

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: P196892

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196892
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-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 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: 11612 lumens
Efficiency: N/A
Efficacy: 90.0 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

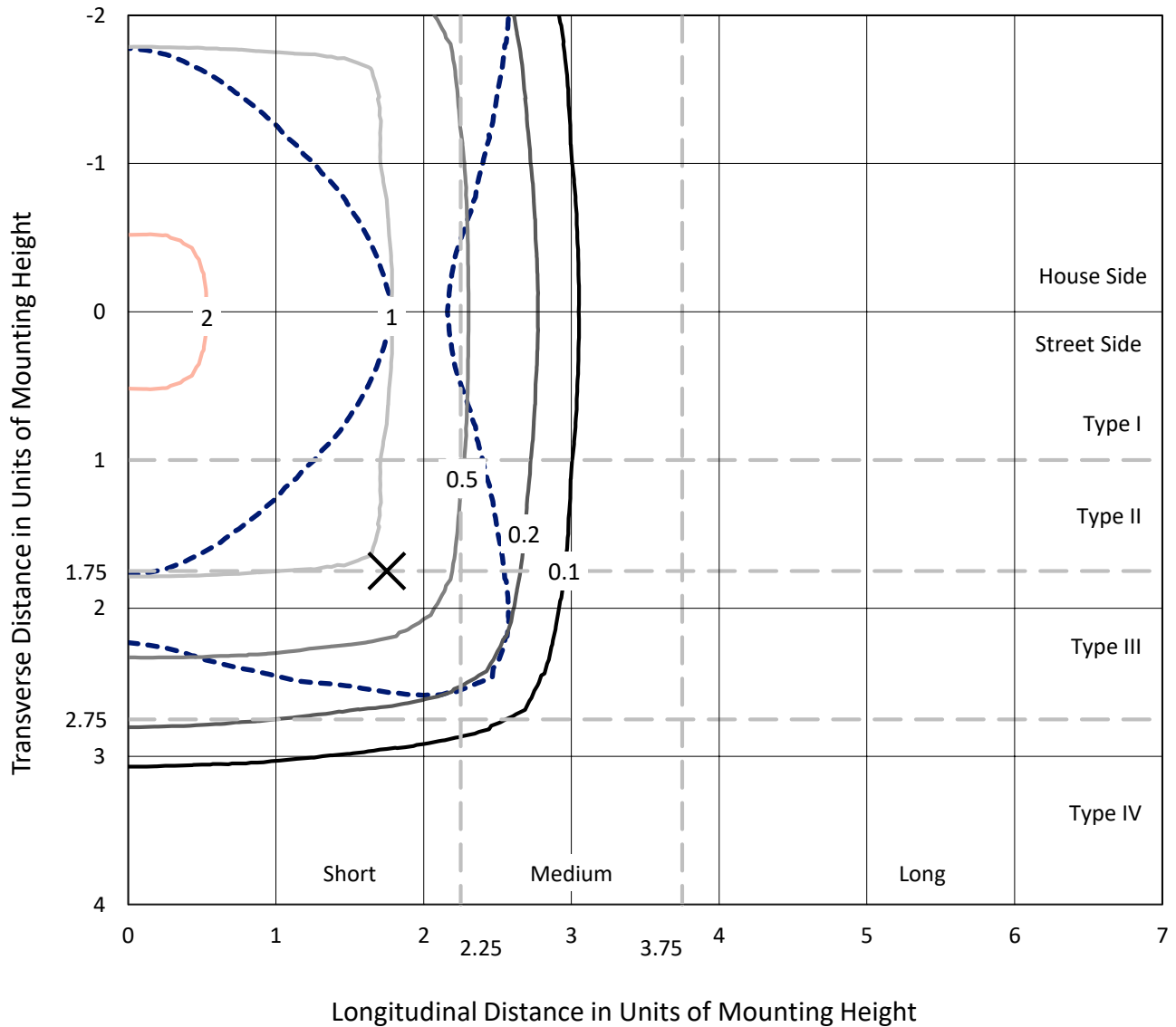
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

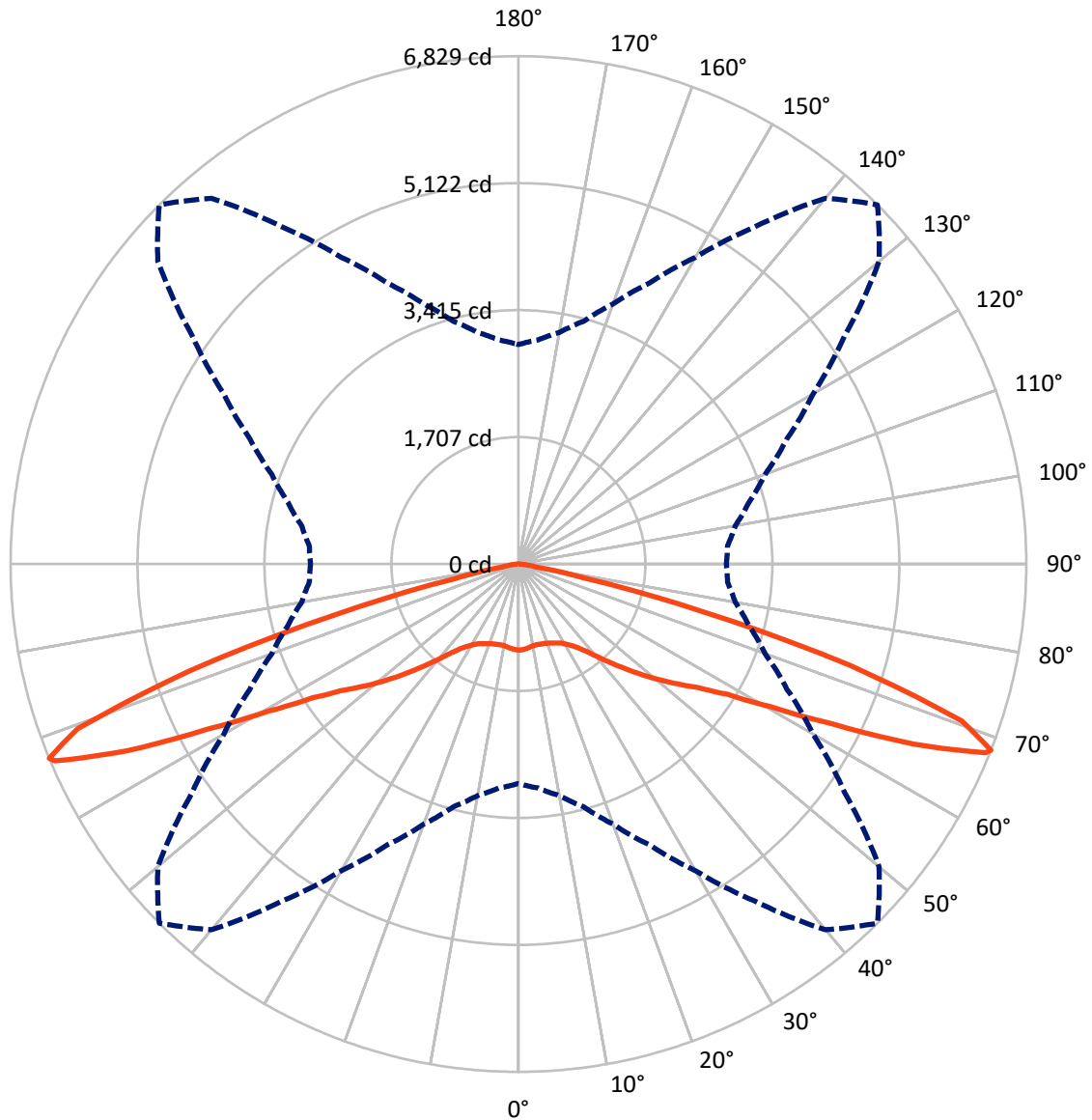
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2.9 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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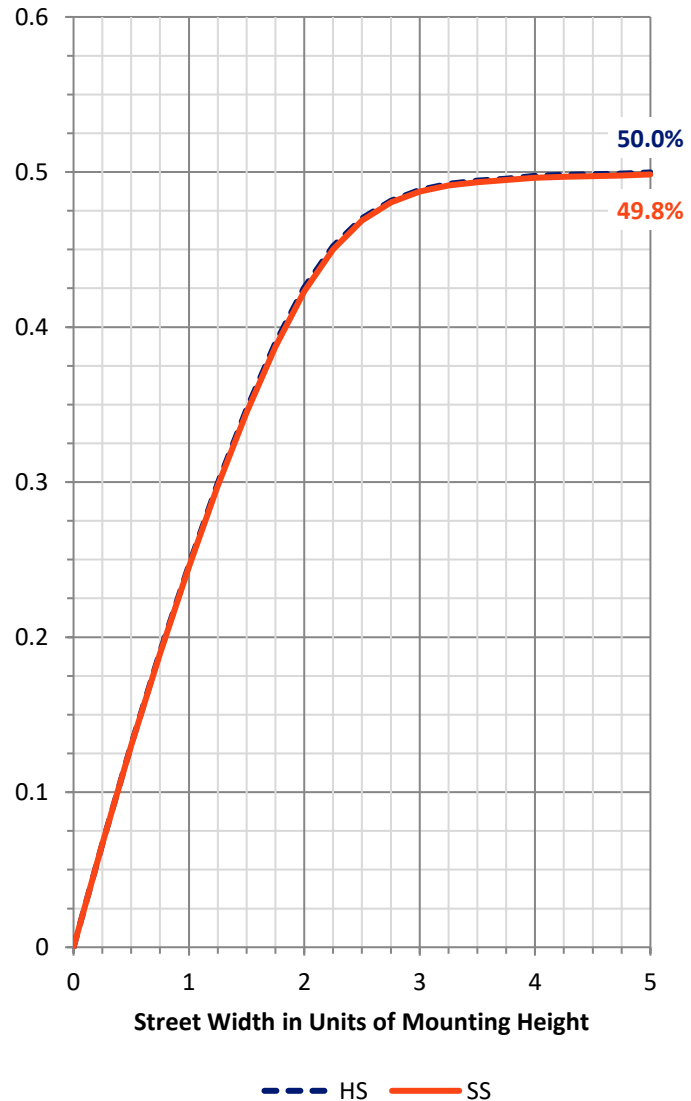
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5806.0	0.0	5806.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5806.0	0.0	5806.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	11612.0	0.0	11612.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.4	0.9
10°-20°	314.4	2.7
20°-30°	534.4	4.6
30°-40°	874.6	7.5
40°-50°	1563.0	13.5
50°-60°	2639.6	22.7
60°-70°	4093.1	35.2
70°-80°	1407.3	12.1
80°-90°	77.3	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°	11612.0	100.0
0°-180°	11612.0	100.0



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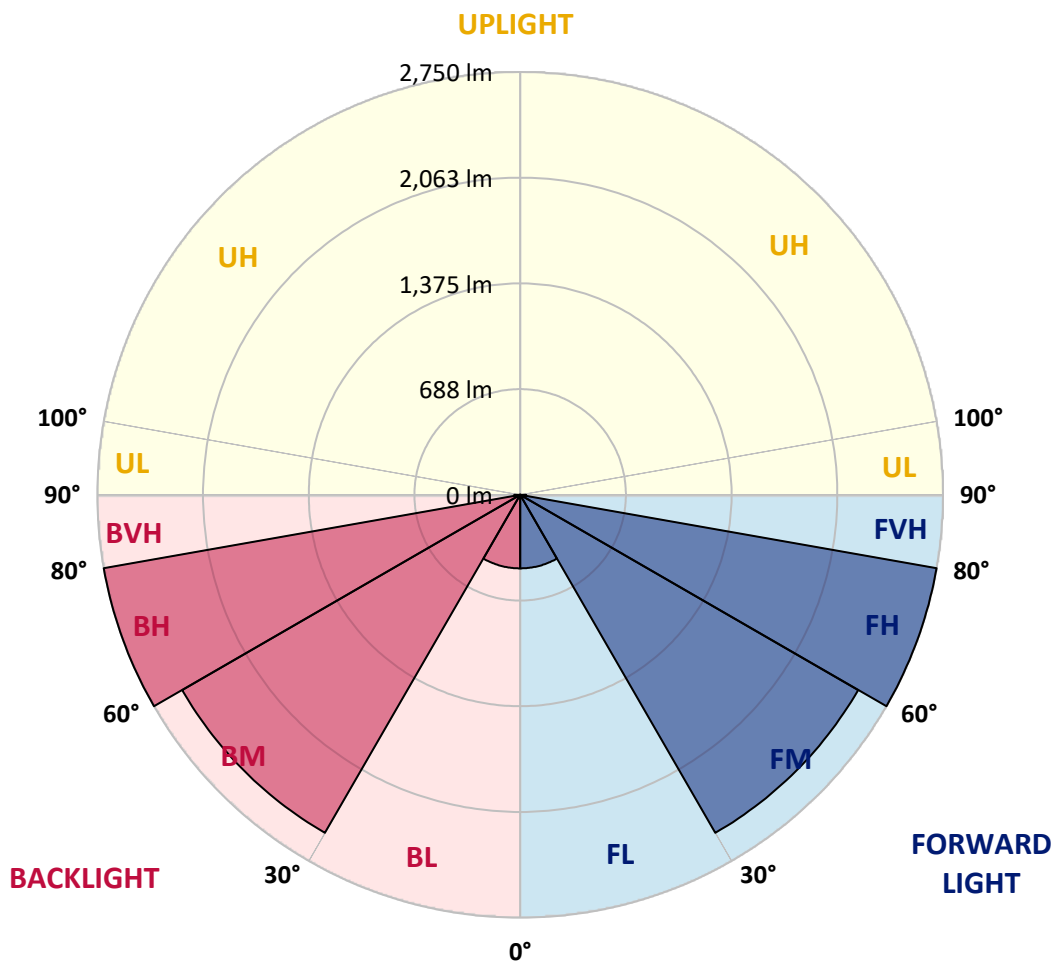
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	478.6	4.1			
FM	(30°-60°)	2538.6	21.9			
FH	(60°-80°)	2750.2	23.7			G2/5000
FVH	(80°-90°)	38.7	0.3			G1/100
BL	(0°-30°)	478.6	4.1	B1/500		
BM	(30°-60°)	2538.6	21.9	B3/5000		
BH	(60°-80°)	2750.2	23.7	B4/5000		G2/5000
BVH	(80°-90°)	38.7	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1158.3	1158.3	1158.3	1158.3	1158.3	1158.3	1158.3	1158.3	1158.3	1158.3	1158.3
2.5°	1163.3	1163.3	1164.7	1164.0	1161.9	1159.8	1157.6	1155.5	1154.1	1152.6	1151.2
5°	1151.2	1151.2	1153.4	1151.9	1150.5	1148.4	1147.0	1144.8	1143.4	1142.0	1142.7
7.5°	1135.6	1137.0	1138.4	1137.7	1134.9	1134.2	1132.0	1131.3	1129.9	1127.8	1128.5
10°	1122.1	1122.8	1124.2	1123.5	1122.8	1120.6	1119.9	1119.2	1118.5	1115.7	1115.0
12.5°	1108.6	1110.0	1111.4	1112.1	1111.4	1112.1	1112.8	1113.5	1112.8	1111.4	1111.4
15°	1097.9	1099.3	1101.4	1103.6	1104.3	1108.6	1111.4	1114.2	1116.4	1117.1	1115.0
17.5°	1092.2	1094.3	1097.2	1101.4	1105.0	1110.0	1115.0	1119.2	1122.8	1123.5	1121.4
20°	1091.5	1093.6	1097.9	1102.9	1109.3	1115.7	1123.5	1129.9	1133.4	1135.6	1133.4
22.5°	1096.5	1099.3	1105.0	1111.4	1119.2	1127.8	1137.7	1144.8	1151.9	1154.8	1152.6
25°	1110.7	1113.5	1119.9	1127.8	1136.3	1147.0	1156.9	1166.2	1173.3	1176.8	1174.0
27.5°	1140.6	1141.3	1148.4	1156.9	1166.9	1176.1	1188.9	1193.2	1198.9	1202.4	1198.9
30°	1182.5	1183.9	1190.3	1203.8	1213.1	1225.2	1232.3	1236.5	1242.9	1246.5	1242.2
32.5°	1246.5	1247.9	1253.6	1266.4	1274.9	1284.2	1292.7	1295.6	1302.0	1306.2	1301.3
35°	1336.8	1339.7	1344.6	1353.2	1360.3	1367.4	1373.8	1371.7	1375.9	1381.6	1376.6
37.5°	1460.5	1459.8	1461.2	1467.6	1474.8	1479.0	1489.0	1484.0	1488.3	1493.2	1490.4
40°	1604.9	1604.9	1604.2	1615.5	1618.4	1622.7	1633.3	1626.9	1632.6	1638.3	1633.3
42.5°	1769.1	1772.0	1775.5	1784.8	1792.6	1794.0	1799.0	1796.2	1803.3	1808.2	1803.3
45°	1958.3	1962.6	1966.8	1988.1	1991.7	1994.5	1998.1	1988.9	1996.7	2000.9	1999.5
47.5°	2154.5	2162.4	2171.6	2193.6	2207.9	2214.3	2217.1	2206.4	2207.2	2213.6	2214.3
50°	2376.4	2384.9	2394.2	2419.1	2432.6	2443.9	2447.5	2435.4	2436.8	2441.8	2443.2
52.5°	2581.2	2591.1	2611.0	2644.5	2663.7	2683.6	2685.0	2670.1	2676.5	2680.0	2677.2
55°	2773.9	2786.7	2813.0	2857.8	2892.6	2931.7	2949.5	2933.2	2933.2	2930.3	2928.9
57.5°	2998.6	3012.8	3039.8	3091.7	3140.1	3196.3	3244.6	3261.0	3290.8	3300.8	3285.1
60°	3337.0	3352.0	3379.7	3448.0	3509.1	3590.9	3670.5	3735.2	3840.5	3897.4	3846.2
62.5°	3646.4	3669.1	3734.5	3854.0	3986.3	4137.7	4313.3	4438.5	4629.8	4725.1	4596.4
65°	3576.0	3622.2	3750.2	3937.9	4211.0	4539.5	4897.1	5240.6	5635.9	5838.6	5576.9
67.5°	3123.7	3162.8	3300.8	3519.1	3859.7	4312.6	4868.7	5579.8	6395.4	6775.1	6312.2
68°	2950.9	3024.2	3161.4	3378.3	3721.7	4166.9	4760.6	5528.6	6418.8	6829.1	6329.2
70°	2262.6	2288.9	2420.5	2615.3	2985.8	3422.4	4021.8	4897.1	5903.3	6325.7	5811.6
72.5°	1075.1	1090.8	1176.1	1368.1	1603.5	1959.0	2488.0	3313.6	4220.2	4659.6	4147.0
75°	393.9	397.5	417.4	462.9	551.1	684.8	938.6	1452.0	2149.6	2563.4	2158.1
77.5°	212.6	213.3	221.1	232.5	248.2	265.9	304.3	408.2	658.4	895.9	695.4
80°	133.7	133.0	140.8	150.0	160.7	169.2	172.8	184.9	208.3	243.9	224.0
82.5°	68.3	74.7	92.4	102.4	118.0	120.9	117.3	116.6	123.7	133.7	137.9
85°	37.7	33.4	49.1	65.4	71.1	73.2	74.0	69.7	68.3	66.8	70.4
87.5°	19.2	17.8	21.3	32.7	34.8	28.4	29.2	24.9	17.1	17.1	17.8
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°	1158.3	1158.3	1158.3	1158.3	1158.3	1158.3	1158.3	1158.3
2.5°	1149.8	1150.5	1149.1	1149.1	1149.1	1149.8	1149.1	1148.4
5°	1140.6	1142.0	1142.0	1142.7	1143.4	1143.4	1143.4	1143.4
7.5°	1127.0	1127.8	1129.2	1129.2	1129.2	1129.2	1129.2	1129.2
10°	1114.2	1112.8	1112.1	1110.7	1110.7	1108.6	1109.3	1110.0
12.5°	1107.8	1105.0	1103.6	1101.4	1100.0	1097.9	1097.9	1098.6
15°	1110.7	1106.4	1102.2	1100.7	1099.3	1097.9	1096.5	1097.2
17.5°	1116.4	1111.4	1106.4	1103.6	1100.7	1098.6	1097.9	1098.6
20°	1128.5	1121.4	1113.5	1108.6	1102.9	1101.4	1099.3	1101.4
22.5°	1144.8	1136.3	1126.3	1117.1	1110.7	1107.8	1105.0	1107.1
25°	1164.7	1155.5	1145.5	1134.9	1127.8	1125.6	1122.1	1122.1
27.5°	1192.5	1184.6	1176.1	1166.2	1159.0	1156.9	1151.2	1151.2
30°	1236.5	1228.7	1220.9	1212.4	1205.3	1203.1	1196.0	1196.0
32.5°	1294.9	1286.3	1281.3	1274.2	1268.5	1265.0	1256.5	1255.7
35°	1373.1	1365.3	1364.5	1359.6	1353.9	1354.6	1346.1	1344.6
37.5°	1485.4	1479.0	1481.2	1476.9	1471.9	1476.2	1471.2	1471.2
40°	1629.1	1626.9	1629.1	1626.2	1626.9	1627.6	1623.4	1624.8
42.5°	1802.6	1796.9	1809.7	1808.2	1806.1	1811.8	1801.8	1794.7
45°	2002.4	2000.2	2013.0	2015.2	2010.9	2014.5	1996.7	1996.0
47.5°	2219.2	2219.2	2230.6	2229.2	2224.9	2225.6	2204.3	2190.8
50°	2445.4	2443.9	2455.3	2452.5	2446.8	2446.1	2424.0	2410.5
52.5°	2680.7	2680.7	2697.1	2689.3	2675.8	2669.4	2642.3	2624.6
55°	2941.0	2937.4	2942.4	2916.8	2890.5	2871.3	2837.9	2824.4
57.5°	3270.2	3229.0	3193.4	3160.7	3123.7	3101.0	3061.9	3047.6
60°	3737.4	3627.2	3579.5	3514.1	3453.0	3422.4	3370.5	3342.7
62.5°	4384.5	4201.7	4072.3	3927.9	3788.6	3690.4	3611.5	3576.7
65°	5132.5	4734.3	4405.1	4095.8	3833.4	3625.0	3509.1	3472.9
67.5°	5416.9	4685.9	4117.8	3674.1	3355.5	3107.4	2968.7	2939.6
68°	5356.5	4575.0	3984.8	3530.5	3210.5	2960.2	2822.2	2795.9
70°	4725.1	3859.7	3236.8	2784.5	2485.9	2247.7	2150.3	2108.3
72.5°	3221.1	2478.8	1901.4	1521.0	1297.7	1147.0	1057.4	1026.8
75°	1482.6	1001.9	669.1	499.9	424.5	388.2	360.5	353.4
77.5°	432.3	314.3	270.2	250.3	235.4	222.6	213.3	212.6
80°	205.5	192.7	187.0	174.2	160.7	148.6	140.1	141.5
82.5°	137.9	134.4	134.4	121.6	100.3	86.0	71.1	64.0
85°	73.2	76.1	80.4	76.1	66.1	49.1	32.0	34.8
87.5°	24.9	28.4	29.9	29.2	26.3	19.9	14.9	14.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)