

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: P143945

Luminaire Tested: **LDRL-5WQ-F03-E**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P143945  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33698)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: LDRL-5WQ-F03-E  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE WIDE  
Light Source: (21) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7592.1 lumens  
Efficiency: N/A  
Efficacy: 97.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G2

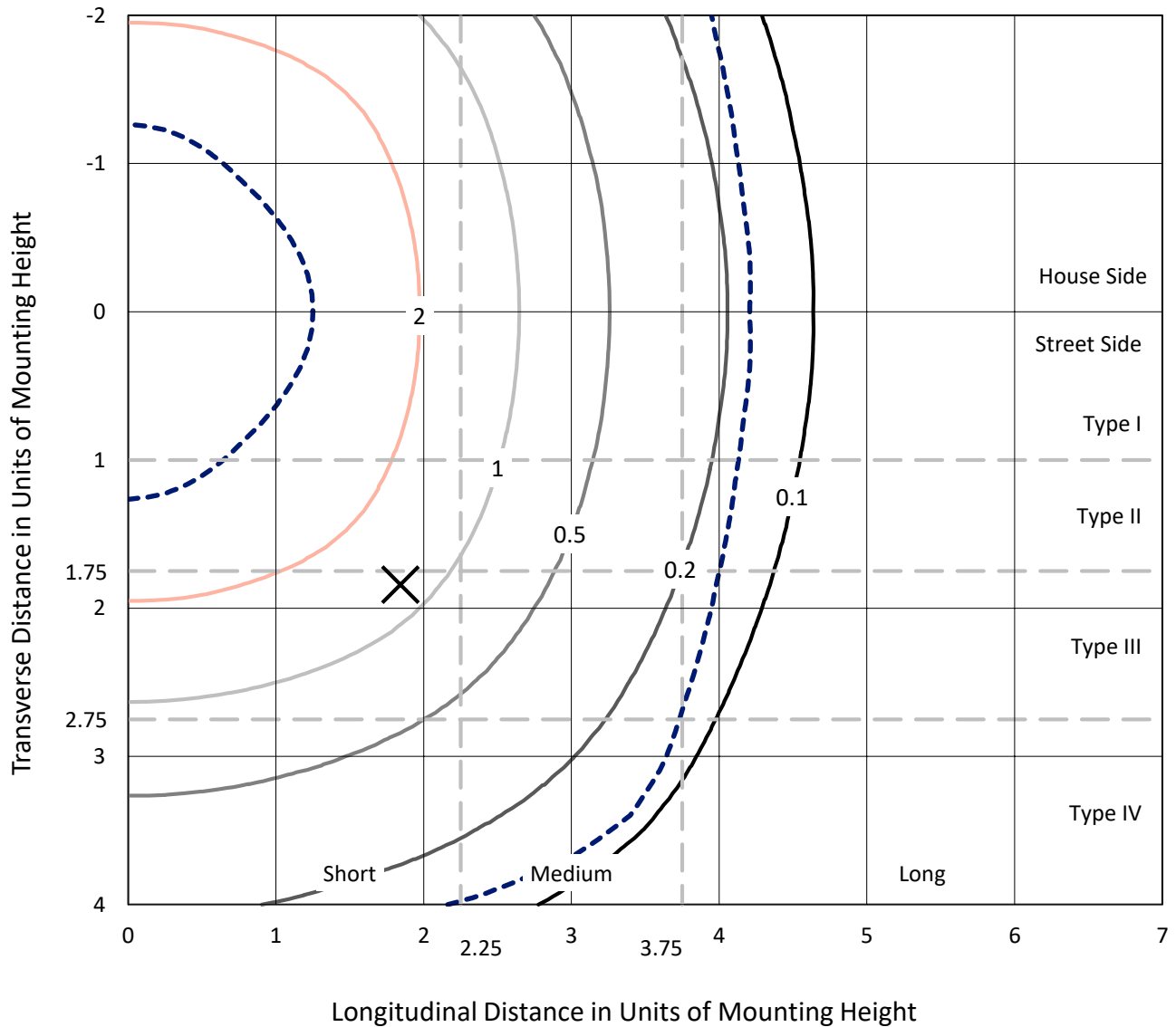
Input Watts (W): 78.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

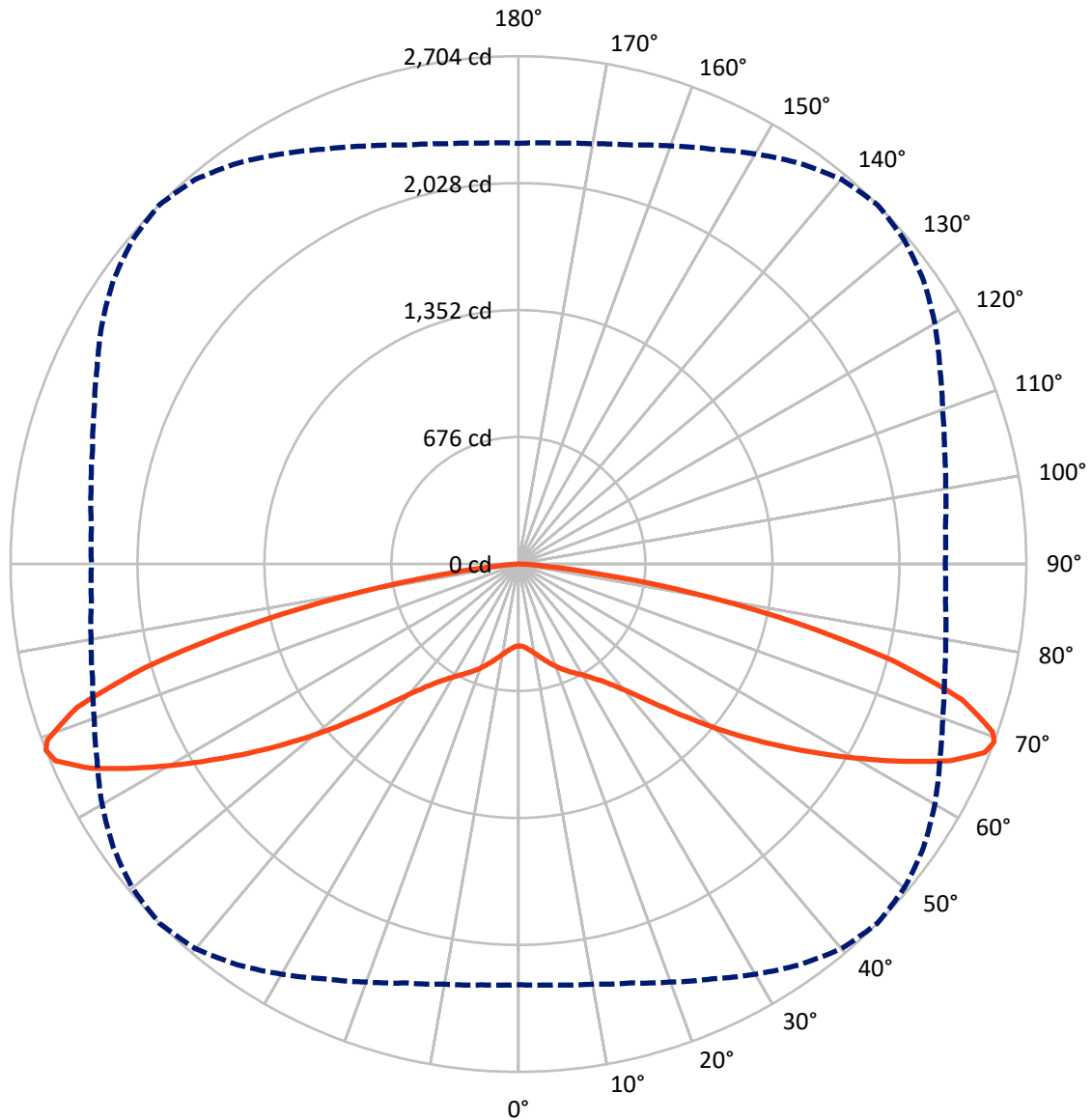
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.9 fc  
 Type V - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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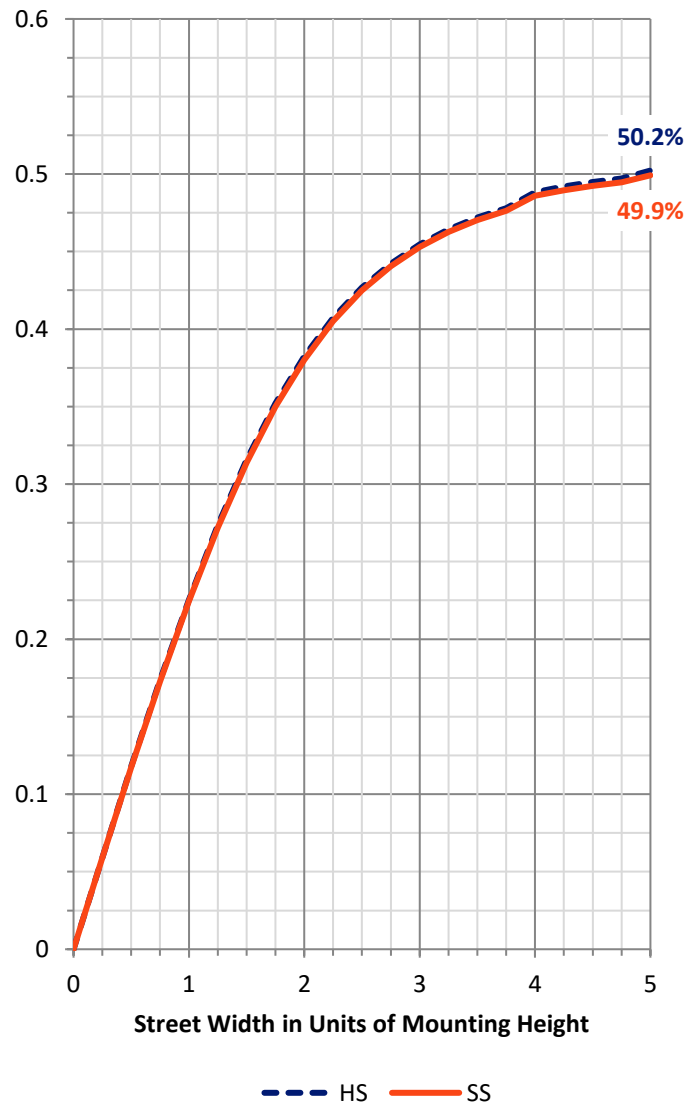
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3796.1	0.0	3796.1
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	3796.1	0.0	3796.1
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	7592.1	0.0	7592.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.0	0.6
10°-20°	151.7	2.0
20°-30°	292.4	3.9
30°-40°	479.2	6.3
40°-50°	833.3	11.0
50°-60°	1480.2	19.5
60°-70°	2298.1	30.3
70°-80°	1831.0	24.1
80°-90°	182.1	2.4
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°	7592.1	100.0
0°-180°	7592.1	100.0



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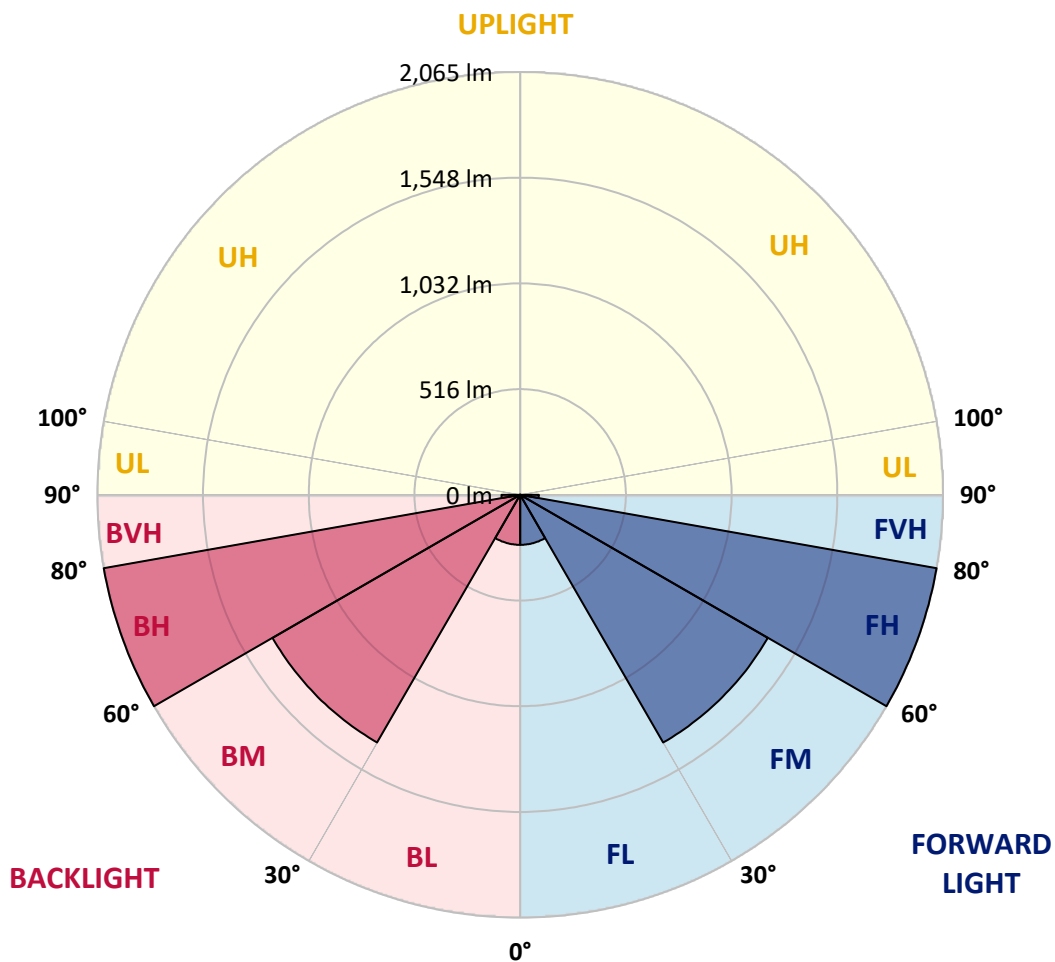
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	244.1	3.2			
FM	(30°-60°)	1396.4	18.4			
FH	(60°-80°)	2064.6	27.2			G2/5000
FVH	(80°-90°)	91.0	1.2			G1/100
BL	(0°-30°)	244.1	3.2	B1/500		
BM	(30°-60°)	1396.4	18.4	B2/2500		
BH	(60°-80°)	2064.6	27.2	B3/2500		G2/5000
BVH	(80°-90°)	91.0	1.2			G1/100
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°	436.4	436.4	436.4	436.4	436.4	436.4	436.4	436.4	436.4	436.4	436.4
2.5°	439.8	439.8	439.8	439.3	439.3	438.8	439.3	438.8	438.8	438.8	438.8
5°	451.2	450.2	450.2	449.7	450.7	450.7	449.7	450.2	449.7	450.2	450.2
7.5°	465.6	465.6	465.6	465.1	466.1	465.6	465.1	465.6	465.6	465.1	465.1
10°	483.4	483.9	483.4	483.4	484.9	484.4	484.9	484.9	485.4	484.9	484.9
12.5°	504.2	504.2	504.7	505.2	505.7	506.2	507.7	507.2	508.2	507.2	507.2
15°	528.5	529.5	528.5	528.5	530.0	531.0	531.5	531.5	532.5	532.0	531.0
17.5°	554.3	554.8	554.3	553.8	555.2	556.7	557.2	557.2	558.7	557.7	557.7
20°	580.5	581.0	580.0	579.5	581.5	581.5	582.5	583.0	584.5	585.0	583.5
22.5°	604.8	605.3	604.8	604.3	606.3	606.3	607.8	608.2	610.2	609.7	609.7
25°	628.6	628.6	628.1	628.1	630.0	630.5	632.0	633.0	635.0	635.0	635.0
27.5°	650.3	650.8	649.9	649.4	653.3	654.8	655.8	657.8	659.3	660.3	659.8
30°	675.1	675.1	674.6	676.1	678.6	680.6	682.5	685.5	688.5	687.5	687.5
32.5°	704.3	705.3	704.8	706.8	709.8	712.8	715.2	718.7	720.2	722.7	720.7
35°	743.5	745.4	744.5	746.4	748.9	750.9	756.3	759.8	762.3	763.8	762.8
37.5°	792.5	791.5	793.5	794.0	798.9	801.4	807.9	812.8	816.8	818.3	817.3
40°	853.4	851.9	854.4	856.9	863.3	865.8	873.2	880.7	886.1	888.1	887.1
42.5°	926.2	928.2	932.2	935.6	944.6	951.5	959.9	970.8	976.8	979.2	975.8
45°	1021.8	1018.4	1025.8	1034.7	1039.7	1055.0	1068.9	1080.3	1090.2	1094.2	1090.2
47.5°	1130.8	1130.3	1139.2	1150.1	1163.0	1177.4	1193.7	1208.6	1225.9	1226.9	1221.9
50°	1251.2	1261.1	1266.0	1276.9	1300.7	1318.5	1339.3	1361.6	1377.5	1382.4	1373.5
52.5°	1396.3	1403.7	1406.7	1425.0	1446.8	1468.6	1497.8	1524.6	1542.9	1544.9	1540.4
55°	1553.8	1559.7	1565.2	1587.5	1611.3	1630.6	1667.7	1694.0	1712.3	1719.2	1716.3
57.5°	1716.8	1722.2	1729.1	1753.4	1777.7	1804.9	1840.1	1870.8	1892.1	1905.0	1901.5
60°	1897.6	1897.6	1913.4	1937.7	1957.5	1989.7	2026.3	2062.0	2085.3	2105.6	2100.1
62.5°	2087.8	2093.2	2108.6	2128.4	2149.2	2178.9	2220.5	2263.1	2298.8	2314.1	2313.6
65°	2231.9	2241.8	2262.1	2284.9	2319.6	2354.7	2407.2	2460.2	2503.3	2525.6	2525.6
67.5°	2274.0	2280.4	2305.7	2340.4	2390.4	2446.4	2517.7	2591.5	2650.4	2679.7	2661.3
69°	2240.3	2249.7	2272.0	2309.7	2369.1	2437.4	2522.1	2605.9	2674.2	2704.4	2683.1
70°	2201.2	2211.6	2233.9	2271.0	2332.4	2405.2	2489.9	2580.1	2653.4	2679.2	2654.9
72.5°	2041.7	2054.6	2070.4	2102.6	2158.1	2226.4	2302.7	2382.0	2452.3	2472.6	2442.4
75°	1769.8	1772.2	1780.2	1803.9	1823.7	1872.3	1937.2	2000.1	2053.1	2065.0	2032.8
77.5°	1252.7	1239.3	1225.9	1246.2	1262.1	1324.5	1394.8	1446.3	1501.8	1518.6	1485.9
80°	549.3	544.4	563.2	589.9	659.8	701.4	770.2	844.0	891.1	946.1	887.1
82.5°	108.5	114.4	132.2	163.5	201.6	253.6	298.7	349.7	395.8	416.6	395.3
85°	44.1	48.0	54.5	60.9	65.4	73.3	86.2	107.0	117.9	119.4	113.4
87.5°	18.3	21.3	28.7	34.2	34.7	33.2	34.2	35.2	28.7	23.3	29.2
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°	436.4	436.4	436.4	436.4	436.4	436.4	436.4	436.4
2.5°	438.8	439.3	438.8	439.3	438.8	438.8	439.3	438.8
5°	449.7	450.2	449.7	449.3	448.8	449.3	449.3	449.3
7.5°	465.1	464.6	464.1	464.1	463.6	463.1	464.1	464.1
10°	483.9	483.4	482.4	482.4	481.9	481.9	481.9	481.9
12.5°	506.7	505.2	504.7	503.2	502.7	502.2	502.2	502.7
15°	530.5	529.0	528.5	526.0	526.0	525.5	525.5	525.5
17.5°	555.7	554.3	552.3	552.3	550.8	549.8	550.3	549.3
20°	581.5	579.5	578.5	578.0	576.1	576.1	576.1	575.6
22.5°	606.8	605.3	603.8	601.8	599.8	599.3	599.3	598.8
25°	632.5	630.0	627.1	625.1	623.1	621.6	621.6	621.6
27.5°	658.3	655.3	650.8	648.4	645.4	643.9	643.9	643.4
30°	685.5	682.0	678.1	674.6	670.7	669.2	668.7	667.7
32.5°	718.2	714.7	710.8	705.8	701.9	699.4	699.4	697.9
35°	759.8	755.9	752.9	746.4	741.5	737.5	738.0	739.0
37.5°	814.3	809.3	806.9	798.9	792.5	788.5	788.5	788.0
40°	883.6	878.7	873.2	865.8	857.9	852.4	851.0	851.0
42.5°	971.8	967.4	959.9	949.5	940.1	934.2	929.2	929.7
45°	1082.3	1076.8	1066.4	1053.5	1042.1	1033.7	1026.8	1026.8
47.5°	1216.5	1205.1	1190.7	1179.3	1160.0	1147.1	1142.2	1141.2
50°	1369.5	1348.2	1330.4	1314.1	1293.8	1280.4	1273.0	1271.0
52.5°	1530.0	1507.7	1485.4	1464.2	1439.4	1425.5	1413.6	1412.6
55°	1704.4	1676.1	1647.9	1627.1	1597.9	1583.5	1571.6	1564.7
57.5°	1882.2	1850.5	1830.2	1800.5	1769.8	1759.4	1748.0	1739.5
60°	2082.3	2047.6	2020.9	1989.7	1969.9	1947.6	1936.7	1930.2
62.5°	2286.9	2254.7	2220.5	2190.8	2163.0	2147.7	2132.8	2125.4
65°	2494.9	2441.9	2401.3	2360.2	2327.5	2299.7	2276.5	2273.5
67.5°	2622.7	2555.8	2488.0	2428.0	2380.0	2340.9	2317.1	2308.7
69°	2633.1	2560.3	2475.6	2403.8	2348.3	2310.6	2282.4	2273.5
70°	2604.4	2531.1	2441.9	2364.6	2307.2	2266.1	2242.8	2227.9
72.5°	2394.4	2330.0	2244.3	2168.0	2116.0	2067.9	2044.7	2038.7
75°	1975.3	1907.0	1828.2	1791.6	1755.4	1725.2	1709.3	1707.8
77.5°	1402.7	1332.9	1273.0	1224.9	1185.8	1166.5	1170.9	1154.6
80°	802.9	711.8	639.5	596.9	538.9	504.2	465.1	493.3
82.5°	345.2	278.9	212.5	172.9	131.8	104.5	86.2	80.2
85°	96.6	78.8	65.9	60.4	54.5	48.5	41.1	38.1
87.5°	32.7	31.2	27.7	27.7	25.3	21.3	14.9	13.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)