

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: P144230

Luminaire Tested: **LDRL-5XQ-E02-E**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P144230  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33699)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: LDRL-5XQ-E02-E  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE EXTRA WIDE  
Light Source: (42) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6184.2 lumens  
Efficiency: N/A  
Efficacy: 118.7 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
IES Classification: Type V - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G2

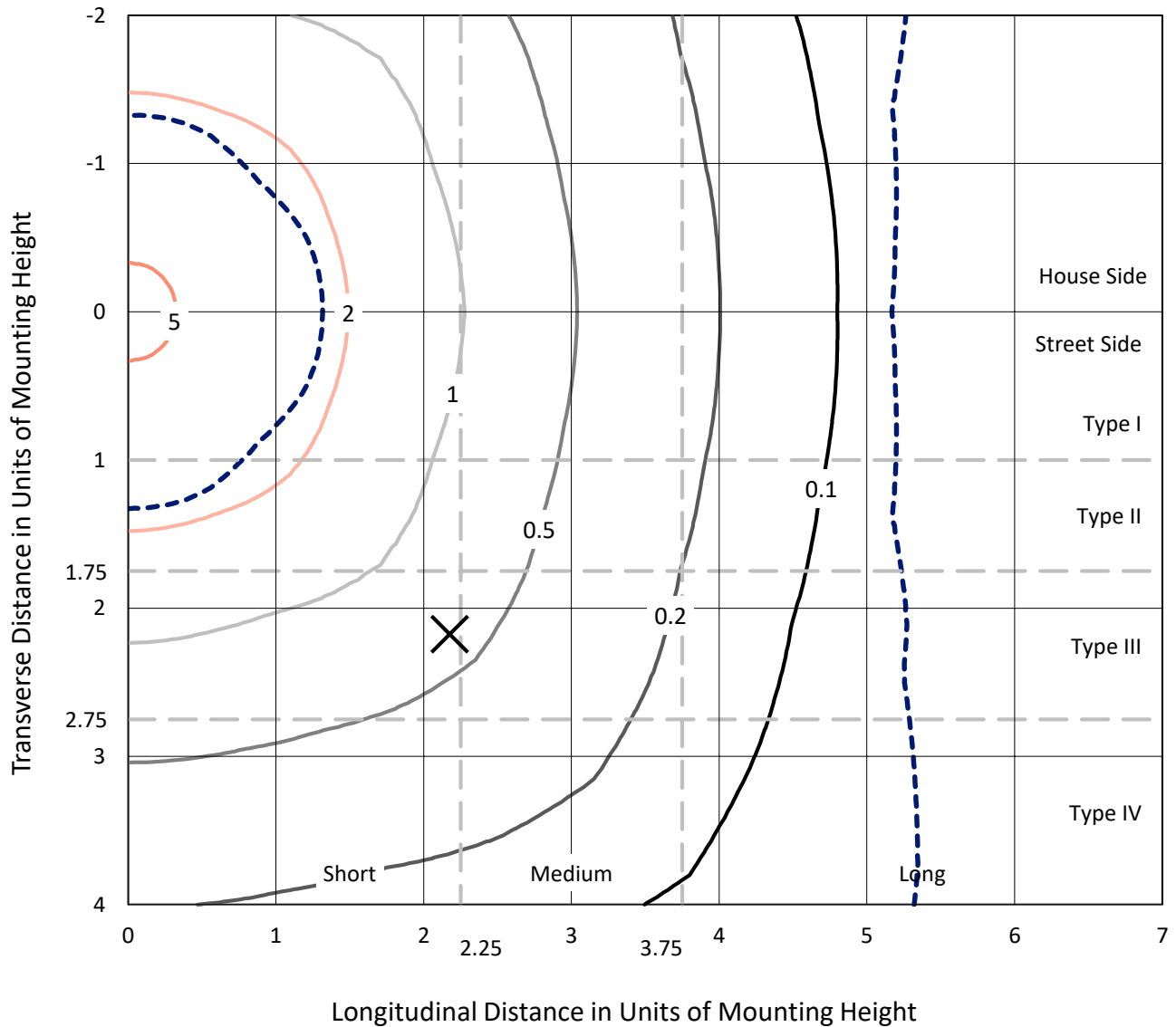
Input Watts (W): 52.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P144230  
 CATALOG NUMBER: LDRL-5XQ-E02-E

### Iso-Footcandle Lines of Horizontal Illumination

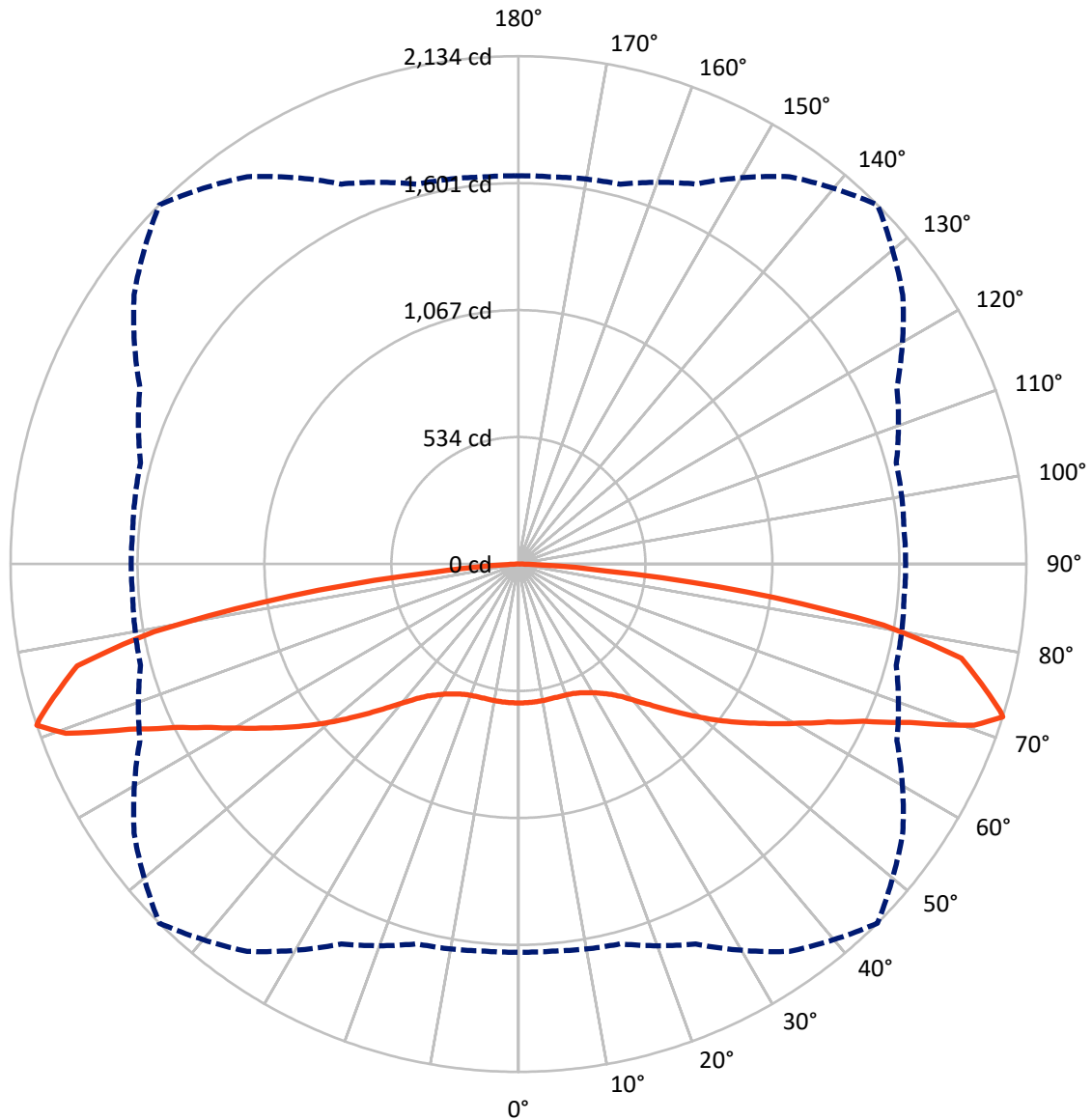
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.8 fc  
 Type V - Short - Non-Cutoff

REPORT NUMBER: P144230  
CATALOG NUMBER: LDRL-5XQ-E02-E

### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 72-Deg Vertical

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 CATALOG NUMBER: LDRL-5XQ-E02-E

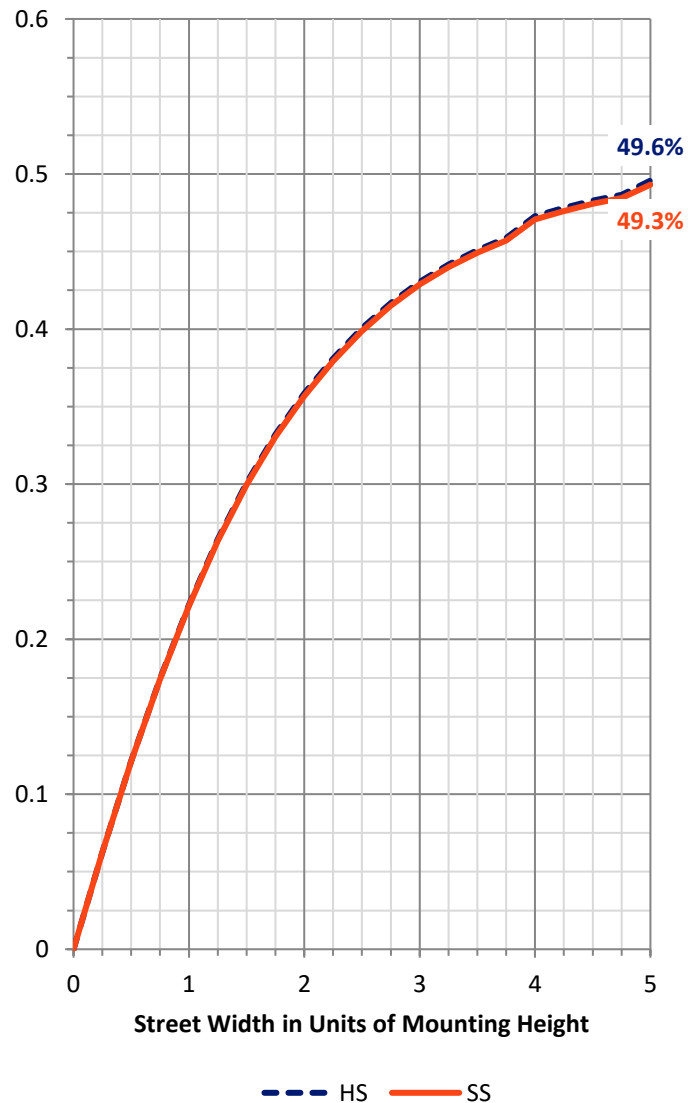
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3092.1	0.0	3092.1
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	3092.1	0.0	3092.1
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	6184.2	0.0	6184.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.7	0.9
10°-20°	165.6	2.7
20°-30°	278.1	4.5
30°-40°	423.3	6.8
40°-50°	669.2	10.8
50°-60°	1022.1	16.5
60°-70°	1497.4	24.2
70°-80°	1701.2	27.5
80°-90°	371.6	6.0
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°	6184.2	100.0
0°-180°	6184.2	100.0



REPORT NUMBER: P144230

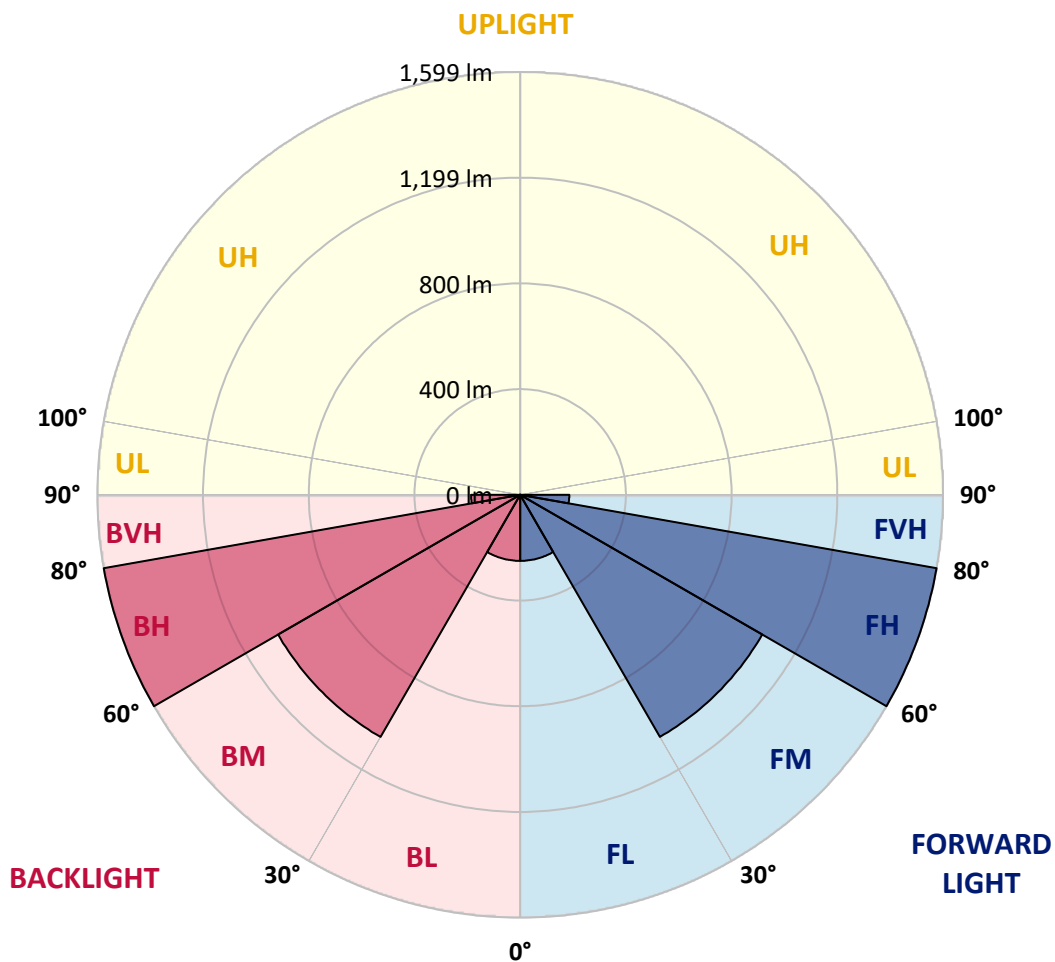
CATALOG NUMBER: LDRL-5XQ-E02-E

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	249.7	4.0			
FM	(30°-60°)	1057.3	17.1			
FH	(60°-80°)	1599.3	25.9			G1/1800
FVH	(80°-90°)	185.8	3.0			G2/225
BL	(0°-30°)	249.7	4.0	B1/500		
BM	(30°-60°)	1057.3	17.1	B2/2500		
BH	(60°-80°)	1599.3	25.9	B3/2500		G1/1800
BVH	(80°-90°)	185.8	3.0			G2/225
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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	584.0	584.0	584.0	584.0	584.0	584.0	584.0	584.0	584.0	584.0	584.0
2.5°	585.2	585.0	584.6	584.2	584.0	583.8	583.8	583.8	583.7	583.6	583.7
5°	585.2	585.0	584.7	584.4	584.1	583.8	583.8	583.8	583.7	583.6	583.8
7.5°	584.4	584.6	584.3	584.0	583.9	583.8	583.7	583.6	583.4	583.2	583.3
10°	584.6	585.4	584.8	584.2	584.0	583.8	583.4	583.0	582.9	582.8	582.6
12.5°	585.0	585.8	585.1	584.4	584.1	583.8	583.4	583.0	582.7	582.4	582.1
15°	586.2	586.8	586.2	585.6	585.0	584.4	584.0	583.6	583.0	582.4	582.1
17.5°	587.0	588.0	587.3	586.6	585.9	585.2	584.8	584.4	584.0	583.6	583.1
20°	588.4	589.4	588.8	588.2	587.8	587.4	587.1	586.8	586.5	586.2	585.5
22.5°	591.0	591.8	591.6	591.4	591.5	591.6	591.7	591.8	591.6	591.4	590.7
25°	596.4	596.4	596.8	597.2	597.8	598.4	598.9	599.4	599.7	600.0	599.1
27.5°	605.8	606.6	606.9	607.2	608.2	609.2	610.3	611.4	612.0	612.6	611.7
30°	618.0	618.0	618.7	619.4	621.1	622.8	624.2	625.6	626.7	627.8	627.1
32.5°	633.6	634.6	635.6	636.6	638.7	640.8	643.2	645.6	647.0	648.4	647.3
35°	657.4	658.6	659.6	660.6	662.8	665.0	667.7	670.4	671.6	672.8	672.1
37.5°	691.0	691.0	692.4	693.8	695.2	696.6	700.2	703.8	705.3	706.8	705.6
40°	736.4	736.6	736.9	737.2	738.5	739.8	744.2	748.6	751.2	753.8	751.3
42.5°	788.6	790.8	790.7	790.6	791.5	792.4	796.6	800.8	804.5	808.2	806.7
45°	850.2	849.8	849.0	848.2	850.9	853.6	859.6	865.6	868.9	872.2	869.1
47.5°	912.4	911.8	910.7	909.6	912.3	915.0	924.0	933.0	937.7	942.4	937.4
50°	974.4	976.8	975.4	974.0	978.0	982.0	993.4	1004.8	1011.7	1018.6	1012.8
52.5°	1043.0	1044.8	1043.2	1041.6	1047.1	1052.6	1066.1	1079.6	1088.8	1098.0	1090.2
55°	1114.0	1111.8	1112.7	1113.6	1118.8	1124.0	1140.6	1157.2	1168.2	1179.2	1170.4
57.5°	1180.4	1181.2	1180.3	1179.4	1187.6	1195.8	1216.7	1237.6	1251.4	1265.2	1254.2
60°	1248.4	1248.6	1246.6	1244.6	1253.5	1262.4	1292.4	1322.4	1340.3	1358.2	1343.1
62.5°	1324.4	1324.2	1320.7	1317.2	1327.7	1338.2	1375.4	1412.6	1437.2	1461.8	1443.4
65°	1417.6	1415.2	1413.2	1411.2	1423.3	1435.4	1481.6	1527.8	1561.0	1594.2	1570.5
67.5°	1555.0	1553.2	1549.0	1544.8	1558.3	1571.8	1631.0	1690.2	1733.1	1776.0	1744.7
70°	1706.2	1702.8	1705.7	1708.6	1739.8	1771.0	1850.4	1929.8	1980.6	2031.4	1978.8
72°	1631.6	1633.0	1642.7	1652.4	1707.1	1761.8	1874.6	1987.4	2060.9	2134.4	2053.1
72.5°	1605.6	1606.8	1617.8	1628.8	1681.0	1733.2	1849.5	1965.8	2041.9	2118.0	2034.4
75°	1495.2	1498.4	1511.1	1523.8	1576.7	1629.6	1746.9	1864.2	1937.1	2010.0	1926.3
77.5°	1315.0	1325.0	1337.9	1350.8	1413.8	1476.8	1609.4	1742.0	1822.5	1903.0	1808.0
80°	1003.6	1000.0	1022.2	1044.4	1104.6	1164.8	1267.4	1370.0	1462.7	1555.4	1448.6
82.5°	390.0	398.6	444.6	490.6	553.7	616.8	708.7	800.6	884.1	967.6	878.7
85°	40.2	45.8	62.3	78.8	113.2	147.6	203.6	259.6	314.5	369.4	309.8
87.5°	16.2	17.8	22.9	28.0	29.3	30.6	37.0	43.4	43.1	42.8	42.2
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: P144230

CATALOG NUMBER: LDRL-5XQ-E02-E

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	584.0	584.0	584.0	584.0	584.0	584.0	584.0	584.0
2.5°	583.8	584.0	584.2	584.2	584.2	584.5	584.8	584.4
5°	584.0	584.1	584.2	584.2	584.2	584.5	584.8	584.4
7.5°	583.4	583.4	583.4	583.7	584.0	584.1	584.2	584.0
10°	582.4	582.5	582.6	582.9	583.2	583.5	583.8	584.0
12.5°	581.8	581.9	582.0	582.3	582.6	582.9	583.2	583.6
15°	581.8	581.9	582.0	582.2	582.4	582.8	583.2	583.6
17.5°	582.6	582.4	582.2	582.4	582.6	583.1	583.6	584.0
20°	584.8	584.5	584.2	584.2	584.2	584.7	585.2	585.2
22.5°	590.0	589.0	588.0	587.8	587.6	587.7	587.8	588.0
25°	598.2	596.6	595.0	594.5	594.0	593.8	593.6	594.0
27.5°	610.8	609.0	607.2	606.1	605.0	604.4	603.8	604.0
30°	626.4	624.3	622.2	620.4	618.6	617.8	617.0	617.2
32.5°	646.2	643.7	641.2	638.8	636.4	635.3	634.2	634.4
35°	671.4	668.5	665.6	663.6	661.6	659.9	658.2	659.6
37.5°	704.4	701.7	699.0	697.7	696.4	694.9	693.4	693.6
40°	748.8	746.0	743.2	742.1	741.0	739.1	737.2	737.6
42.5°	805.2	801.0	796.8	794.8	792.8	791.9	791.0	791.6
45°	866.0	861.8	857.6	855.9	854.2	851.8	849.4	851.6
47.5°	932.4	927.1	921.8	918.8	915.8	916.6	917.4	915.6
50°	1007.0	998.1	989.2	985.7	982.2	982.2	982.2	982.0
52.5°	1082.4	1070.1	1057.8	1054.8	1051.8	1051.1	1050.4	1049.6
55°	1161.6	1146.5	1131.4	1125.8	1120.2	1121.0	1121.8	1124.0
57.5°	1243.2	1223.3	1203.4	1197.0	1190.6	1191.1	1191.6	1195.2
60°	1328.0	1302.3	1276.6	1269.5	1262.4	1264.3	1266.2	1268.4
62.5°	1425.0	1393.9	1362.8	1353.3	1343.8	1346.2	1348.6	1354.4
65°	1546.8	1508.0	1469.2	1459.3	1449.4	1450.5	1451.6	1461.6
67.5°	1713.4	1661.7	1610.0	1600.9	1591.8	1593.4	1595.0	1611.2
70°	1926.2	1849.6	1773.0	1735.3	1697.6	1691.7	1685.8	1694.4
72°	1971.8	1863.6	1755.4	1699.8	1644.2	1635.5	1626.8	1627.6
72.5°	1950.8	1841.4	1732.0	1678.0	1624.0	1616.9	1609.8	1608.4
75°	1842.6	1735.6	1628.6	1572.8	1517.0	1503.5	1490.0	1490.0
77.5°	1713.0	1578.1	1443.2	1383.0	1322.8	1308.7	1294.6	1283.6
80°	1341.8	1220.9	1100.0	1038.9	977.8	955.2	932.6	919.2
82.5°	789.8	678.6	567.4	489.8	412.2	388.9	365.6	333.2
85°	250.2	192.5	134.8	105.2	75.6	61.1	46.6	40.8
87.5°	41.6	33.8	26.0	25.1	24.2	19.0	13.8	11.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)