

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: P143635

Luminaire Tested: **LDRL-5MQ-F02-E**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P143635  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33697)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: LDRL-5MQ-F02-E  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE MEDIUM  
Light Source: (14) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5130.9 lumens  
Efficiency: N/A  
Efficacy: 93.3 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B3 - U0 - G1

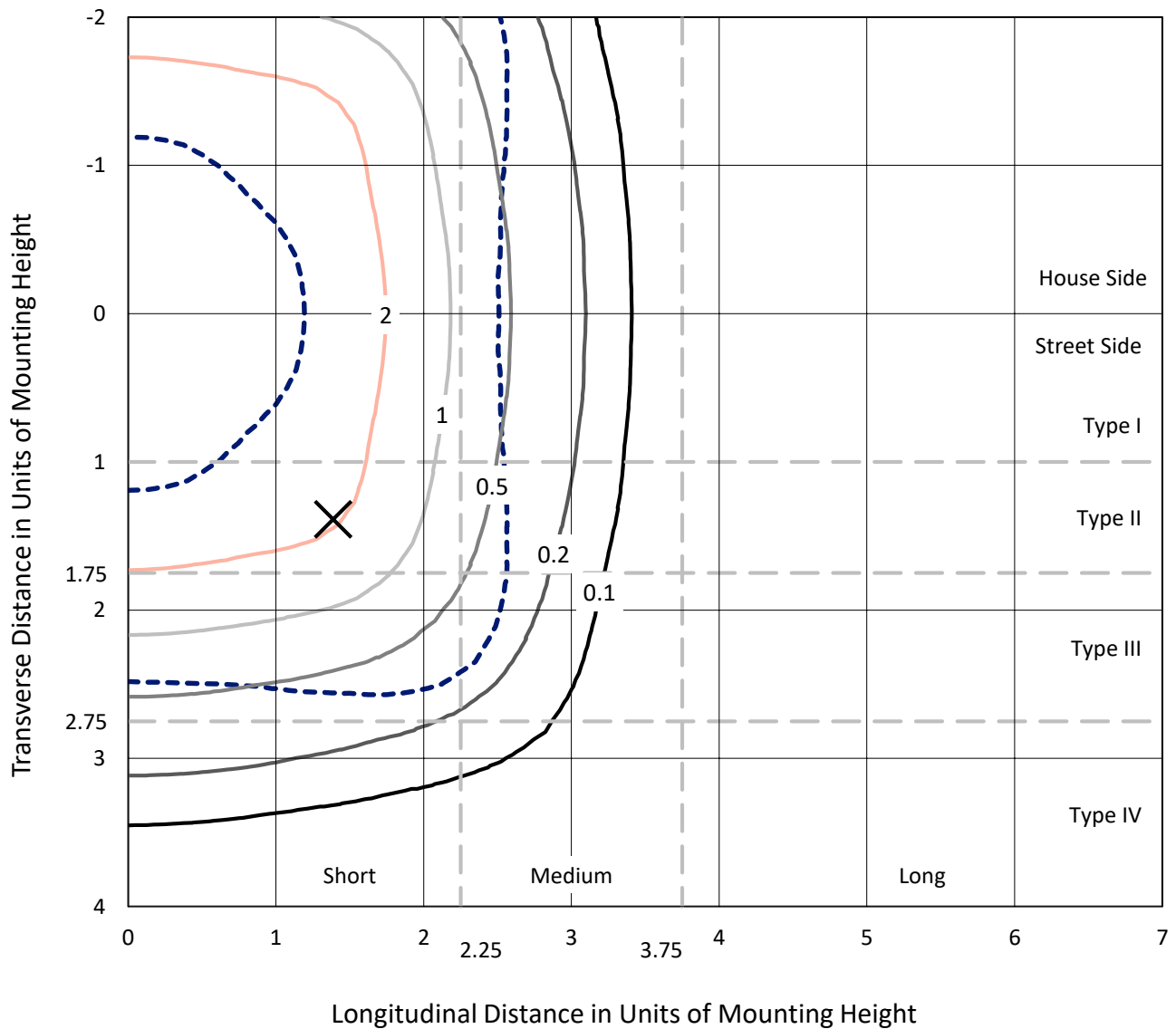
Input Watts (W): 55  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

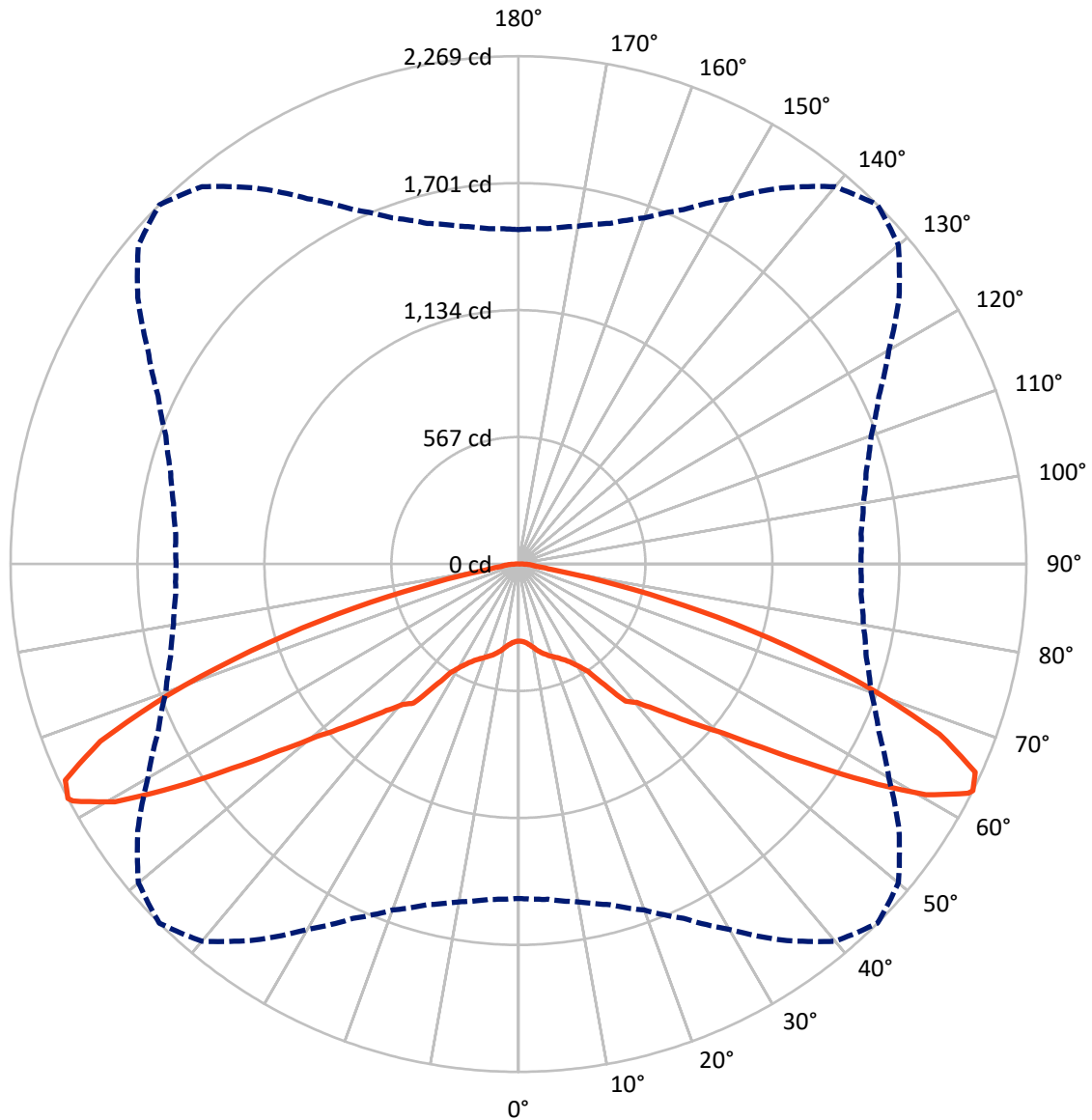
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.8 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 63-Deg Vertical

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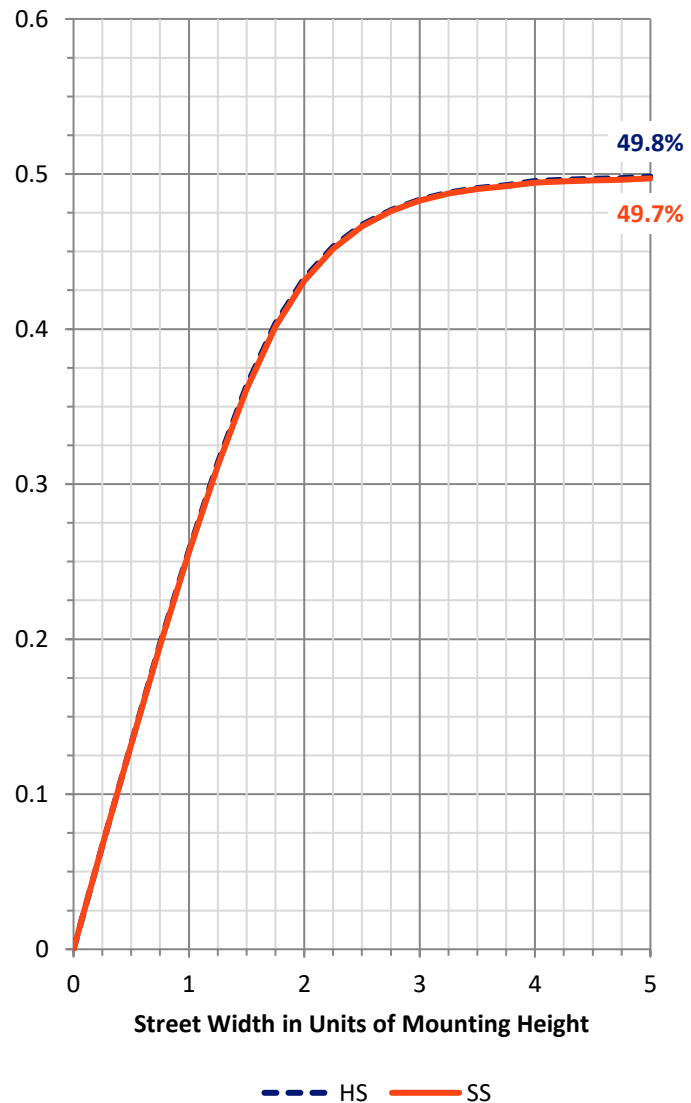
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2565.5	0.0	2565.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	2565.5	0.0	2565.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	5130.9	0.0	5130.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.7	0.7
10°-20°	118.5	2.3
20°-30°	226.3	4.4
30°-40°	431.0	8.4
40°-50°	742.2	14.5
50°-60°	1326.3	25.8
60°-70°	1615.5	31.5
70°-80°	575.5	11.2
80°-90°	61.0	1.2
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°	5130.9	100.0
0°-180°	5130.9	100.0



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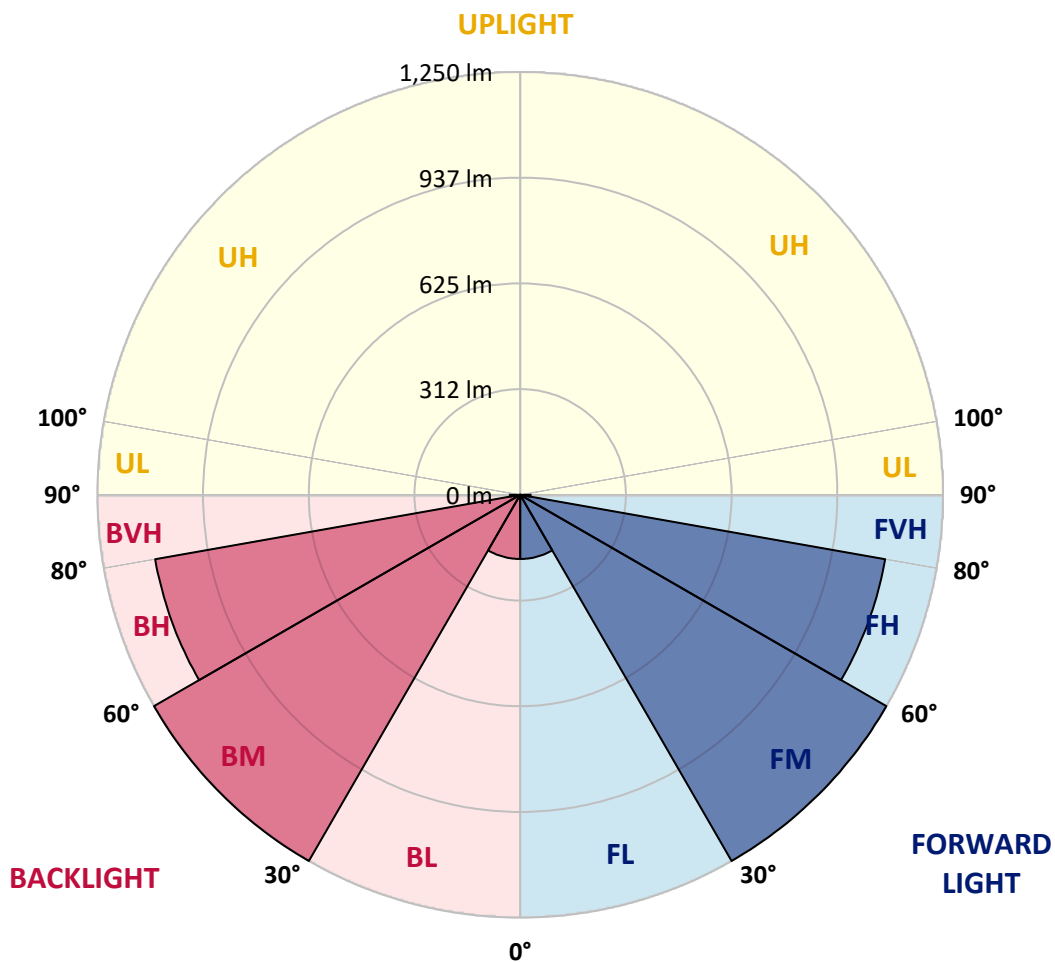
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	189.7	3.7			
FM	(30°-60°)	1249.8	24.4			
FH	(60°-80°)	1095.5	21.4			G1/1800
FVH	(80°-90°)	30.5	0.6			G1/100
BL	(0°-30°)	189.7	3.7	B1/500		
BM	(30°-60°)	1249.8	24.4	B2/2500		
BH	(60°-80°)	1095.5	21.4	B3/2500		G1/1800
BVH	(80°-90°)	30.5	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G1**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4
2.5°	347.1	346.7	347.1	346.4	346.4	346.1	346.1	346.1	345.4	346.1	345.4
5°	354.3	354.0	354.3	353.7	353.7	353.0	353.0	353.0	352.3	353.0	352.7
7.5°	366.9	367.5	366.9	366.2	366.2	365.5	365.2	365.2	364.9	364.6	365.2
10°	384.4	385.0	384.0	383.4	383.0	382.7	382.1	381.7	381.7	380.4	380.7
12.5°	402.9	402.9	401.9	401.5	401.5	400.9	399.6	399.2	399.2	398.6	397.9
15°	419.4	419.4	418.7	417.4	417.7	416.7	415.7	415.1	415.1	414.4	413.8
17.5°	434.6	434.6	433.6	432.2	431.6	431.3	429.9	429.3	429.3	428.6	428.0
20°	449.7	450.4	448.8	447.4	446.1	444.8	443.5	442.8	441.8	442.2	441.8
22.5°	467.9	468.2	465.6	463.9	461.3	459.7	457.7	457.0	455.7	455.7	456.4
25°	491.0	490.7	487.7	484.7	481.8	478.5	475.5	474.8	473.5	473.2	473.5
27.5°	521.4	521.1	517.4	513.5	509.5	504.6	500.9	498.9	498.0	496.6	497.3
30°	558.7	559.4	555.1	550.5	545.5	539.6	534.9	532.3	530.3	529.0	529.7
32.5°	634.7	634.0	627.4	617.5	606.9	593.1	581.8	577.2	573.6	572.3	573.2
35°	710.9	710.3	707.6	704.7	702.0	693.1	684.9	675.3	667.4	662.4	663.7
37.5°	746.9	746.9	745.0	744.3	744.3	749.6	756.2	768.1	777.3	778.0	775.0
40°	803.1	803.1	799.8	798.1	797.1	798.8	803.1	807.4	812.0	813.0	809.7
42.5°	869.1	866.1	863.8	860.5	860.2	861.8	866.5	871.8	876.4	880.3	873.4
45°	940.4	937.8	935.5	933.5	934.8	939.1	945.4	954.6	961.2	967.2	961.6
47.5°	1020.0	1014.4	1016.7	1014.7	1018.0	1026.6	1037.8	1051.7	1058.7	1069.2	1060.3
50°	1119.1	1120.4	1119.1	1119.1	1123.0	1134.3	1150.8	1169.6	1181.5	1187.4	1182.2
52.5°	1266.4	1262.4	1253.5	1256.1	1261.4	1279.2	1300.7	1327.1	1342.3	1356.5	1340.0
55°	1427.5	1428.2	1426.8	1430.5	1440.7	1458.9	1485.9	1525.9	1545.1	1569.8	1550.0
57.5°	1560.9	1565.5	1573.5	1584.3	1606.5	1636.9	1690.0	1751.1	1802.0	1828.7	1797.7
60°	1604.2	1608.8	1627.9	1658.3	1699.9	1762.0	1848.2	1952.9	2044.3	2091.9	2051.3
62.5°	1520.9	1529.5	1557.9	1599.9	1668.6	1765.6	1893.8	2048.6	2189.6	2254.7	2205.5
63°	1493.9	1503.4	1532.5	1575.1	1645.1	1746.5	1884.8	2050.6	2199.9	2268.5	2215.4
65°	1373.7	1379.9	1410.7	1459.2	1537.1	1642.8	1796.7	1992.8	2162.9	2242.5	2186.0
67.5°	1184.5	1192.7	1220.8	1262.7	1338.3	1450.3	1601.5	1797.0	1964.4	2028.1	1979.9
70°	950.0	959.3	982.4	1021.3	1080.8	1184.5	1313.9	1496.5	1622.3	1672.2	1620.7
72.5°	667.7	671.6	688.5	729.4	774.0	856.6	959.3	1101.3	1222.1	1254.8	1205.3
75°	282.7	283.0	305.1	331.2	387.0	469.2	558.7	680.9	789.5	840.4	777.6
77.5°	90.5	91.5	97.7	107.3	125.8	162.5	228.5	295.5	395.3	443.5	384.7
80°	75.6	76.9	79.6	81.6	82.9	84.9	92.5	103.0	129.8	150.9	121.8
82.5°	65.1	67.4	73.3	75.6	76.9	77.6	78.6	78.3	76.6	75.9	76.3
85°	49.5	55.1	61.7	67.0	67.7	68.0	70.0	70.7	65.4	60.1	65.4
87.5°	21.5	27.7	42.6	47.2	46.2	42.9	45.9	48.5	44.2	32.4	43.3
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°	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4
2.5°	345.7	346.4	346.4	346.4	346.4	346.7	347.1	346.7
5°	353.0	353.7	353.3	353.7	353.7	354.0	354.3	354.0
7.5°	365.5	365.5	365.5	366.2	366.2	366.9	366.9	366.9
10°	381.1	380.7	380.7	381.4	382.1	382.4	383.0	382.7
12.5°	397.9	397.2	397.6	398.2	398.9	399.2	399.9	399.6
15°	413.1	412.8	412.8	413.8	414.1	414.4	415.7	415.7
17.5°	427.6	427.6	427.6	428.9	429.3	430.6	431.6	431.6
20°	442.2	442.2	442.2	443.5	444.5	446.4	448.4	448.1
22.5°	457.0	457.3	458.0	459.3	461.6	464.6	466.3	466.3
25°	475.5	476.8	478.1	480.1	483.4	487.4	490.0	491.0
27.5°	499.3	502.2	505.6	508.5	512.2	517.1	520.7	521.4
30°	531.6	535.9	541.2	545.2	549.8	555.4	559.7	562.0
32.5°	577.5	588.1	595.0	609.2	617.8	627.4	635.3	638.6
35°	672.0	682.5	691.8	701.4	703.3	706.6	710.9	711.9
37.5°	765.4	756.8	748.6	748.3	745.9	746.6	747.9	749.6
40°	806.0	803.4	799.1	800.8	801.1	801.1	803.7	804.1
42.5°	871.4	865.2	860.2	864.2	864.8	865.5	868.1	871.1
45°	954.6	945.1	938.8	936.5	938.8	938.1	941.8	942.4
47.5°	1049.7	1037.2	1023.0	1018.4	1017.0	1014.1	1020.3	1019.7
50°	1166.3	1146.2	1129.0	1122.4	1119.1	1117.4	1119.1	1119.1
52.5°	1313.9	1293.8	1270.3	1262.7	1260.1	1263.7	1258.4	1264.0
55°	1517.0	1484.3	1452.3	1442.0	1440.4	1438.7	1439.4	1441.7
57.5°	1745.5	1687.4	1644.4	1619.3	1603.2	1595.2	1586.7	1585.3
60°	1966.1	1860.4	1778.8	1723.4	1684.1	1654.4	1639.2	1633.9
62.5°	2072.4	1917.9	1791.1	1696.6	1638.2	1589.6	1562.9	1555.9
63°	2075.4	1910.6	1776.2	1676.5	1608.5	1564.9	1536.5	1529.2
65°	2020.2	1832.7	1675.2	1565.5	1493.5	1448.0	1413.0	1405.4
67.5°	1819.5	1637.5	1476.4	1365.1	1287.2	1250.5	1211.9	1210.9
70°	1493.2	1330.7	1195.0	1092.7	1027.6	991.3	952.0	953.0
72.5°	1091.7	947.4	853.9	774.0	705.3	671.0	634.0	637.6
75°	657.1	528.3	444.1	374.8	304.1	261.9	233.5	217.3
77.5°	281.0	192.2	138.0	109.6	92.5	85.5	82.2	81.2
80°	97.7	86.5	81.6	80.2	79.3	77.9	75.6	73.3
82.5°	79.3	79.3	76.6	76.3	73.3	71.0	65.1	62.1
85°	70.3	69.0	66.7	65.7	65.1	60.1	52.5	48.5
87.5°	46.6	43.3	41.3	42.3	40.9	36.7	22.5	17.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)