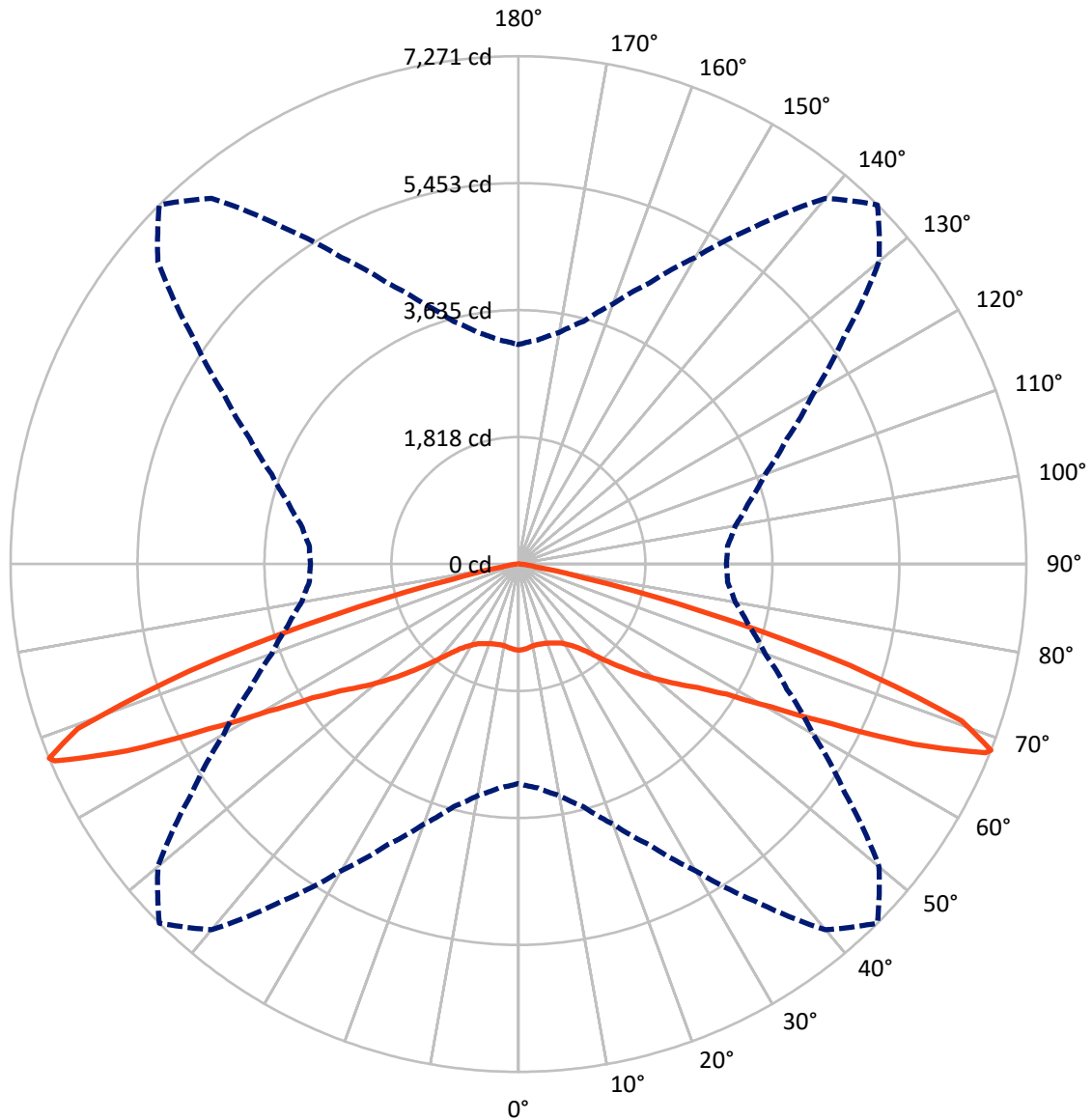
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.1 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P270324
CATALOG NUMBER: NAV-AF-02-D-UNV-5MQ-7027-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P270324

CATALOG NUMBER: NAV-AF-02-D-UNV-5MQ-7027-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6181.4	0.0	6181.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6181.4	0.0	6181.4
	% Fixture	50.0	0.0	50.0
Total	Lumens	12362.7	0.0	12362.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.4	0.9
10°-20°	334.7	2.7
20°-30°	569.0	4.6
30°-40°	931.1	7.5
40°-50°	1664.0	13.5
50°-60°	2810.3	22.7
60°-70°	4357.7	35.2
70°-80°	1498.3	12.1
80°-90°	82.3	0.7
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°	12362.7	100.0
0°-180°	12362.7	100.0



REPORT NUMBER: P270324

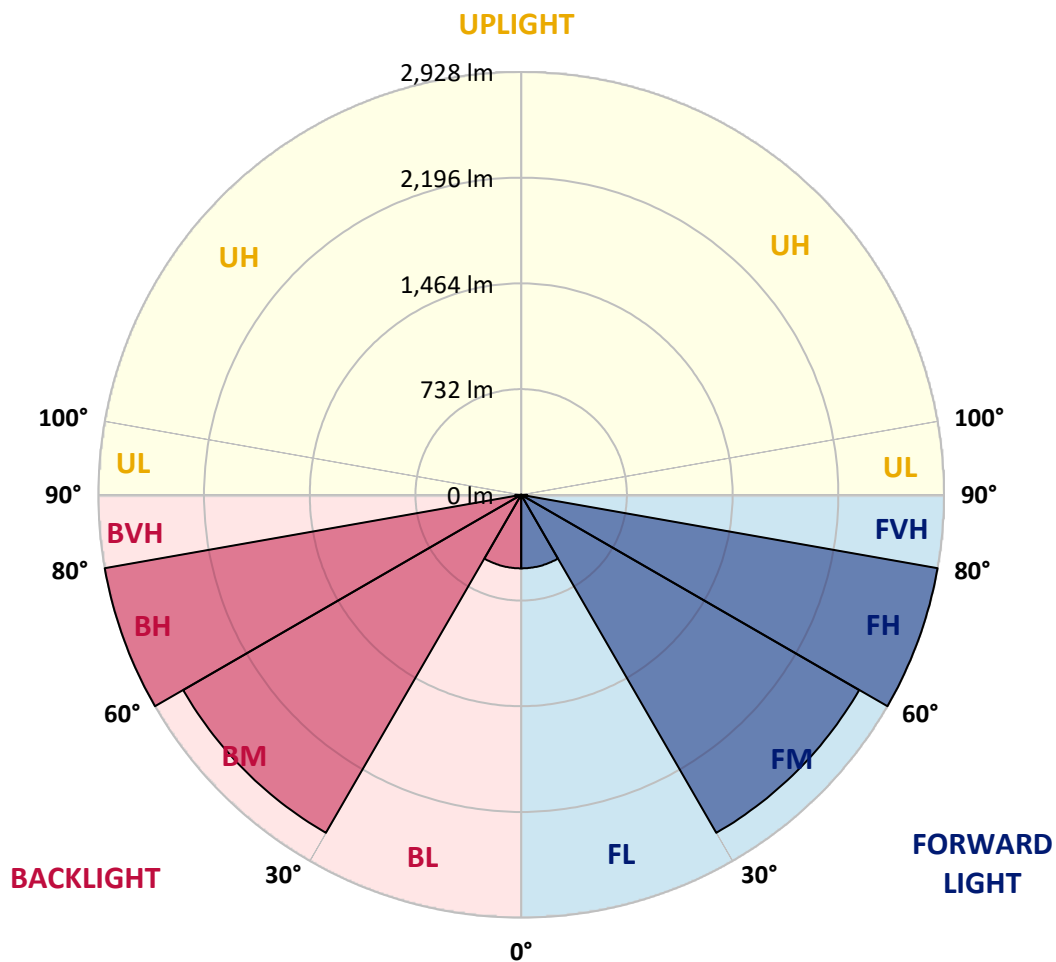
CATALOG NUMBER: NAV-AF-02-D-UNV-5MQ-7027-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	509.5	4.1			
FM	(30°-60°)	2702.7	21.9			
FH	(60°-80°)	2928.0	23.7			G2/5000
FVH	(80°-90°)	41.2	0.3			G1/100
BL	(0°-30°)	509.5	4.1	B2/1000		
BM	(30°-60°)	2702.7	21.9	B3/5000		
BH	(60°-80°)	2928.0	23.7	B4/5000		G2/5000
BVH	(80°-90°)	41.2	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G2

Type V Short





REPORT NUMBER: P270324

CATALOG NUMBER: NAV-AF-02-D-UNV-5MQ-7027-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1233.3	1233.3	1233.3	1233.3	1233.3	1233.3	1233.3	1233.3	1233.3	1233.3	1233.3
2.5°	1238.6	1238.6	1240.0	1239.3	1237.0	1234.7	1232.5	1230.1	1228.7	1227.2	1225.6
5°	1225.6	1225.6	1228.0	1226.4	1224.8	1222.7	1221.1	1218.8	1217.4	1215.8	1216.6
7.5°	1208.9	1210.5	1212.1	1211.3	1208.2	1207.5	1205.2	1204.4	1202.9	1200.7	1201.5
10°	1194.7	1195.4	1196.9	1196.2	1195.4	1193.0	1192.3	1191.6	1190.9	1187.7	1187.0
12.5°	1180.3	1181.7	1183.2	1184.1	1183.2	1184.1	1184.8	1185.6	1184.8	1183.2	1183.2
15°	1168.9	1170.4	1172.6	1175.0	1175.7	1180.3	1183.2	1186.3	1188.5	1189.4	1187.0
17.5°	1162.9	1165.1	1168.2	1172.6	1176.4	1181.7	1187.0	1191.6	1195.4	1196.2	1193.8
20°	1162.0	1164.4	1168.9	1174.2	1181.0	1187.7	1196.2	1202.9	1206.8	1208.9	1206.8
22.5°	1167.3	1170.4	1176.4	1183.2	1191.6	1200.7	1211.3	1218.8	1226.4	1229.4	1227.2
25°	1182.4	1185.6	1192.3	1200.7	1209.7	1221.1	1231.7	1241.5	1249.2	1252.9	1249.9
27.5°	1214.2	1215.0	1222.7	1231.7	1242.3	1252.1	1265.8	1270.4	1276.4	1280.2	1276.4
30°	1259.0	1260.5	1267.2	1281.7	1291.6	1304.3	1312.0	1316.5	1323.4	1327.1	1322.6
32.5°	1327.1	1328.7	1334.6	1348.3	1357.3	1367.2	1376.4	1379.3	1386.2	1390.7	1385.4
35°	1423.3	1426.2	1431.5	1440.6	1448.2	1455.9	1462.6	1460.4	1464.9	1471.0	1465.7
37.5°	1555.0	1554.2	1555.8	1562.5	1570.1	1574.6	1585.2	1579.9	1584.5	1589.8	1586.8
40°	1708.7	1708.7	1707.9	1720.1	1722.9	1727.6	1738.8	1732.1	1738.2	1744.1	1738.8
42.5°	1883.6	1886.5	1890.4	1900.2	1908.4	1910.1	1915.4	1912.3	1919.9	1925.2	1919.9
45°	2084.8	2089.5	2093.9	2116.6	2120.4	2123.6	2127.2	2117.5	2125.7	2130.3	2128.9
47.5°	2293.8	2302.1	2312.0	2335.5	2350.7	2357.4	2360.4	2349.1	2349.8	2356.7	2357.4
50°	2530.0	2539.1	2549.0	2575.4	2589.9	2601.9	2605.8	2592.9	2594.3	2599.7	2601.2
52.5°	2748.1	2758.7	2779.8	2815.5	2835.9	2857.1	2858.5	2842.6	2849.6	2853.2	2850.2
55°	2953.2	2966.8	2994.9	3042.6	3079.7	3121.3	3140.2	3122.8	3122.8	3119.8	3118.2
57.5°	3192.4	3207.6	3236.4	3291.6	3343.1	3402.9	3454.4	3471.8	3503.6	3514.2	3497.6
60°	3552.7	3568.6	3598.3	3671.0	3736.1	3823.0	3907.8	3976.7	4088.7	4149.4	4094.8
62.5°	3882.1	3906.3	3976.0	4103.2	4244.0	4405.2	4592.2	4725.4	4929.1	5030.6	4893.4
65°	3807.1	3856.3	3992.6	4192.5	4483.3	4832.9	5213.8	5579.5	6000.3	6216.0	5937.4
67.5°	3325.6	3367.3	3514.2	3746.7	4109.2	4591.4	5183.5	5940.5	6808.9	7213.1	6720.3
68°	3141.7	3219.6	3365.8	3596.8	3962.3	4436.3	5068.3	5886.1	6833.9	7270.6	6738.5
70°	2409.0	2436.9	2577.0	2784.3	3178.8	3643.6	4281.9	5213.8	6284.9	6734.7	6187.3
72.5°	1144.6	1161.2	1252.1	1456.5	1707.0	2085.7	2648.9	3527.9	4493.1	4960.9	4415.1
75°	419.4	423.2	444.4	492.8	586.8	729.1	999.3	1545.9	2288.5	2729.1	2297.7
77.5°	226.4	227.1	235.4	247.6	264.2	283.1	324.0	434.5	700.9	953.9	740.5
80°	142.3	141.6	149.8	159.7	171.0	180.2	184.0	196.8	221.8	259.7	238.5
82.5°	72.7	79.5	98.5	109.1	125.7	128.6	125.0	124.1	131.7	142.3	146.9
85°	40.2	35.7	52.2	69.7	75.6	78.0	78.7	74.2	72.7	71.1	75.0
87.5°	20.4	19.0	22.6	34.9	37.1	30.4	31.0	26.5	18.1	18.1	19.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P270324

CATALOG NUMBER: NAV-AF-02-D-UNV-5MQ-7027-1200

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1233.3	1233.3	1233.3	1233.3	1233.3	1233.3	1233.3	1233.3
2.5°	1224.1	1224.8	1223.4	1223.4	1223.4	1224.1	1223.4	1222.7
5°	1214.2	1215.8	1215.8	1216.6	1217.4	1217.4	1217.4	1217.4
7.5°	1200.0	1200.7	1202.2	1202.2	1202.2	1202.2	1202.2	1202.2
10°	1186.3	1184.8	1184.1	1182.4	1182.4	1180.3	1181.0	1181.7
12.5°	1179.5	1176.4	1175.0	1172.6	1171.1	1168.9	1168.9	1169.7
15°	1182.4	1177.9	1173.5	1171.8	1170.4	1168.9	1167.3	1168.2
17.5°	1188.5	1183.2	1177.9	1175.0	1171.8	1169.7	1168.9	1169.7
20°	1201.5	1193.8	1185.6	1180.3	1174.2	1172.6	1170.4	1172.6
22.5°	1218.8	1209.7	1199.1	1189.4	1182.4	1179.5	1176.4	1178.8
25°	1240.0	1230.1	1219.5	1208.2	1200.7	1198.3	1194.7	1194.7
27.5°	1269.6	1261.2	1252.1	1241.5	1234.0	1231.7	1225.6	1225.6
30°	1316.5	1308.1	1299.8	1290.8	1283.1	1281.0	1273.3	1273.3
32.5°	1378.5	1369.5	1364.2	1356.6	1350.5	1346.7	1337.7	1336.9
35°	1461.8	1453.5	1452.7	1447.4	1441.4	1442.1	1433.1	1431.5
37.5°	1581.5	1574.6	1577.0	1572.4	1567.1	1571.7	1566.4	1566.4
40°	1734.4	1732.1	1734.4	1731.4	1732.1	1732.9	1728.2	1729.9
42.5°	1919.0	1913.0	1926.7	1925.2	1922.9	1928.9	1918.3	1910.8
45°	2131.9	2129.5	2143.1	2145.4	2140.9	2144.8	2125.7	2125.0
47.5°	2362.7	2362.7	2374.8	2373.3	2368.8	2369.5	2346.8	2332.4
50°	2603.5	2601.9	2614.1	2611.1	2604.9	2604.2	2580.7	2566.4
52.5°	2854.1	2854.1	2871.4	2863.2	2848.7	2842.0	2813.1	2794.3
55°	3131.1	3127.3	3132.6	3105.4	3077.4	3056.9	3021.4	3006.9
57.5°	3481.7	3437.8	3399.8	3365.1	3325.6	3301.5	3259.8	3244.7
60°	3979.0	3861.6	3811.0	3741.4	3676.3	3643.6	3588.4	3558.8
62.5°	4668.0	4473.4	4335.6	4181.9	4033.5	3929.0	3845.0	3807.9
65°	5464.3	5040.4	4690.0	4360.6	4081.2	3859.4	3736.1	3697.5
67.5°	5767.2	4988.8	4384.0	3911.6	3572.5	3308.3	3160.6	3129.7
68°	5702.8	4870.8	4242.4	3758.7	3418.1	3151.6	3004.7	2976.8
70°	5030.6	4109.2	3446.1	2964.5	2646.6	2393.1	2289.3	2244.7
72.5°	3429.4	2639.0	2024.3	1619.4	1381.7	1221.1	1125.8	1093.1
75°	1578.4	1066.6	712.4	532.2	451.9	413.3	383.8	376.2
77.5°	460.3	334.6	287.6	266.4	250.5	237.0	227.1	226.4
80°	218.7	205.2	199.2	185.5	171.0	158.2	149.2	150.6
82.5°	146.9	143.1	143.1	129.4	106.8	91.5	75.6	68.1
85°	78.0	80.9	85.6	80.9	70.3	52.2	34.0	37.1
87.5°	26.5	30.4	31.8	31.0	27.9	21.2	15.9	15.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)