

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: P196905

Luminaire Tested: **NAV-AF-03-D-UNV-5NQ-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196905
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-03-D-UNV-5NQ-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12277 lumens
Efficiency: N/A
Efficacy: 99.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G2

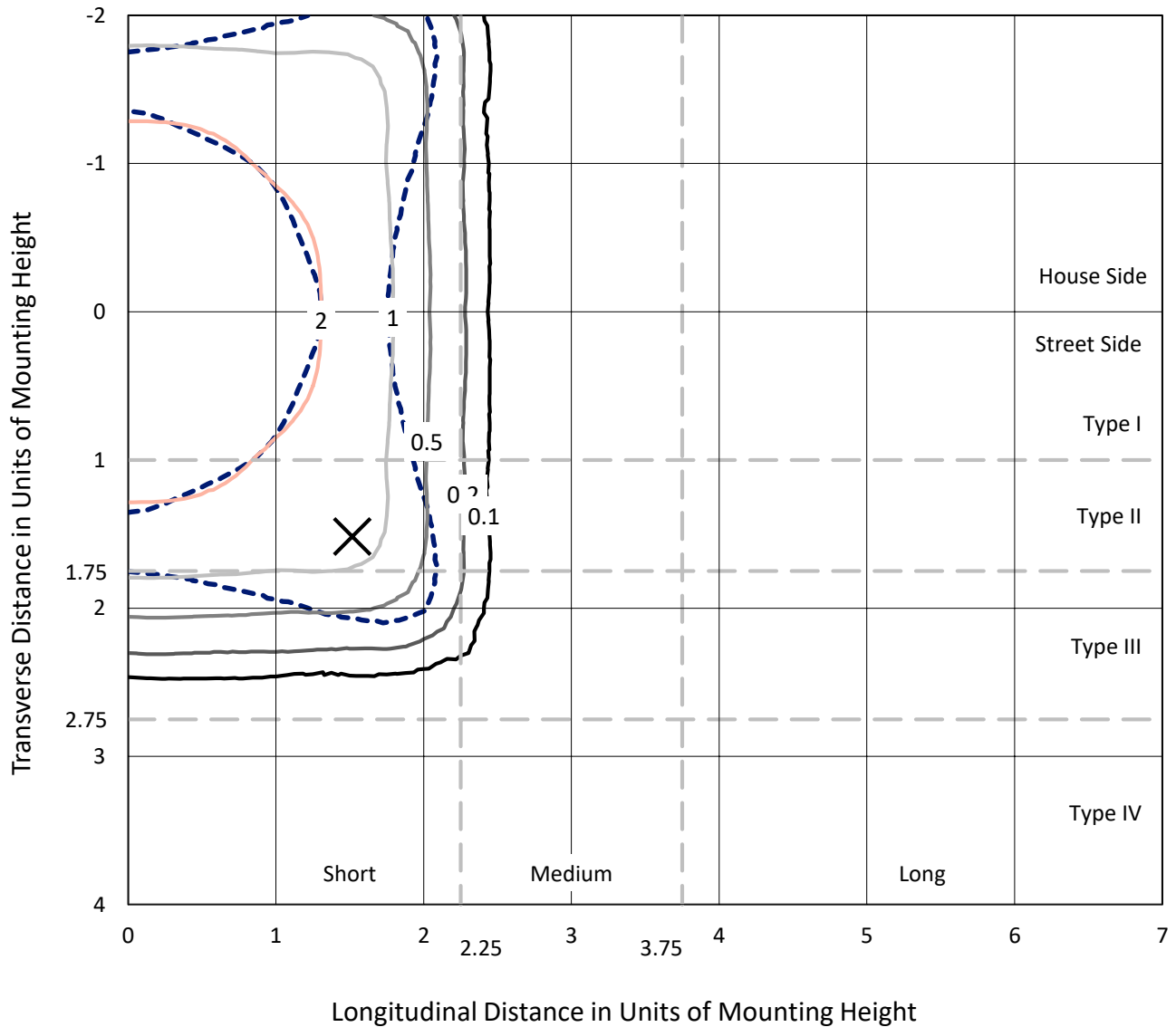
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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 CATALOG NUMBER: NAV-AF-03-D-UNV-5NQ-8030-800

Iso-Footcandle Lines of Horizontal Illumination

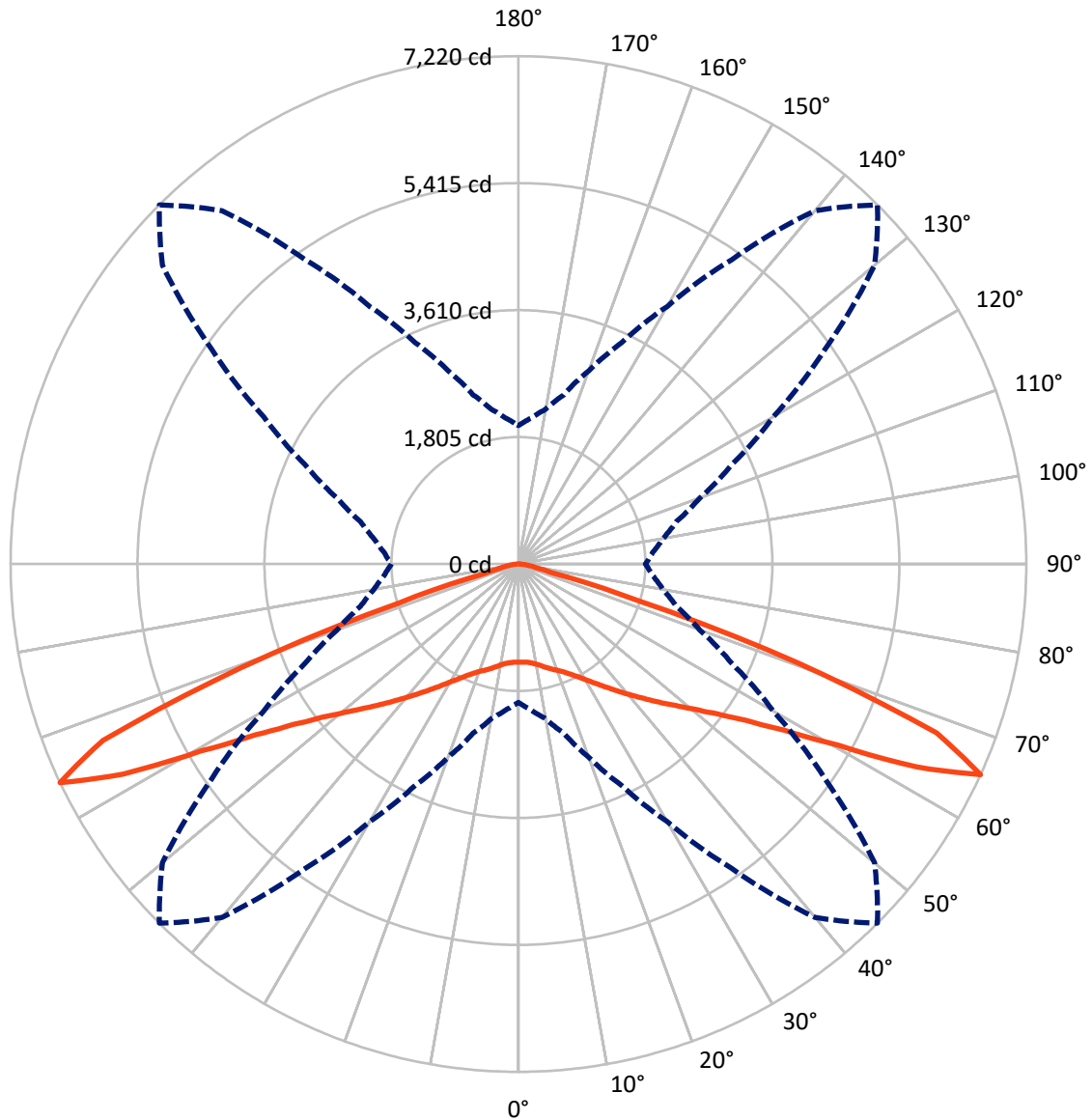
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.5 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P196905
CATALOG NUMBER: NAV-AF-03-D-UNV-5NQ-8030-800

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P196905

CATALOG NUMBER: NAV-AF-03-D-UNV-5NQ-8030-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6138.5	0.0	6138.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6138.5	0.0	6138.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	12277.0	0.0	12277.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.0	1.1
10°-20°	435.9	3.6
20°-30°	813.1	6.6
30°-40°	1371.0	11.2
40°-50°	2226.9	18.1
50°-60°	3489.1	28.4
60°-70°	3293.6	26.8
70°-80°	443.9	3.6
80°-90°	67.6	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°	12277.0	100.0
0°-180°	12277.0	100.0

Coefficient of Utilization



REPORT NUMBER: P196905

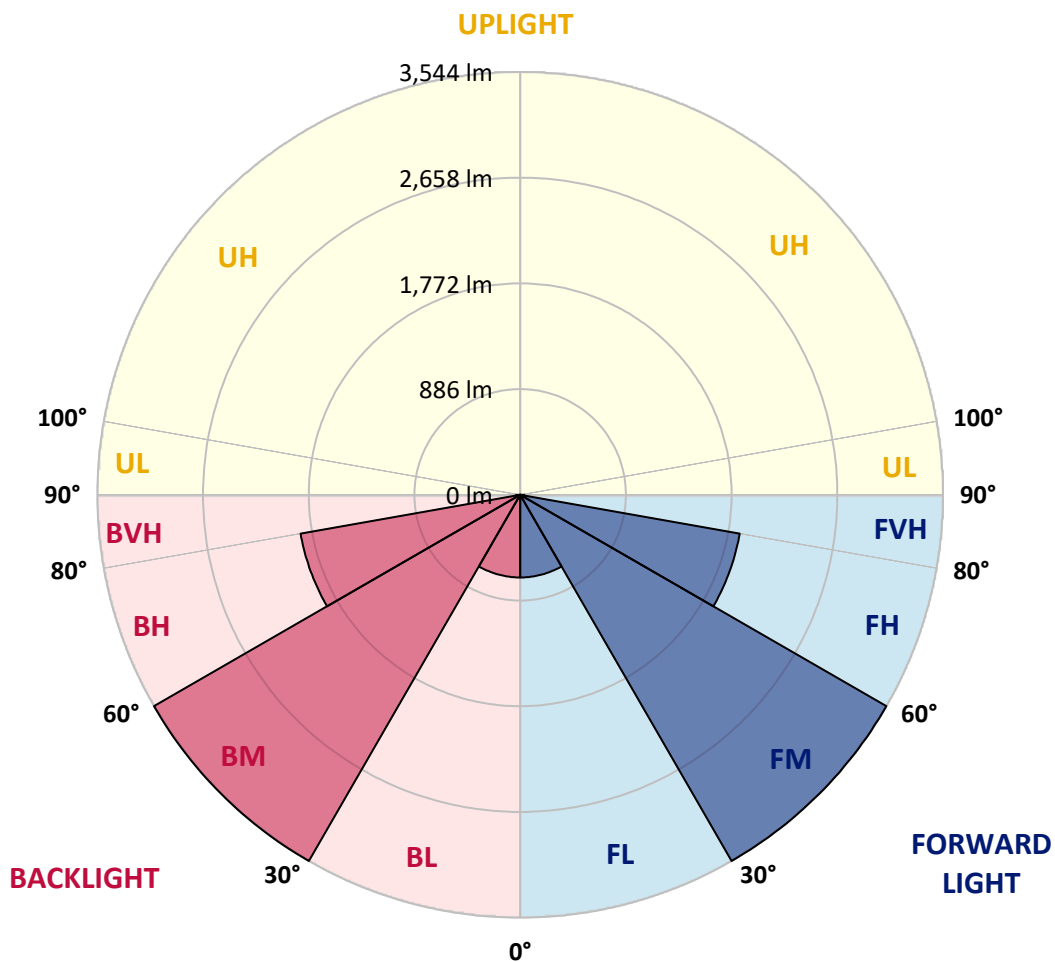
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	692.5	5.6			
FM (30°-60°)	3543.5	28.9			
FH (60°-80°)	1868.7	15.2			G2/5000
FVH (80°-90°)	33.8	0.3			G1/100
BL (0°-30°)	692.5	5.6	B2/1000		
BM (30°-60°)	3543.5	28.9	B3/5000		
BH (60°-80°)	1868.7	15.2	B3/2500		G2/5000
BVH (80°-90°)	33.8	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-G2

Type V Short





REPORT NUMBER: P196905

CATALOG NUMBER: NAV-AF-03-D-UNV-5NQ-8030-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1396.5	1396.5	1396.5	1396.5	1396.5	1396.5	1396.5	1396.5	1396.5	1396.5	1396.5
2.5°	1408.0	1408.0	1410.3	1409.5	1406.4	1404.1	1401.8	1398.8	1397.3	1395.7	1395.0
5°	1415.6	1415.6	1417.9	1417.1	1414.8	1411.8	1410.3	1408.0	1405.7	1404.1	1404.9
7.5°	1434.7	1435.5	1436.3	1435.5	1433.2	1430.9	1427.9	1427.1	1424.0	1421.7	1423.3
10°	1463.8	1463.8	1464.6	1465.3	1463.8	1458.4	1458.4	1456.9	1453.9	1450.8	1451.6
12.5°	1495.9	1495.9	1496.7	1496.7	1496.7	1493.6	1494.4	1493.6	1489.8	1488.3	1489.8
15°	1527.3	1528.0	1528.0	1529.6	1529.6	1530.3	1533.4	1533.4	1531.9	1531.1	1531.1
17.5°	1564.0	1565.5	1566.3	1568.6	1569.3	1570.9	1573.9	1574.7	1575.5	1573.2	1573.9
20°	1612.9	1613.7	1616.0	1616.8	1619.8	1619.8	1621.3	1620.6	1619.0	1616.0	1616.0
22.5°	1668.0	1669.5	1674.1	1674.1	1677.9	1675.6	1676.4	1674.1	1670.3	1668.8	1667.2
25°	1739.9	1742.2	1746.0	1744.5	1746.0	1742.2	1742.2	1742.2	1739.9	1737.6	1736.8
27.5°	1830.9	1827.1	1830.9	1827.8	1827.1	1824.0	1824.8	1823.2	1820.9	1820.2	1817.1
30°	1925.7	1921.1	1923.4	1924.2	1922.7	1921.9	1918.8	1916.5	1912.7	1913.5	1911.2
32.5°	2034.3	2029.7	2032.0	2032.8	2031.3	2032.8	2032.0	2026.7	2022.1	2025.1	2025.1
35°	2163.6	2160.5	2166.6	2168.9	2164.3	2162.0	2159.0	2152.9	2146.0	2150.6	2151.3
37.5°	2318.8	2315.0	2319.6	2325.7	2317.3	2312.7	2300.5	2291.3	2286.7	2289.0	2292.1
40°	2480.2	2481.0	2494.0	2495.5	2486.3	2481.0	2468.7	2455.0	2442.0	2442.0	2445.8
42.5°	2650.0	2652.3	2667.6	2672.9	2669.9	2659.9	2643.1	2626.3	2609.4	2612.5	2617.1
45°	2841.9	2838.9	2854.9	2867.9	2865.6	2862.6	2846.5	2815.9	2800.6	2799.9	2807.5
47.5°	3043.8	3050.0	3066.8	3089.0	3088.2	3080.5	3059.9	3031.6	3003.3	3005.6	3014.8
50°	3279.4	3287.8	3316.1	3338.3	3341.3	3339.0	3314.6	3281.7	3241.9	3244.2	3256.4
52.5°	3490.5	3502.7	3535.6	3581.5	3609.8	3622.8	3606.7	3576.1	3535.6	3537.9	3550.9
55°	3681.7	3700.8	3749.7	3812.4	3869.0	3921.8	3945.5	3944.8	3914.9	3921.8	3938.6
57.5°	3801.7	3828.5	3902.7	4003.6	4116.1	4222.4	4314.1	4400.6	4419.7	4455.6	4455.6
60°	3640.4	3703.1	3801.7	3974.6	4195.6	4434.2	4692.7	4944.3	5106.5	5234.2	5165.3
62.5°	3040.0	3132.6	3271.0	3498.9	3843.0	4269.0	4788.3	5373.4	5983.7	6356.9	6083.1
65°	1967.0	2083.3	2233.9	2490.1	2923.8	3472.1	4228.5	5280.1	6557.3	7219.6	6607.7
67.5°	779.3	858.1	949.9	1131.9	1508.2	2046.6	2895.5	4192.5	5790.2	6415.0	5729.0
70°	372.4	385.5	403.0	442.0	536.1	723.5	1163.2	2065.7	3550.9	4209.4	3466.0
72.5°	269.2	271.5	279.9	292.9	320.4	358.7	435.9	631.7	1224.4	1780.4	1225.9
75°	204.2	207.3	211.8	218.7	233.3	251.6	280.7	336.5	419.1	483.3	418.3
77.5°	155.3	158.3	162.1	169.0	176.7	189.7	200.4	222.6	257.7	271.5	270.0
80°	113.2	118.5	124.7	130.8	136.1	142.2	143.0	153.7	173.6	186.6	182.8
82.5°	71.9	76.5	92.5	99.4	100.2	101.7	101.0	101.7	112.4	121.6	118.5
85°	45.9	48.9	57.4	65.0	63.5	66.5	66.5	65.0	60.4	52.0	61.9
87.5°	22.9	23.7	27.5	34.4	32.9	29.1	28.3	28.3	20.6	17.6	19.1
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: P196905

CATALOG NUMBER: NAV-AF-03-D-UNV-5NQ-8030-800

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1396.5	1396.5	1396.5	1396.5	1396.5	1396.5	1396.5	1396.5
2.5°	1392.7	1394.2	1391.9	1391.9	1391.1	1392.7	1390.4	1390.4
5°	1403.4	1405.7	1404.9	1404.9	1406.4	1408.0	1407.2	1406.4
7.5°	1422.5	1424.0	1425.6	1426.3	1427.9	1427.1	1428.6	1427.9
10°	1451.6	1450.0	1452.3	1450.0	1450.8	1449.3	1450.0	1450.0
12.5°	1488.3	1486.0	1484.4	1482.9	1482.9	1479.9	1479.9	1480.6
15°	1530.3	1526.5	1523.4	1521.9	1520.4	1520.4	1518.1	1519.6
17.5°	1571.6	1567.8	1562.5	1562.5	1560.2	1558.6	1557.1	1560.9
20°	1615.2	1611.4	1608.3	1607.6	1603.0	1601.5	1602.2	1606.8
22.5°	1665.7	1663.4	1663.4	1661.9	1658.8	1656.5	1656.5	1661.9
25°	1733.8	1729.2	1729.9	1730.7	1729.2	1729.2	1727.6	1731.5
27.5°	1817.1	1813.3	1815.6	1817.1	1815.6	1817.9	1815.6	1818.7
30°	1915.0	1912.7	1915.0	1917.3	1913.5	1913.5	1912.0	1914.3
32.5°	2032.0	2029.0	2030.5	2030.5	2025.1	2020.6	2014.4	2019.0
35°	2160.5	2156.7	2159.7	2162.0	2155.9	2151.3	2142.2	2146.0
37.5°	2302.0	2303.5	2307.4	2317.3	2315.8	2308.1	2301.2	2304.3
40°	2460.3	2468.0	2484.8	2491.7	2490.1	2482.5	2473.3	2474.8
42.5°	2639.3	2649.2	2666.8	2678.3	2672.9	2662.2	2650.7	2655.3
45°	2834.3	2849.6	2872.5	2884.0	2877.1	2865.6	2849.6	2858.0
47.5°	3040.8	3071.4	3102.0	3117.3	3115.0	3098.9	3078.3	3080.5
50°	3287.8	3328.3	3367.3	3382.6	3371.2	3346.7	3317.6	3316.9
52.5°	3595.2	3638.8	3671.0	3667.1	3638.8	3600.6	3567.7	3566.2
55°	3979.2	3993.7	3989.1	3956.2	3906.5	3846.9	3804.8	3797.9
57.5°	4443.4	4394.4	4322.6	4223.1	4111.5	3998.3	3921.8	3893.5
60°	5010.9	4789.8	4532.9	4262.1	4015.1	3830.0	3713.0	3641.9
62.5°	5479.7	4839.5	4265.2	3794.9	3410.2	3181.5	3021.7	2923.0
65°	5319.1	4181.1	3349.0	2742.5	2322.6	2086.3	1917.3	1804.9
67.5°	4109.2	2793.8	1944.1	1347.5	1021.8	865.0	755.6	684.5
70°	2071.8	1071.5	649.3	458.1	391.6	364.0	345.7	335.0
72.5°	608.0	406.1	337.3	298.3	274.6	257.7	247.0	241.7
75°	336.5	274.6	242.4	220.3	205.0	193.5	186.6	182.0
77.5°	231.7	199.6	183.5	169.0	156.8	148.4	143.0	138.4
80°	162.1	146.1	139.2	131.5	122.4	115.5	107.8	104.8
82.5°	107.8	101.0	99.4	93.3	88.0	80.3	66.5	61.9
85°	63.5	62.7	62.7	60.4	56.6	49.7	39.8	39.8
87.5°	22.2	22.9	23.7	25.2	24.5	20.6	16.8	16.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)