

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: McGRAW-EDISON

Report Number: P299893

Luminaire Tested: **GLNA-AF-04-LED-E1-5WQ-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299893
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-04-LED-E1-5WQ-7027-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 2700K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17690.5 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G2

Input Watts (W): 171
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

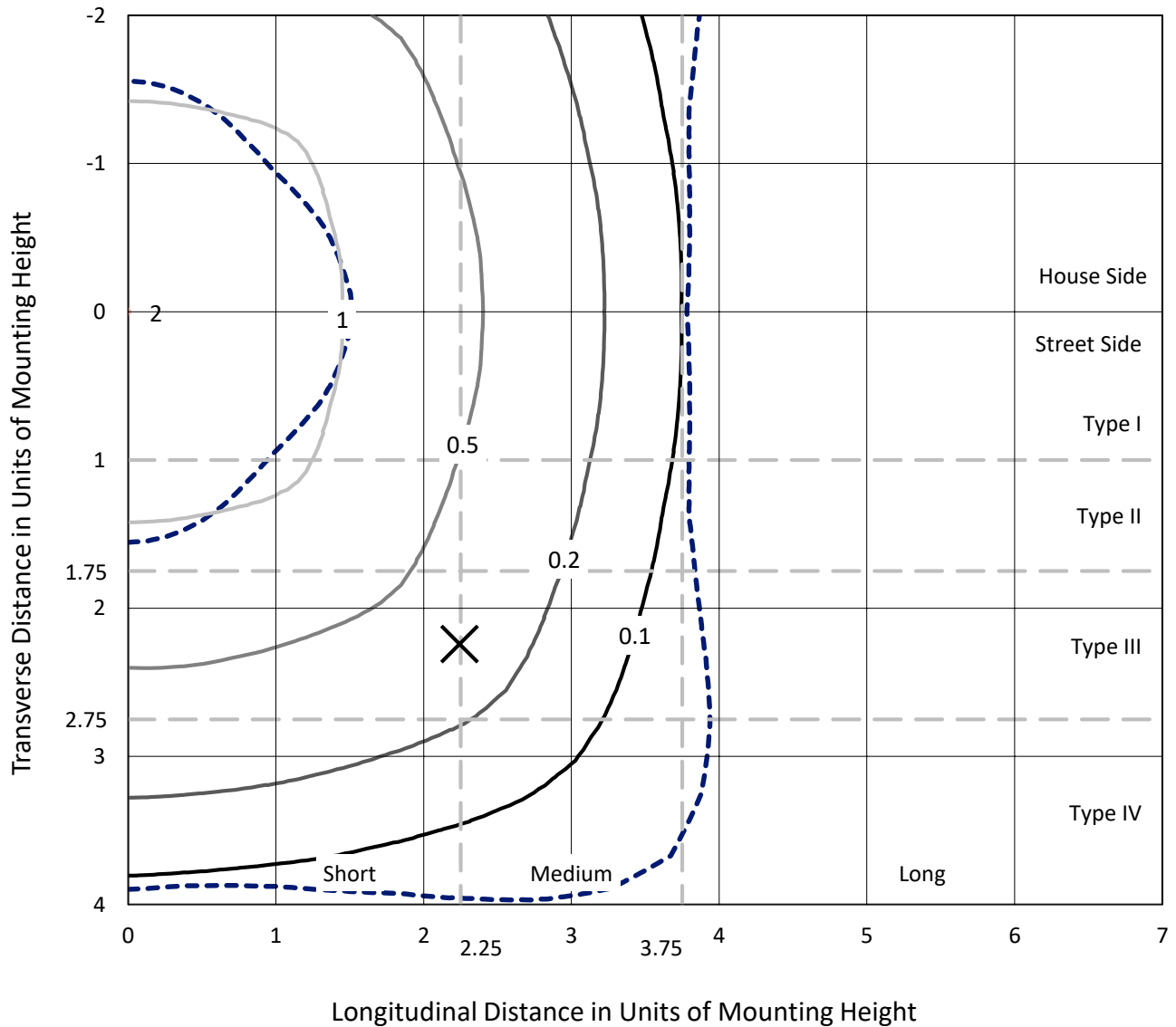


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

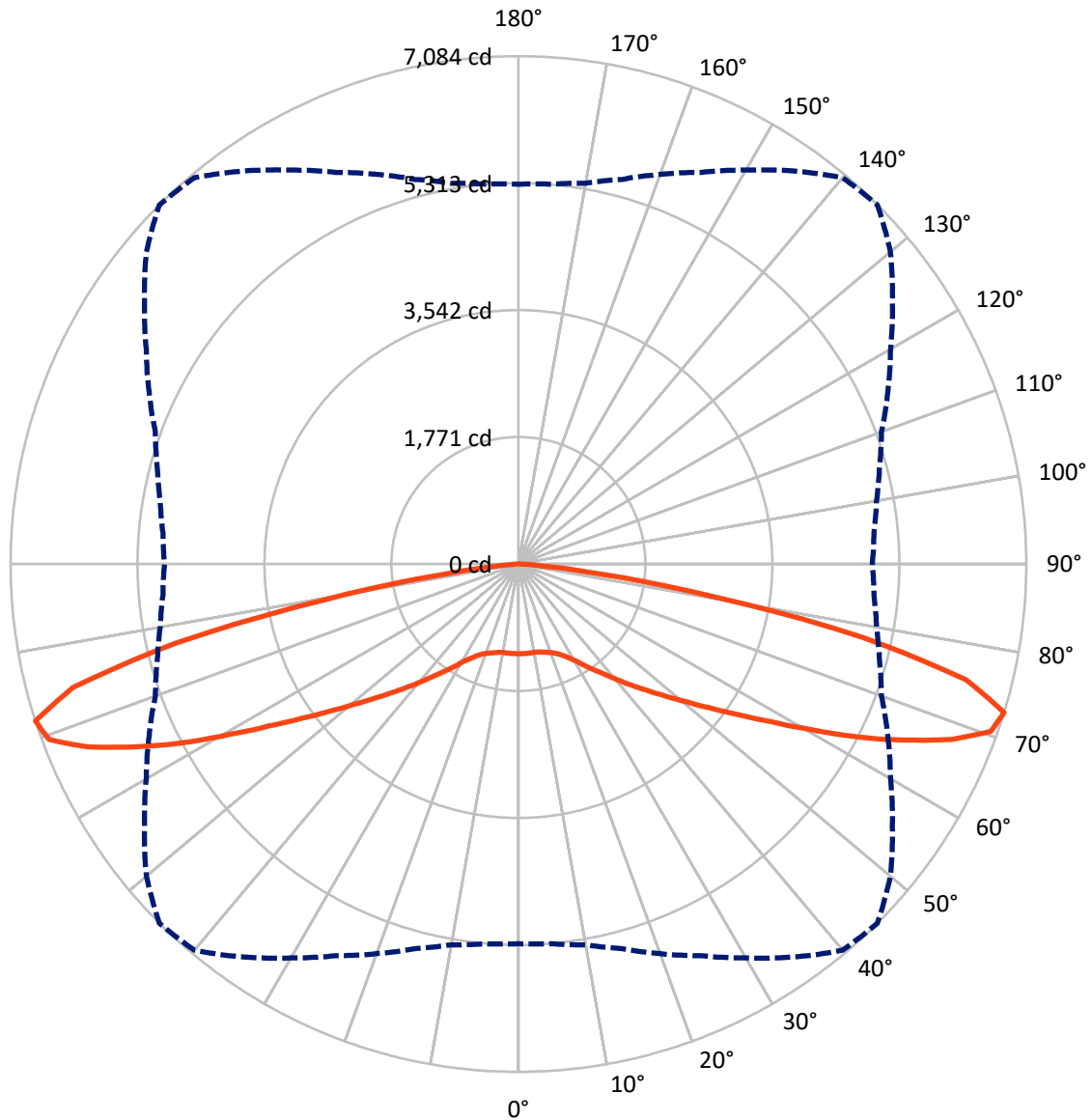


Based on 25 foot mounting height. Maximum calculated value = 2 fc
 Type V - Short - Semi-Cutoff

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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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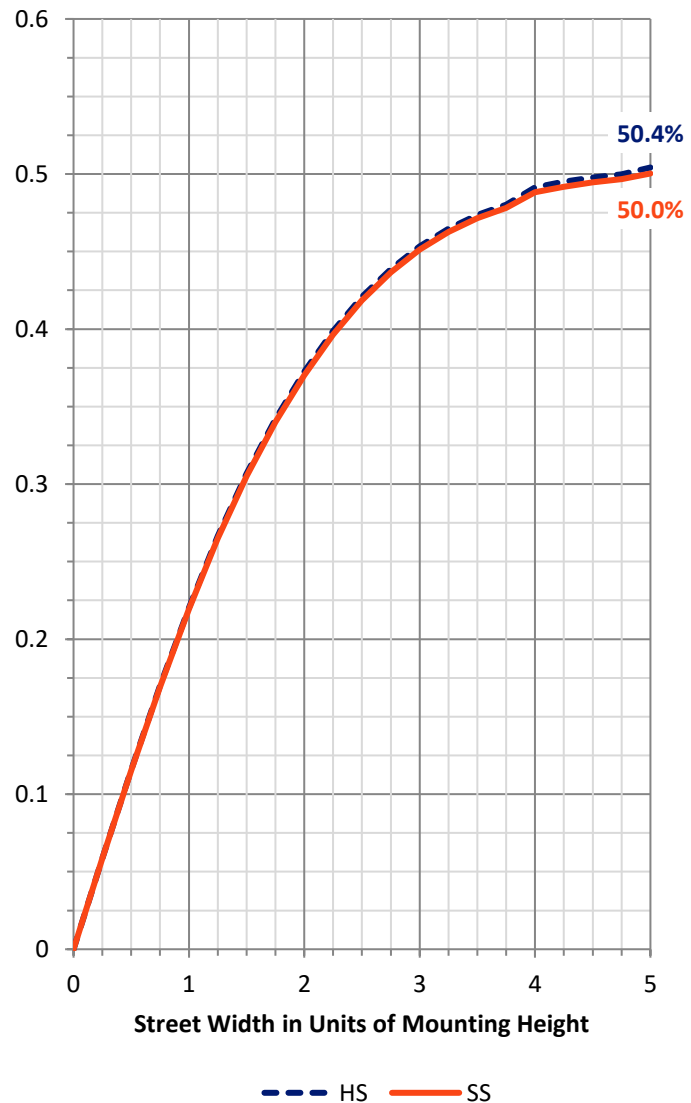
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8845.2	0.0	8845.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8845.2	0.0	8845.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	17690.5	0.0	17690.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.6	0.7
10°-20°	363.3	2.1
20°-30°	663.9	3.8
30°-40°	1144.7	6.5
40°-50°	1956.9	11.1
50°-60°	3171.8	17.9
60°-70°	5262.0	29.7
70°-80°	4634.6	26.2
80°-90°	373.7	2.1
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°	17690.5	100.0
0°-180°	17690.5	100.0



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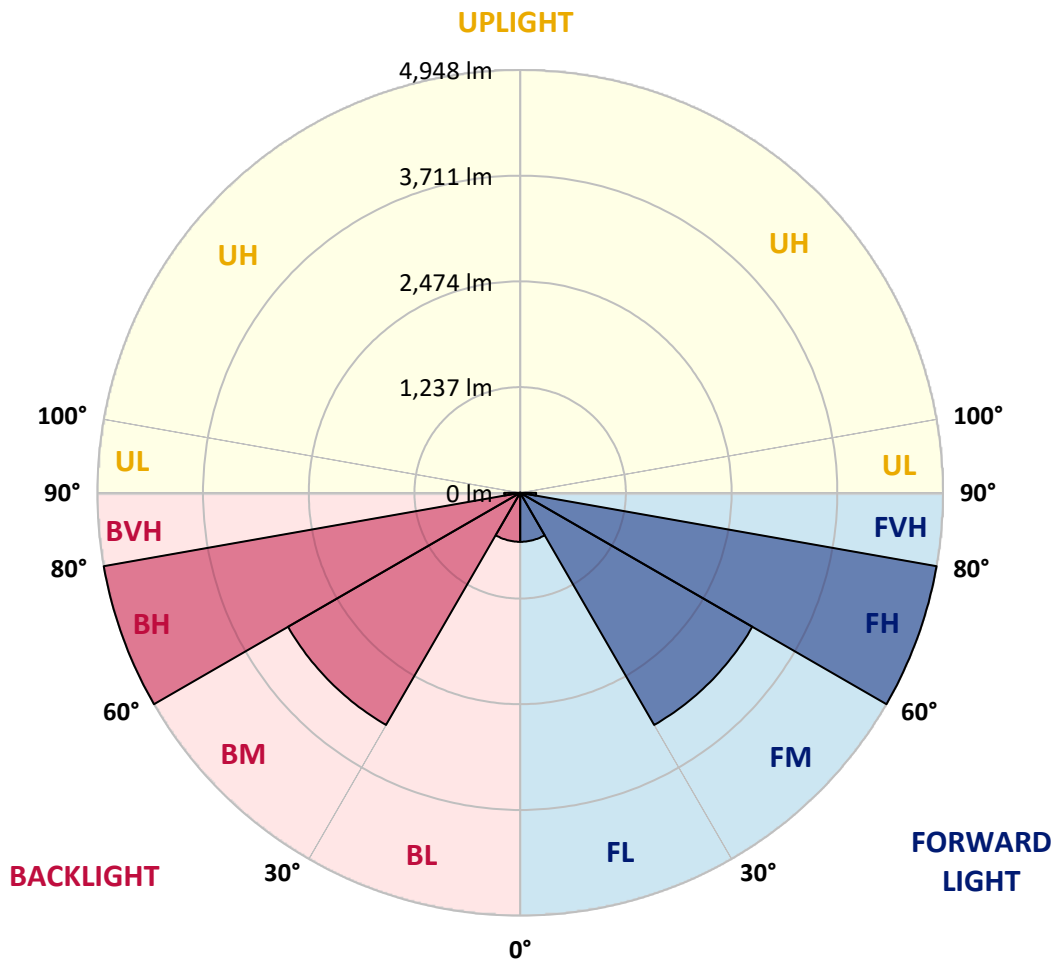
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	573.4	3.2			
FM	(30°-60°)	3136.7	17.7			
FH	(60°-80°)	4948.3	28.0			G2/5000
FVH	(80°-90°)	186.8	1.1			G2/225
BL	(0°-30°)	573.4	3.2	B2/1000		
BM	(30°-60°)	3136.7	17.7	B3/5000		
BH	(60°-80°)	4948.3	28.0	B4/5000		G2/5000
BVH	(80°-90°)	186.8	1.1			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°	1252.8	1252.8	1252.8	1252.8	1252.8	1252.8	1252.8	1252.8	1252.8	1252.8	1252.8
2.5°	1252.8	1253.6	1254.4	1253.6	1253.6	1252.8	1251.9	1252.8	1251.9	1250.3	1251.1
5°	1256.8	1258.4	1258.4	1256.8	1257.6	1256.8	1255.2	1256.0	1254.4	1251.9	1251.9
7.5°	1261.7	1262.5	1262.5	1260.9	1261.7	1260.1	1258.4	1257.6	1256.0	1252.8	1250.3
10°	1269.0	1269.8	1269.0	1267.4	1267.4	1264.9	1260.9	1259.3	1256.0	1251.1	1248.7
12.5°	1277.1	1277.9	1277.1	1275.5	1274.7	1270.6	1267.4	1264.9	1262.5	1258.4	1254.4
15°	1288.5	1290.1	1288.5	1285.2	1282.8	1279.5	1277.9	1278.7	1279.5	1276.3	1272.2
17.5°	1309.6	1310.4	1307.9	1300.6	1297.4	1294.1	1294.1	1295.8	1298.2	1296.6	1292.5
20°	1348.5	1346.1	1340.4	1331.5	1327.4	1321.7	1320.9	1321.7	1321.7	1320.9	1317.7
22.5°	1397.2	1395.6	1388.3	1376.9	1371.2	1368.0	1363.1	1359.0	1358.2	1355.8	1352.6
25°	1455.6	1454.8	1445.9	1436.1	1432.1	1428.0	1424.0	1418.3	1413.4	1407.7	1404.5
27.5°	1530.2	1527.0	1514.0	1509.2	1503.5	1501.0	1495.4	1488.9	1484.8	1477.5	1473.5
30°	1612.2	1612.2	1601.6	1600.0	1600.0	1594.3	1587.9	1576.5	1569.2	1561.9	1559.5
32.5°	1694.1	1695.0	1684.4	1687.7	1690.1	1694.1	1695.8	1691.7	1686.8	1686.0	1681.2
35°	1812.6	1809.4	1798.8	1801.2	1800.4	1799.6	1799.6	1808.5	1810.2	1811.8	1802.1
37.5°	1959.5	1959.5	1948.9	1948.9	1944.0	1939.2	1932.7	1938.4	1947.3	1949.7	1943.2
40°	2127.4	2133.1	2120.1	2119.3	2120.9	2105.5	2098.2	2107.1	2112.8	2122.6	2115.2
42.5°	2325.4	2321.3	2308.4	2306.7	2297.8	2292.9	2286.4	2293.8	2302.7	2309.2	2311.6
45°	2515.3	2512.0	2497.4	2497.4	2488.5	2484.4	2487.7	2499.8	2503.9	2512.8	2521.7
47.5°	2702.7	2698.6	2688.9	2692.9	2693.8	2701.1	2711.6	2723.0	2734.3	2746.5	2750.6
50°	2894.2	2895.0	2884.4	2894.2	2906.3	2926.6	2955.0	2973.7	2997.2	3012.6	3017.5
52.5°	3068.6	3071.9	3083.2	3105.9	3130.3	3170.0	3218.7	3264.2	3303.1	3329.1	3327.4
55°	3277.9	3282.8	3310.4	3349.3	3389.1	3449.1	3521.4	3601.7	3666.6	3703.9	3680.4
57.5°	3545.7	3556.2	3587.1	3639.8	3699.0	3776.9	3875.9	3996.8	4097.4	4147.7	4109.6
60°	3913.3	3919.7	3957.1	4015.5	4086.9	4183.4	4315.7	4478.0	4620.0	4686.5	4642.7
62.5°	4397.6	4409.8	4439.8	4499.1	4572.1	4681.6	4843.1	5045.9	5222.8	5315.3	5216.3
65°	4976.1	5015.1	5040.2	5100.3	5168.4	5284.5	5453.2	5670.7	5860.5	5921.4	5807.0
67.5°	5549.0	5583.1	5626.9	5695.8	5764.8	5895.4	6052.0	6263.0	6471.5	6526.7	6349.0
70°	5799.7	5819.2	5887.3	5981.4	6113.7	6267.9	6448.8	6685.7	6943.7	6989.2	6763.6
72.5°	5297.5	5316.9	5393.2	5553.0	5783.5	6028.5	6344.1	6692.2	7033.0	7084.1	6773.3
75°	4006.6	3974.9	4087.7	4299.5	4610.2	4951.8	5393.2	5892.2	6384.7	6448.8	6078.0
77.5°	2070.6	2066.6	2151.8	2414.6	2785.4	3174.1	3660.1	4224.0	4706.0	4900.7	4598.9
80°	583.4	589.9	630.4	761.1	977.7	1258.4	1638.2	2166.4	2560.7	2761.9	2593.1
82.5°	228.8	246.7	262.1	286.4	314.8	356.2	475.5	707.5	949.3	1134.3	929.0
85°	81.9	87.6	124.1	146.9	149.3	157.4	179.3	209.3	252.3	301.0	247.5
87.5°	30.8	34.1	39.8	65.7	64.9	59.2	72.2	75.5	56.8	51.9	64.1
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°	1252.8	1252.8	1252.8	1252.8	1252.8	1252.8	1252.8	1252.8
2.5°	1249.5	1250.3	1250.3	1251.1	1251.9	1251.9	1253.6	1253.6
5°	1250.3	1250.3	1248.7	1249.5	1248.7	1248.7	1249.5	1249.5
7.5°	1248.7	1247.9	1246.3	1245.5	1243.8	1243.8	1243.8	1243.8
10°	1246.3	1245.5	1243.8	1243.0	1242.2	1242.2	1242.2	1242.2
12.5°	1252.8	1250.3	1248.7	1247.9	1247.9	1247.9	1247.9	1247.9
15°	1269.8	1264.1	1260.1	1260.1	1260.9	1262.5	1262.5	1264.1
17.5°	1290.9	1284.4	1280.3	1277.1	1278.7	1281.2	1282.8	1284.4
20°	1316.0	1312.8	1307.1	1303.9	1303.9	1307.1	1308.7	1309.6
22.5°	1350.9	1348.5	1346.1	1342.0	1342.0	1343.6	1346.9	1346.9
25°	1402.9	1401.2	1399.6	1396.4	1395.6	1395.6	1397.2	1398.8
27.5°	1467.8	1468.6	1467.0	1466.2	1463.7	1462.9	1465.3	1464.5
30°	1554.6	1558.6	1562.7	1559.5	1555.4	1553.0	1550.5	1547.3
32.5°	1672.2	1667.4	1664.1	1658.4	1651.1	1644.7	1639.8	1634.1
35°	1783.4	1775.3	1772.0	1776.9	1776.1	1772.0	1766.4	1761.5
37.5°	1919.7	1918.1	1919.7	1928.6	1927.0	1931.1	1919.7	1918.9
40°	2091.7	2093.3	2104.7	2115.2	2120.9	2126.6	2120.1	2113.6
42.5°	2291.3	2290.5	2294.6	2309.2	2318.9	2325.4	2311.6	2310.0
45°	2502.3	2496.6	2499.8	2512.0	2521.7	2529.0	2513.6	2513.6
47.5°	2734.3	2724.6	2714.0	2727.8	2733.5	2738.4	2726.2	2722.2
50°	2993.2	2972.9	2950.2	2955.8	2955.8	2954.2	2938.8	2938.0
52.5°	3290.1	3252.8	3211.4	3196.0	3187.1	3177.3	3150.6	3137.6
55°	3631.7	3575.7	3510.8	3471.1	3450.0	3423.2	3378.6	3366.4
57.5°	4030.9	3943.3	3831.3	3782.6	3735.6	3691.7	3642.3	3628.5
60°	4503.9	4374.9	4226.4	4136.4	4085.3	4043.1	3992.0	3989.5
62.5°	5031.3	4827.7	4659.7	4578.6	4541.3	4503.9	4455.2	4461.7
65°	5567.6	5355.1	5197.7	5131.9	5097.0	5066.2	5017.5	5024.8
67.5°	6096.7	5901.1	5728.3	5660.9	5622.0	5583.1	5539.2	5546.5
70°	6476.4	6233.8	6039.0	5889.8	5796.4	5691.0	5622.8	5605.8
72.5°	6367.7	5993.6	5684.5	5388.3	5214.7	5073.5	4977.8	4936.4
75°	5510.8	4999.7	4602.1	4238.6	4034.1	3867.8	3746.9	3671.5
77.5°	4092.6	3518.1	3048.3	2629.7	2298.6	2076.3	1919.7	1818.3
80°	2240.2	1703.9	1245.5	875.5	643.4	534.7	472.2	442.2
82.5°	697.8	450.3	331.9	286.4	266.1	254.8	236.1	206.1
85°	222.3	194.7	180.9	172.8	164.7	143.6	99.0	90.1
87.5°	86.0	88.4	87.6	82.8	84.4	60.9	48.7	43.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)