

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: P196941

Luminaire Tested: **NAV-AF-03-D-UNV-5WQ-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196941
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
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-5WQ-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16869 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G2

Input Watts (W): 191
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

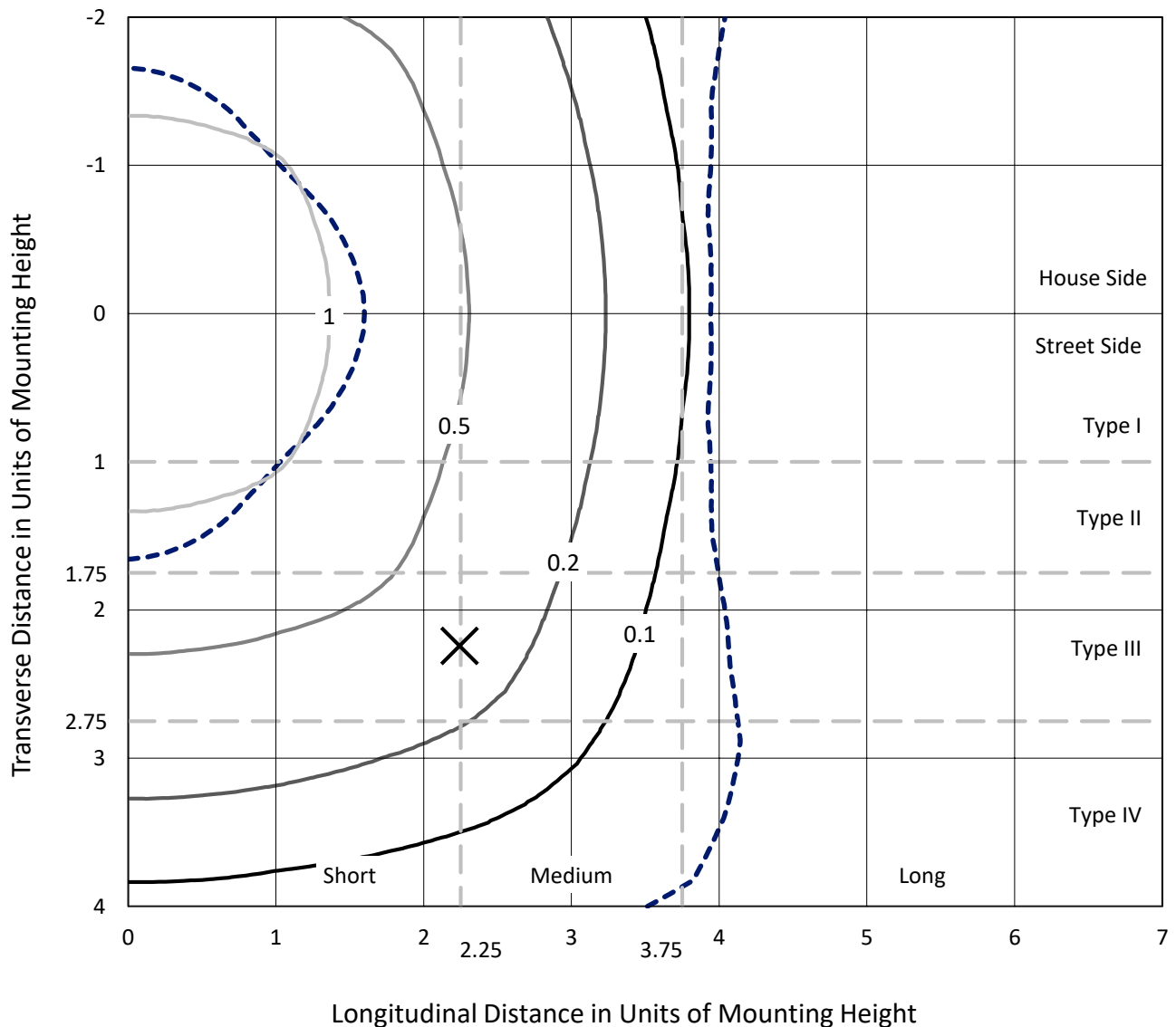


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Iso-Footcandle Lines of Horizontal Illumination

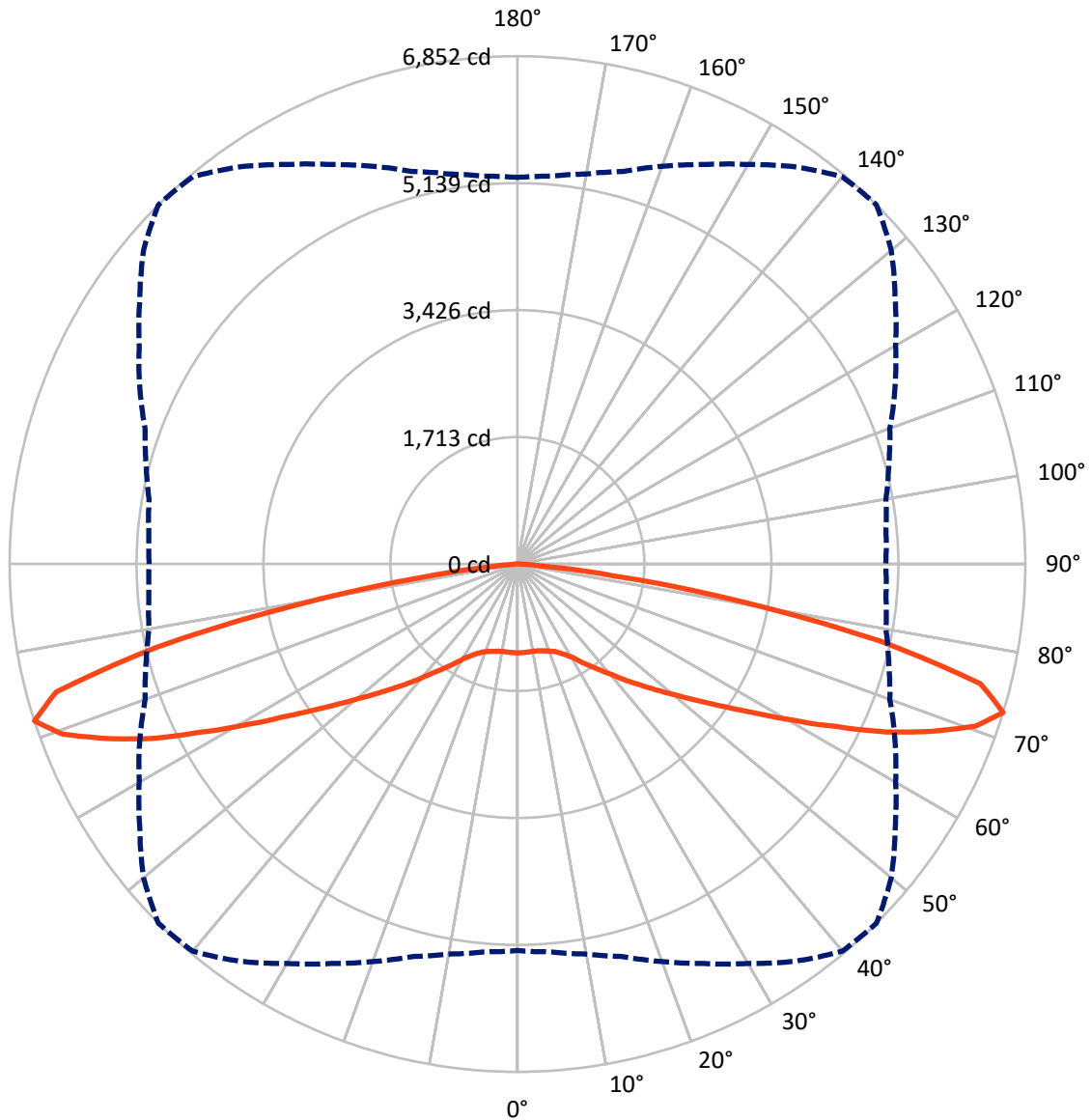
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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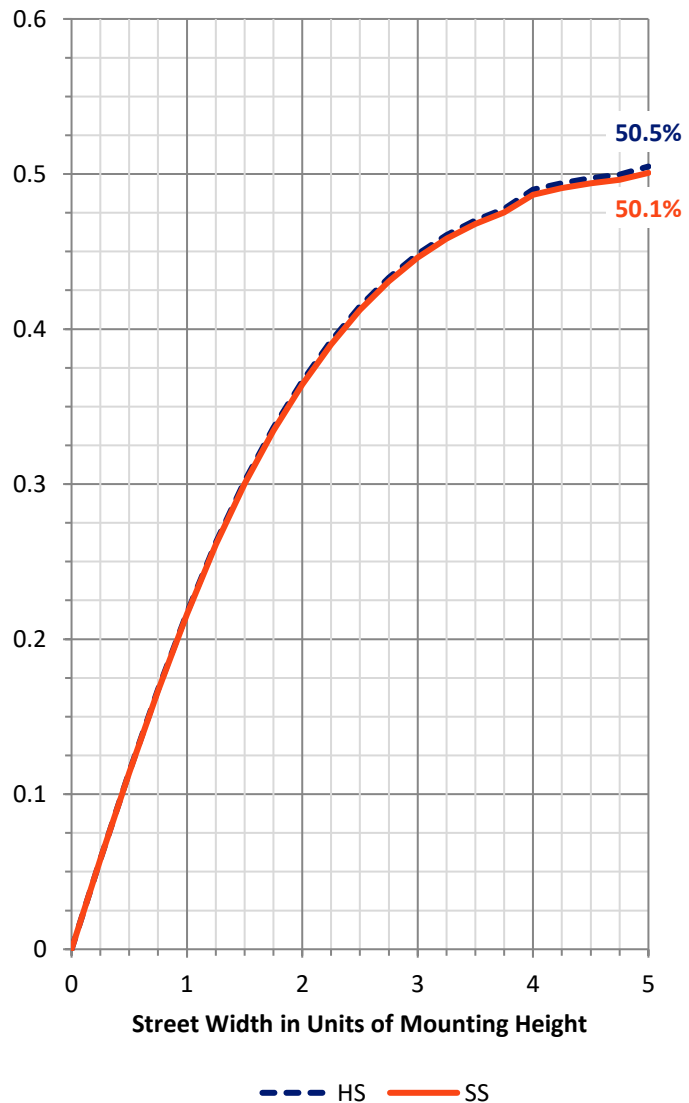
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8434.5	0.0	8434.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8434.5	0.0	8434.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	16869.0	0.0	16869.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.5	0.7
10°-20°	346.4	2.1
20°-30°	625.4	3.7
30°-40°	1066.8	6.3
40°-50°	1816.2	10.8
50°-60°	2922.9	17.3
60°-70°	4860.8	28.8
70°-80°	4702.3	27.9
80°-90°	413.9	2.5
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°	16869.0	100.0
0°-180°	16869.0	100.0



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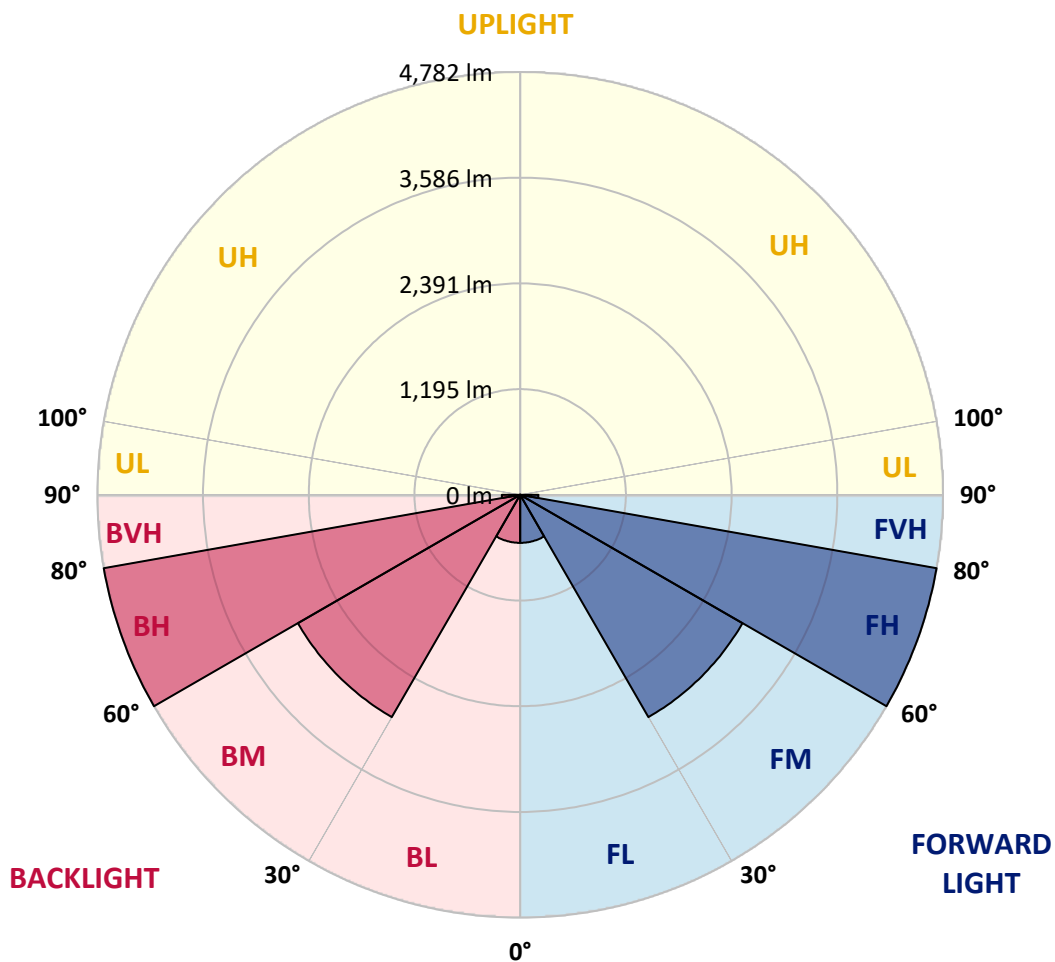
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	543.1	3.2			
FM	(30°-60°)	2902.9	17.2			
FH	(60°-80°)	4781.5	28.3			G2/5000
FVH	(80°-90°)	206.9	1.2			G2/225
BL	(0°-30°)	543.1	3.2	B2/1000		
BM	(30°-60°)	2902.9	17.2	B3/5000		
BH	(60°-80°)	4781.5	28.3	B4/5000		G2/5000
BVH	(80°-90°)	206.9	1.2			G2/225
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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1199.3	1199.3	1199.3	1199.3	1199.3	1199.3	1199.3	1199.3	1199.3	1199.3	1199.3
2.5°	1208.6	1208.6	1209.6	1208.6	1206.5	1205.5	1202.4	1200.3	1198.2	1197.2	1195.1
5°	1209.6	1209.6	1210.7	1209.6	1207.6	1205.5	1203.4	1200.3	1198.2	1196.1	1195.1
7.5°	1213.8	1214.8	1215.9	1214.8	1210.7	1208.6	1205.5	1202.4	1198.2	1196.1	1194.1
10°	1222.1	1222.1	1222.1	1221.1	1217.9	1213.8	1209.6	1206.5	1201.3	1196.1	1193.0
12.5°	1228.3	1229.4	1229.4	1227.3	1223.1	1217.9	1213.8	1210.7	1206.5	1202.4	1199.3
15°	1237.7	1237.7	1236.6	1232.5	1226.3	1222.1	1220.0	1219.0	1217.9	1215.9	1212.8
17.5°	1256.4	1255.3	1252.2	1246.0	1238.7	1235.6	1233.5	1233.5	1233.5	1232.5	1230.4
20°	1283.4	1283.4	1279.2	1268.8	1262.6	1259.5	1256.4	1256.4	1256.4	1253.3	1250.1
22.5°	1327.0	1328.0	1321.8	1309.3	1301.0	1294.8	1290.6	1287.5	1284.4	1282.3	1277.1
25°	1386.2	1385.1	1377.9	1362.3	1356.0	1349.8	1341.5	1336.3	1332.2	1329.0	1322.8
27.5°	1448.5	1447.4	1439.1	1425.6	1421.5	1412.1	1405.9	1398.6	1393.4	1388.2	1382.0
30°	1528.4	1523.2	1517.0	1506.6	1504.5	1497.3	1489.0	1478.6	1470.3	1462.0	1454.7
32.5°	1600.1	1600.1	1590.7	1585.5	1589.7	1586.6	1587.6	1581.4	1576.2	1573.1	1565.8
35°	1699.7	1699.7	1695.6	1689.3	1690.4	1683.1	1682.1	1683.1	1687.3	1687.3	1679.0
37.5°	1832.6	1834.7	1821.2	1819.1	1813.9	1803.6	1798.4	1800.4	1809.8	1815.0	1803.6
40°	1997.7	2001.9	1997.7	1984.2	1978.0	1960.3	1950.0	1950.0	1957.2	1962.4	1958.3
42.5°	2160.7	2168.0	2160.7	2150.4	2145.2	2131.7	2126.5	2130.6	2140.0	2146.2	2140.0
45°	2342.4	2347.6	2338.3	2325.8	2319.6	2312.3	2309.2	2312.3	2322.7	2329.0	2326.9
47.5°	2521.0	2528.3	2516.9	2511.7	2511.7	2504.4	2512.7	2521.0	2530.4	2544.9	2538.7
50°	2695.5	2704.8	2697.6	2698.6	2706.9	2720.4	2736.0	2752.6	2769.2	2784.8	2786.9
52.5°	2851.2	2865.8	2866.8	2885.5	2911.4	2932.2	2975.8	3012.2	3051.6	3065.1	3058.9
55°	3015.3	3035.0	3061.0	3090.0	3131.6	3174.1	3247.9	3313.3	3365.2	3397.4	3392.2
57.5°	3249.9	3269.7	3296.7	3344.4	3406.7	3464.9	3565.6	3667.3	3746.3	3795.1	3771.2
60°	3554.2	3574.9	3610.2	3661.1	3742.1	3821.0	3959.1	4105.5	4228.0	4284.1	4240.5
62.5°	3957.0	3976.8	3999.6	4067.1	4157.4	4259.2	4432.6	4620.5	4776.3	4830.3	4769.0
65°	4531.2	4555.1	4562.4	4617.4	4705.7	4800.2	4987.0	5198.9	5376.4	5464.7	5342.2
67.5°	5178.1	5187.4	5216.5	5280.9	5371.2	5456.4	5603.8	5804.2	5974.5	6023.3	5892.5
70°	5557.1	5575.8	5626.7	5716.0	5823.9	5957.9	6118.8	6334.8	6527.9	6550.8	6384.6
72.5°	5214.4	5252.9	5343.2	5482.3	5708.7	5946.5	6223.7	6542.5	6819.7	6851.9	6585.0
75°	4182.4	4226.0	4333.9	4486.6	4754.5	5107.5	5508.3	5987.0	6402.3	6455.2	6102.2
77.5°	2229.3	2283.3	2440.1	2645.6	3027.7	3495.0	3977.8	4524.0	4877.0	4996.4	4742.0
80°	561.7	590.8	666.6	787.0	1045.6	1422.5	1838.9	2426.6	2864.7	3050.6	2864.7
82.5°	218.0	239.9	260.6	275.2	300.1	352.0	485.9	792.2	1067.4	1314.5	1138.0
85°	84.1	89.3	128.8	146.4	146.4	160.9	184.8	218.0	270.0	294.9	247.1
87.5°	33.2	36.3	44.6	68.5	70.6	62.3	66.5	74.8	57.1	47.8	54.0
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°	1199.3	1199.3	1199.3	1199.3	1199.3	1199.3	1199.3	1199.3
2.5°	1194.1	1193.0	1191.0	1192.0	1191.0	1191.0	1191.0	1191.0
5°	1193.0	1193.0	1191.0	1191.0	1191.0	1192.0	1191.0	1191.0
7.5°	1192.0	1191.0	1188.9	1187.8	1187.8	1186.8	1186.8	1186.8
10°	1189.9	1187.8	1185.8	1184.7	1184.7	1182.6	1182.6	1182.6
12.5°	1195.1	1192.0	1189.9	1188.9	1188.9	1188.9	1189.9	1189.9
15°	1209.6	1203.4	1200.3	1199.3	1200.3	1202.4	1203.4	1204.5
17.5°	1225.2	1219.0	1213.8	1211.7	1212.8	1215.9	1219.0	1221.1
20°	1244.9	1239.8	1233.5	1231.4	1231.4	1235.6	1237.7	1240.8
22.5°	1273.0	1268.8	1263.6	1260.5	1258.4	1263.6	1266.8	1268.8
25°	1317.6	1313.5	1309.3	1306.2	1305.2	1310.4	1312.4	1313.5
27.5°	1376.8	1372.7	1370.6	1369.5	1366.4	1368.5	1371.6	1370.6
30°	1453.6	1456.8	1453.6	1453.6	1448.5	1450.5	1448.5	1446.4
32.5°	1556.4	1553.3	1544.0	1537.8	1530.5	1530.5	1527.4	1524.3
35°	1659.2	1648.9	1643.7	1646.8	1643.7	1645.7	1640.5	1635.4
37.5°	1780.7	1774.5	1773.5	1782.8	1780.7	1782.8	1782.8	1775.5
40°	1941.7	1937.5	1944.8	1960.3	1966.6	1965.5	1967.6	1958.3
42.5°	2126.5	2119.2	2122.3	2135.8	2143.1	2145.2	2144.1	2135.8
45°	2311.3	2313.4	2313.4	2327.9	2335.2	2339.3	2332.1	2329.0
47.5°	2520.0	2523.1	2515.8	2525.2	2527.3	2534.5	2528.3	2523.1
50°	2760.9	2749.5	2732.9	2736.0	2736.0	2733.9	2726.6	2720.4
52.5°	3029.8	3003.9	2972.7	2962.3	2950.9	2939.5	2924.9	2913.5
55°	3336.1	3291.5	3235.4	3209.4	3187.6	3161.7	3128.5	3117.0
57.5°	3691.2	3614.4	3539.6	3492.9	3436.8	3402.6	3360.0	3357.9
60°	4112.8	4009.0	3877.1	3807.5	3751.4	3711.0	3678.8	3666.3
62.5°	4599.8	4421.2	4278.9	4204.2	4138.7	4113.8	4073.3	4078.5
65°	5099.2	4917.5	4779.4	4719.2	4657.9	4641.3	4603.9	4617.4
67.5°	5640.2	5490.6	5339.0	5283.0	5226.9	5210.3	5171.9	5183.3
70°	6125.0	5935.0	5762.7	5652.6	5557.1	5480.3	5431.5	5411.7
72.5°	6221.6	5892.5	5621.5	5346.3	5187.4	5048.3	4991.2	4969.4
75°	5590.3	5079.5	4693.2	4370.3	4191.7	3989.2	3967.4	3937.3
77.5°	4348.5	3767.0	3299.8	2884.5	2644.6	2397.5	2312.3	2248.0
80°	2593.7	1993.6	1545.0	1083.0	883.6	711.2	668.7	624.0
82.5°	928.3	595.0	400.8	312.5	279.3	257.5	240.9	219.1
85°	224.3	189.0	178.6	162.0	159.9	136.0	96.6	86.2
87.5°	71.6	65.4	66.5	63.3	66.5	49.8	40.5	36.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)