

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: P196916

Luminaire Tested: **NAV-AF-02-D-UNV-5NQ-8030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196916  
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-02-D-UNV-5NQ-8030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V  
NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11209 lumens  
Efficiency: N/A  
Efficacy: 86.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B3 - U0 - G1

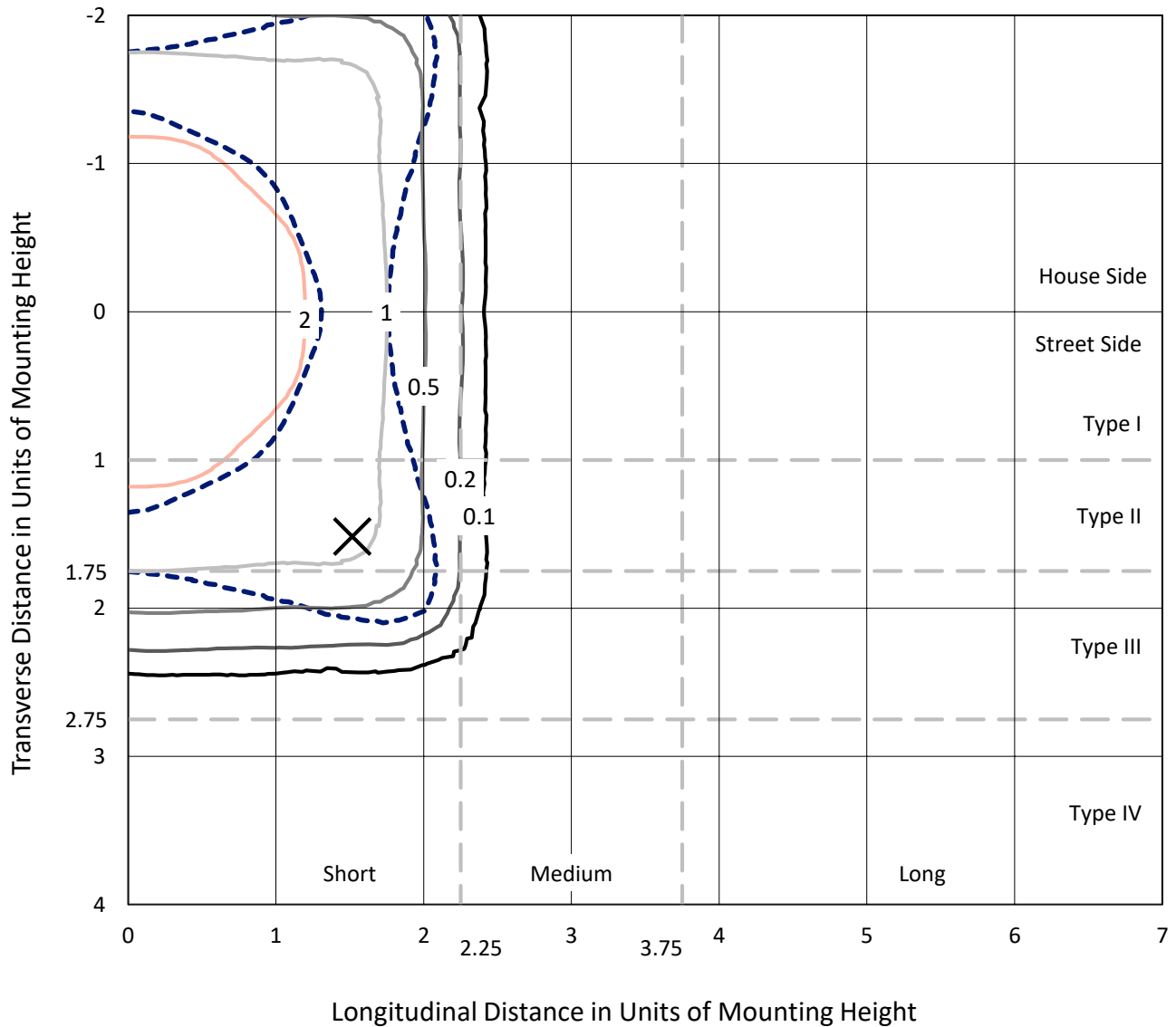
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

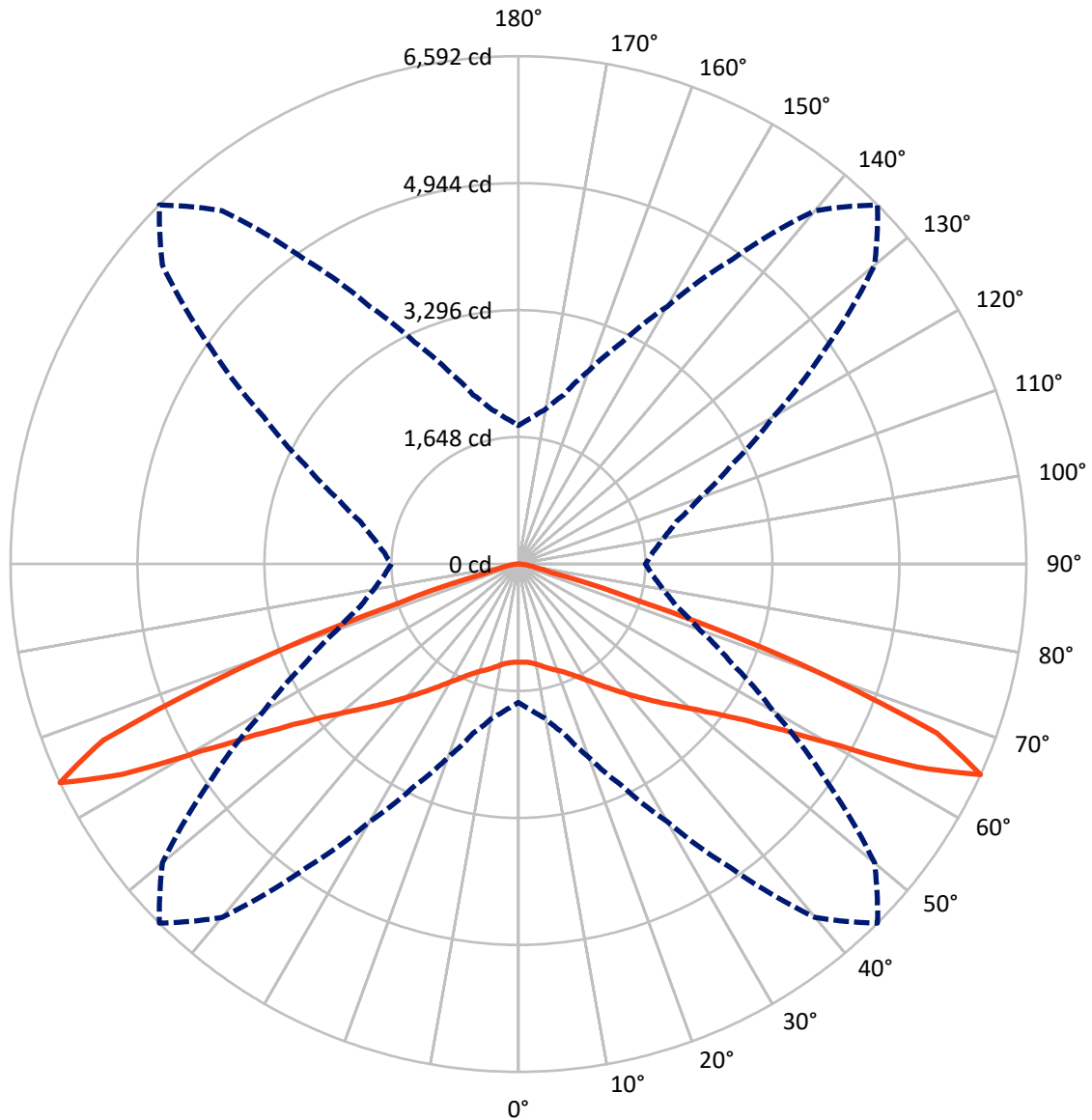
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.2 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
<b>House Side</b>	Lumens	5604.5	0.0	5604.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	5604.5	0.0	5604.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	11209.0	0.0	11209.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	124.2	1.1
10°-20°	397.9	3.6
20°-30°	742.3	6.6
30°-40°	1251.7	11.2
40°-50°	2033.2	18.1
50°-60°	3185.6	28.4
60°-70°	3007.1	26.8
70°-80°	405.3	3.6
80°-90°	61.7	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°	11209.0	100.0
0°-180°	11209.0	100.0



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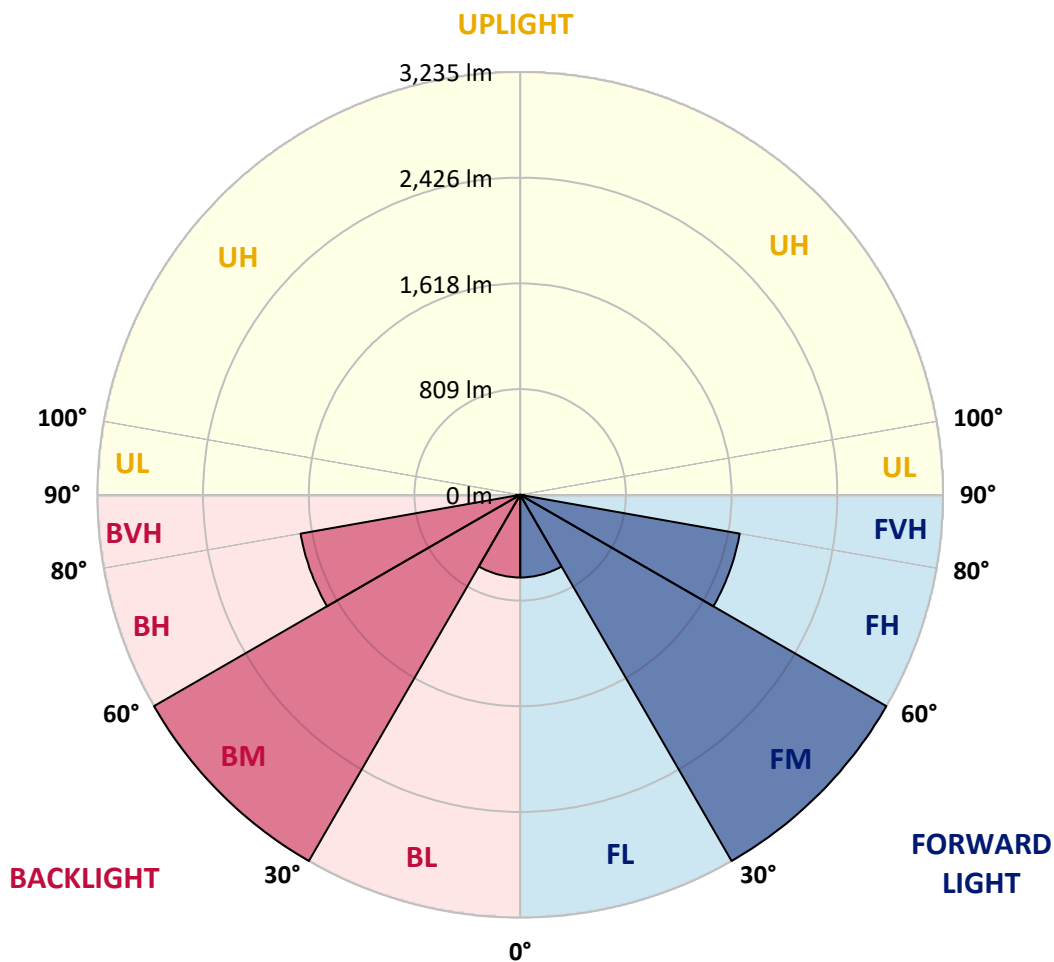
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	632.2	5.6			
FM	(30°-60°)	3235.2	28.9			
FH	(60°-80°)	1706.2	15.2			G1/1800
FVH	(80°-90°)	30.9	0.3			G1/100
BL	(0°-30°)	632.2	5.6	B2/1000		
BM	(30°-60°)	3235.2	28.9	B3/5000		
BH	(60°-80°)	1706.2	15.2	B3/2500		G1/1800
BVH	(80°-90°)	30.9	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-G1**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0
2.5°	1285.5	1285.5	1287.6	1286.9	1284.1	1282.0	1279.9	1277.1	1275.7	1274.3	1273.6
5°	1292.5	1292.5	1294.6	1293.9	1291.8	1289.0	1287.6	1285.5	1283.4	1282.0	1282.7
7.5°	1309.9	1310.6	1311.3	1310.6	1308.5	1306.4	1303.6	1302.9	1300.1	1298.1	1299.4
10°	1336.5	1336.5	1337.2	1337.9	1336.5	1331.6	1331.6	1330.2	1327.4	1324.6	1325.3
12.5°	1365.8	1365.8	1366.5	1366.5	1366.5	1363.7	1364.4	1363.7	1360.2	1358.8	1360.2
15°	1394.4	1395.1	1395.1	1396.5	1396.5	1397.2	1400.0	1400.0	1398.6	1397.9	1397.9
17.5°	1427.9	1429.3	1430.0	1432.1	1432.8	1434.2	1437.0	1437.7	1438.4	1436.3	1437.0
20°	1472.6	1473.3	1475.4	1476.1	1478.9	1478.9	1480.3	1479.6	1478.2	1475.4	1475.4
22.5°	1522.9	1524.3	1528.5	1528.5	1532.0	1529.9	1530.6	1528.5	1525.0	1523.6	1522.2
25°	1588.5	1590.6	1594.1	1592.7	1594.1	1590.6	1590.6	1590.6	1588.5	1586.4	1585.7
27.5°	1671.6	1668.1	1671.6	1668.8	1668.1	1665.3	1666.0	1664.6	1662.5	1661.8	1659.0
30°	1758.2	1754.0	1756.1	1756.8	1755.4	1754.7	1751.9	1749.8	1746.3	1747.0	1744.9
32.5°	1857.4	1853.2	1855.3	1856.0	1854.6	1856.0	1855.3	1850.4	1846.2	1849.0	1849.0
35°	1975.4	1972.6	1978.2	1980.2	1976.1	1974.0	1971.2	1965.6	1959.3	1963.5	1964.2
37.5°	2117.1	2113.6	2117.8	2123.4	2115.7	2111.5	2100.3	2092.0	2087.8	2089.9	2092.7
40°	2264.4	2265.1	2277.0	2278.4	2270.0	2265.1	2254.0	2241.4	2229.5	2229.5	2233.0
42.5°	2419.4	2421.5	2435.5	2440.4	2437.6	2428.5	2413.2	2397.8	2382.4	2385.2	2389.4
45°	2594.7	2591.9	2606.6	2618.4	2616.4	2613.6	2598.9	2571.0	2557.0	2556.3	2563.3
47.5°	2779.0	2784.6	2800.0	2820.2	2819.5	2812.6	2793.7	2767.9	2742.0	2744.1	2752.5
50°	2994.1	3001.8	3027.6	3047.9	3050.7	3048.6	3026.2	2996.2	2959.9	2962.0	2973.2
52.5°	3186.8	3198.0	3228.0	3269.9	3295.8	3307.6	3293.0	3265.0	3228.0	3230.1	3242.0
55°	3361.4	3378.8	3423.5	3480.8	3532.5	3580.6	3602.3	3601.6	3574.4	3580.6	3596.0
57.5°	3471.0	3495.5	3563.2	3655.4	3758.0	3855.1	3938.8	4017.7	4035.2	4068.0	4068.0
60°	3323.7	3380.9	3471.0	3628.8	3830.6	4048.5	4284.5	4514.2	4662.2	4778.8	4716.0
62.5°	2775.6	2860.0	2986.4	3194.5	3508.7	3897.6	4371.8	4905.9	5463.1	5803.9	5553.9
65°	1795.9	1902.0	2039.6	2273.5	2669.4	3170.1	3860.6	4820.7	5986.8	6591.5	6032.9
67.5°	711.5	783.4	867.2	1033.4	1377.0	1868.5	2643.6	3827.8	5286.5	5856.9	5230.6
70°	340.0	351.9	368.0	403.6	489.5	660.5	1062.0	1886.0	3242.0	3843.2	3164.5
72.5°	245.8	247.9	255.6	267.4	292.6	327.5	398.0	576.8	1117.9	1625.5	1119.3
75°	186.4	189.2	193.4	199.7	213.0	229.7	256.3	307.2	382.6	441.3	381.9
77.5°	141.7	144.5	148.0	154.3	161.3	173.2	182.9	203.2	235.3	247.9	246.5
80°	103.3	108.2	113.8	119.4	124.3	129.9	130.6	140.3	158.5	170.4	166.9
82.5°	65.6	69.8	84.5	90.8	91.5	92.9	92.2	92.9	102.6	111.0	108.2
85°	41.9	44.7	52.4	59.4	58.0	60.7	60.7	59.4	55.2	47.5	56.6
87.5°	20.9	21.6	25.1	31.4	30.0	26.5	25.8	25.8	18.9	16.1	17.5
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°	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0	1275.0
2.5°	1271.5	1272.9	1270.8	1270.8	1270.1	1271.5	1269.4	1269.4
5°	1281.3	1283.4	1282.7	1282.7	1284.1	1285.5	1284.8	1284.1
7.5°	1298.8	1300.1	1301.5	1302.2	1303.6	1302.9	1304.3	1303.6
10°	1325.3	1323.9	1326.0	1323.9	1324.6	1323.2	1323.9	1323.9
12.5°	1358.8	1356.7	1355.3	1353.9	1353.9	1351.1	1351.1	1351.8
15°	1397.2	1393.7	1390.9	1389.5	1388.1	1388.1	1386.0	1387.4
17.5°	1434.9	1431.4	1426.5	1426.5	1424.4	1423.0	1421.6	1425.1
20°	1474.7	1471.2	1468.4	1467.7	1463.5	1462.1	1462.8	1467.0
22.5°	1520.8	1518.7	1518.7	1517.3	1514.5	1512.4	1512.4	1517.3
25°	1582.9	1578.8	1579.4	1580.1	1578.8	1578.8	1577.4	1580.8
27.5°	1659.0	1655.6	1657.7	1659.0	1657.7	1659.7	1657.7	1660.4
30°	1748.4	1746.3	1748.4	1750.5	1747.0	1747.0	1745.6	1747.7
32.5°	1855.3	1852.5	1853.9	1853.9	1849.0	1844.8	1839.2	1843.4
35°	1972.6	1969.1	1971.9	1974.0	1968.4	1964.2	1955.8	1959.3
37.5°	2101.7	2103.1	2106.6	2115.7	2114.3	2107.3	2101.0	2103.8
40°	2246.3	2253.3	2268.6	2274.9	2273.5	2266.5	2258.2	2259.5
42.5°	2409.7	2418.7	2434.8	2445.3	2440.4	2430.6	2420.1	2424.3
45°	2587.7	2601.7	2622.6	2633.1	2626.8	2616.4	2601.7	2609.4
47.5°	2776.3	2804.2	2832.1	2846.1	2844.0	2829.3	2810.5	2812.6
50°	3001.8	3038.8	3074.4	3088.4	3077.9	3055.6	3029.0	3028.3
52.5°	3282.5	3322.3	3351.6	3348.1	3322.3	3287.4	3257.4	3256.0
55°	3633.0	3646.3	3642.1	3612.1	3566.7	3512.2	3473.8	3467.5
57.5°	4056.9	4012.2	3946.5	3855.8	3753.8	3650.5	3580.6	3554.8
60°	4575.0	4373.2	4138.5	3891.4	3665.8	3496.9	3390.0	3325.1
62.5°	5003.0	4418.5	3894.2	3464.7	3113.5	2904.7	2758.8	2668.7
65°	4856.4	3817.4	3057.7	2503.9	2120.6	1904.8	1750.5	1647.9
67.5°	3751.7	2550.7	1775.0	1230.3	932.9	789.7	689.9	624.9
70°	1891.6	978.3	592.8	418.3	357.5	332.4	315.6	305.8
72.5°	555.1	370.8	307.9	272.3	250.7	235.3	225.5	220.6
75°	307.2	250.7	221.3	201.1	187.1	176.7	170.4	166.2
77.5°	211.6	182.2	167.6	154.3	143.1	135.5	130.6	126.4
80°	148.0	133.4	127.1	120.1	111.7	105.4	98.5	95.7
82.5°	98.5	92.2	90.8	85.2	80.3	73.3	60.7	56.6
85°	58.0	57.3	57.3	55.2	51.7	45.4	36.3	36.3
87.5°	20.2	20.9	21.6	23.0	22.3	18.9	15.4	14.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)