

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: P143638

Luminaire Tested: **LDRL-5MQ-E03-E-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P143638  
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-E03-E-8030  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE MEDIUM  
Light Source: (63) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7868.5 lumens  
Efficiency: N/A  
Efficacy: 104.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B3 - U0 - G1

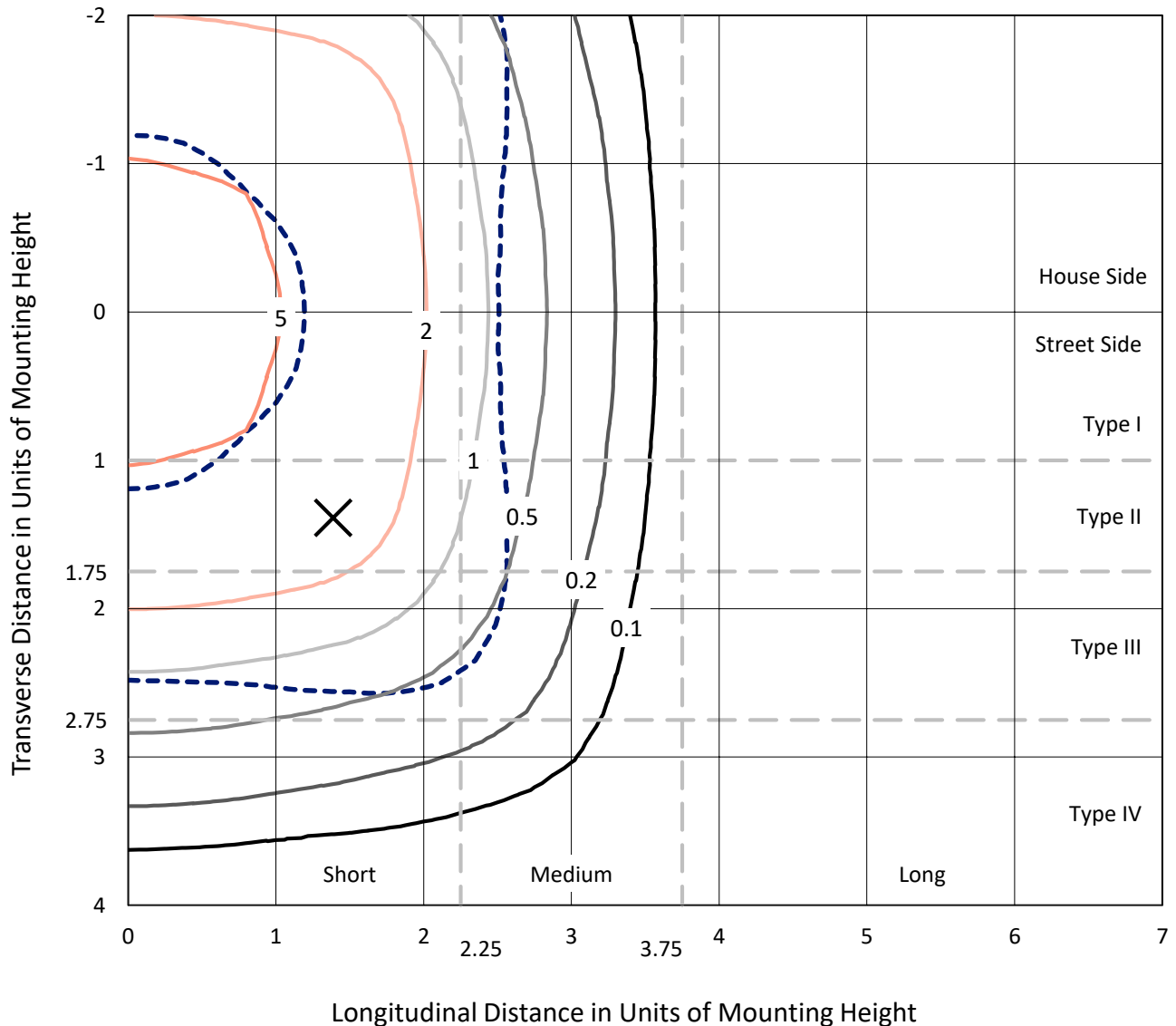
Input Watts (W): 75.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

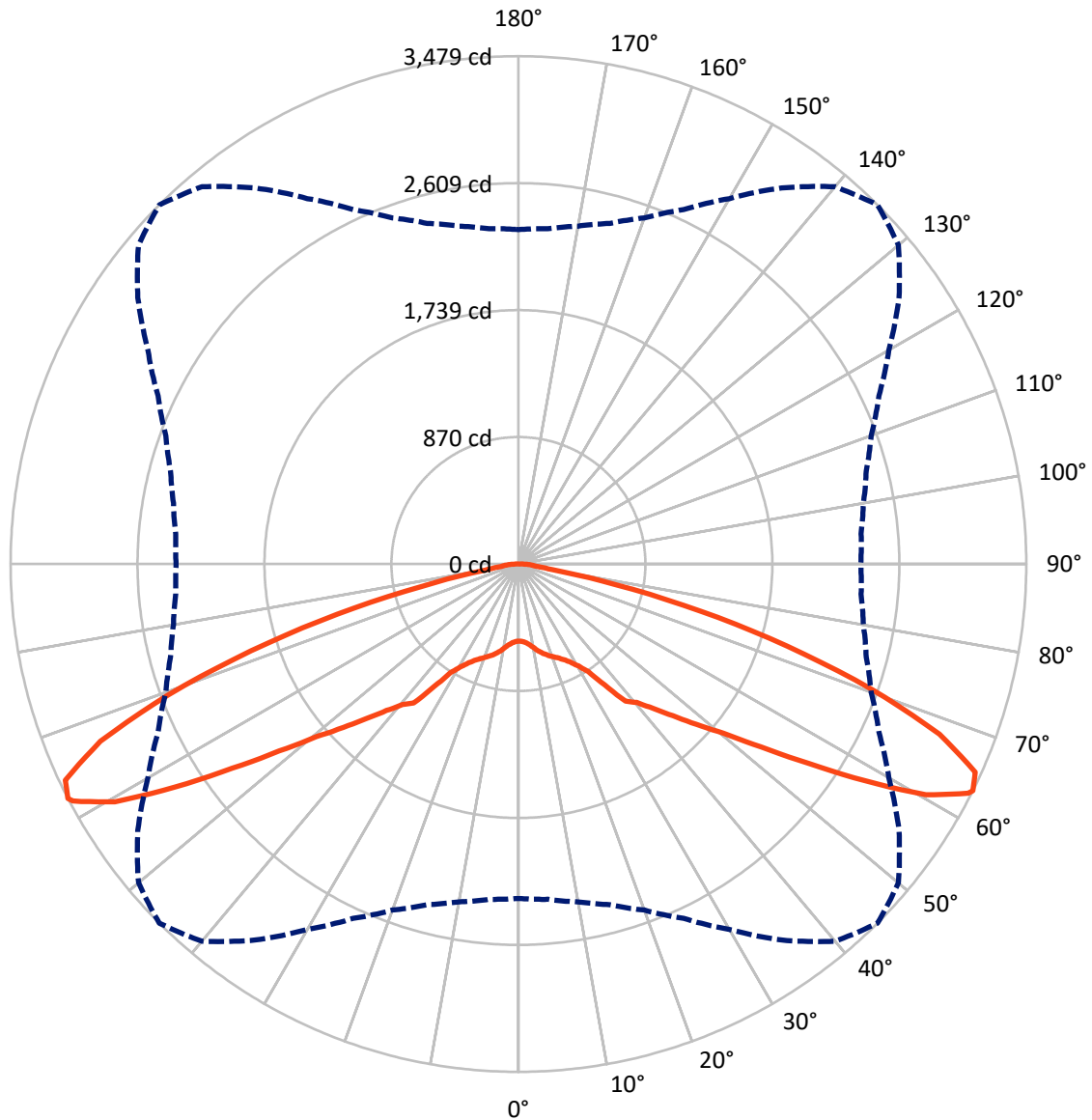
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.8 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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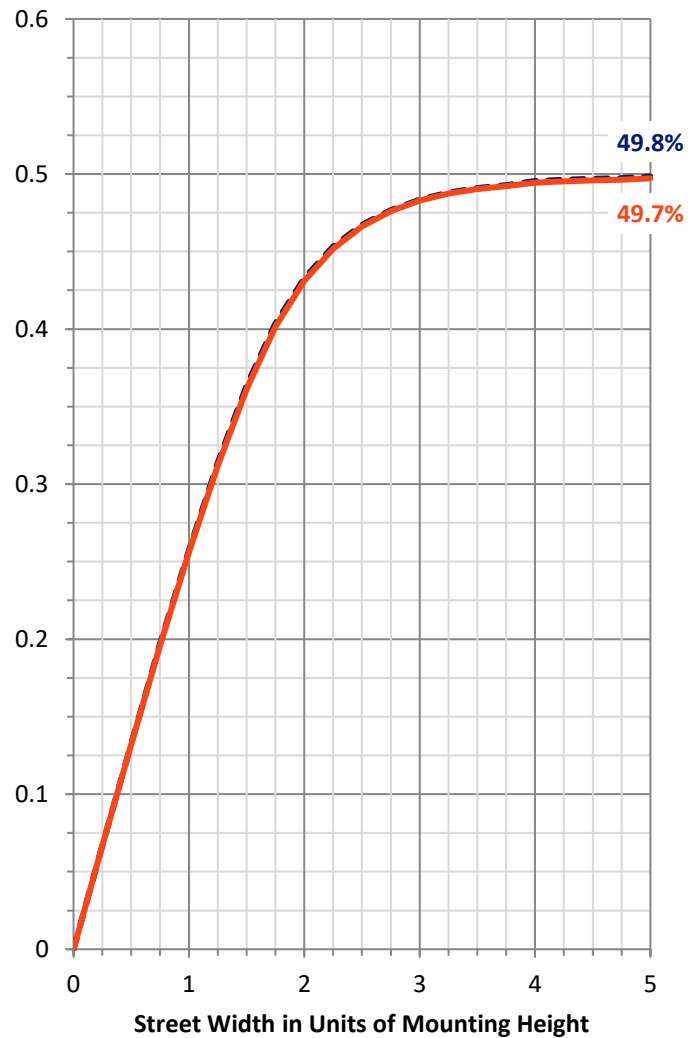
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3934.3	0.0	3934.3
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	3934.3	0.0	3934.3
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	7868.5	0.0	7868.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.2	0.7
10°-20°	181.7	2.3
20°-30°	347.0	4.4
30°-40°	661.0	8.4
40°-50°	1138.2	14.5
50°-60°	2034.0	25.8
60°-70°	2477.4	31.5
70°-80°	882.5	11.2
80°-90°	93.6	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°	7868.5	100.0
0°-180°	7868.5	100.0



--- HS    — SS

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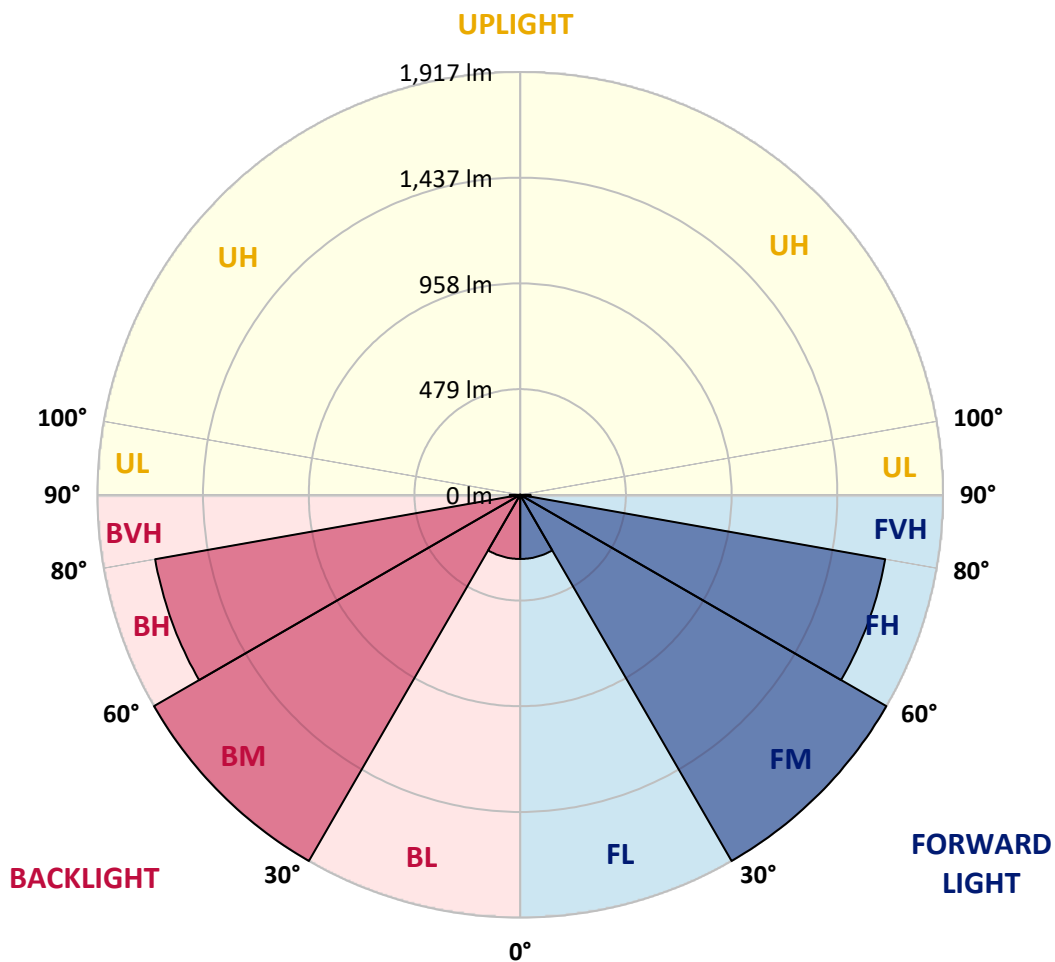
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	290.9	3.7			
FM (30°-60°)	1916.6	24.4			
FH (60°-80°)	1680.0	21.4			G1/1800
FVH (80°-90°)	46.8	0.6			G1/100
BL (0°-30°)	290.9	3.7	B1/500		
BM (30°-60°)	1916.6	24.4	B2/2500		
BH (60°-80°)	1680.0	21.4	B3/2500		G1/1800
BVH (80°-90°)	46.8	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°	528.2	528.2	528.2	528.2	528.2	528.2	528.2	528.2	528.2	528.2	528.2
2.5°	532.2	531.7	532.2	531.2	531.2	530.7	530.7	530.7	529.7	530.7	529.7
5°	543.4	542.9	543.4	542.3	542.3	541.3	541.3	541.3	540.3	541.3	540.8
7.5°	562.6	563.6	562.6	561.6	561.6	560.6	560.1	560.1	559.6	559.1	560.1
10°	589.4	590.5	588.9	587.9	587.4	586.9	585.9	585.4	585.4	583.4	583.9
12.5°	617.8	617.8	616.3	615.8	615.8	614.8	612.7	612.2	612.2	611.2	610.2
15°	643.1	643.1	642.1	640.1	640.6	639.1	637.6	636.5	636.5	635.5	634.5
17.5°	666.4	666.4	664.9	662.9	661.9	661.4	659.3	658.3	658.3	657.3	656.3
20°	689.7	690.7	688.2	686.2	684.1	682.1	680.1	679.1	677.6	678.1	677.6
22.5°	717.6	718.1	714.0	711.5	707.4	704.9	701.9	700.9	698.8	698.8	699.8
25°	753.0	752.5	747.9	743.4	738.8	733.8	729.2	728.2	726.2	725.7	726.2
27.5°	799.6	799.1	793.5	787.4	781.4	773.8	768.2	765.2	763.6	761.6	762.6
30°	856.8	857.8	851.2	844.2	836.6	827.4	820.4	816.3	813.3	811.2	812.3
32.5°	973.3	972.3	962.1	947.0	930.8	909.5	892.3	885.2	879.6	877.6	879.1
35°	1090.3	1089.3	1085.2	1080.6	1076.6	1062.9	1050.3	1035.6	1023.4	1015.8	1017.9
37.5°	1145.5	1145.5	1142.4	1141.4	1141.4	1149.5	1159.6	1177.9	1192.1	1193.1	1188.5
40°	1231.6	1231.6	1226.5	1224.0	1222.4	1225.0	1231.6	1238.1	1245.2	1246.7	1241.7
42.5°	1332.8	1328.3	1324.7	1319.7	1319.2	1321.7	1328.8	1336.9	1344.0	1350.0	1339.4
45°	1442.2	1438.2	1434.6	1431.6	1433.6	1440.2	1449.8	1464.0	1474.1	1483.2	1474.6
47.5°	1564.3	1555.6	1559.2	1556.2	1561.2	1574.4	1591.6	1612.9	1623.5	1639.7	1626.0
50°	1716.2	1718.2	1716.2	1716.2	1722.2	1739.5	1764.8	1793.6	1811.9	1821.0	1812.9
52.5°	1942.0	1935.9	1922.3	1926.3	1934.4	1961.8	1994.7	2035.2	2058.5	2080.3	2054.9
55°	2189.1	2190.2	2188.1	2193.7	2209.4	2237.3	2278.8	2340.0	2369.4	2407.4	2377.0
57.5°	2393.7	2400.8	2413.0	2429.7	2463.6	2510.2	2591.7	2685.4	2763.4	2804.4	2756.8
60°	2460.1	2467.2	2496.5	2543.1	2606.9	2702.1	2834.3	2994.8	3135.1	3208.0	3145.7
62.5°	2332.5	2345.6	2389.2	2453.5	2558.8	2707.7	2904.2	3141.7	3357.9	3457.7	3382.2
63°	2290.9	2305.6	2350.2	2415.5	2522.9	2678.3	2890.5	3144.7	3373.6	3478.9	3397.4
65°	2106.6	2116.2	2163.3	2237.8	2357.3	2519.3	2755.3	3056.1	3316.9	3438.9	3352.3
67.5°	1816.4	1829.1	1872.1	1936.5	2052.4	2224.1	2456.0	2755.8	3012.5	3110.3	3036.3
70°	1456.9	1471.1	1506.5	1566.3	1657.4	1816.4	2014.9	2295.0	2487.9	2564.4	2485.4
72.5°	1023.9	1030.0	1055.8	1118.6	1187.0	1313.6	1471.1	1688.8	1874.2	1924.3	1848.3
75°	433.5	434.0	467.9	507.9	593.5	719.6	856.8	1044.2	1210.8	1288.8	1192.6
77.5°	138.8	140.3	149.9	164.6	192.9	249.1	350.4	453.2	606.2	680.1	589.9
80°	116.0	118.0	122.0	125.1	127.1	130.1	141.8	158.0	199.0	231.4	186.9
82.5°	99.8	103.3	112.4	116.0	118.0	119.0	120.5	120.0	117.5	116.5	117.0
85°	76.0	84.6	94.7	102.8	103.8	104.3	107.4	108.4	100.3	92.2	100.3
87.5°	32.9	42.5	65.3	72.4	70.9	65.8	70.4	74.4	67.9	49.6	66.3
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°	528.2	528.2	528.2	528.2	528.2	528.2	528.2	528.2
2.5°	530.2	531.2	531.2	531.2	531.2	531.7	532.2	531.7
5°	541.3	542.3	541.8	542.3	542.3	542.9	543.4	542.9
7.5°	560.6	560.6	560.6	561.6	561.6	562.6	562.6	562.6
10°	584.4	583.9	583.9	584.9	585.9	586.4	587.4	586.9
12.5°	610.2	609.2	609.7	610.7	611.7	612.2	613.2	612.7
15°	633.5	633.0	633.0	634.5	635.0	635.5	637.6	637.6
17.5°	655.8	655.8	655.8	657.8	658.3	660.3	661.9	661.9
20°	678.1	678.1	678.1	680.1	681.6	684.6	687.7	687.2
22.5°	700.9	701.4	702.4	704.4	707.9	712.5	715.0	715.0
25°	729.2	731.2	733.3	736.3	741.4	747.4	751.5	753.0
27.5°	765.7	770.2	775.3	779.8	785.4	793.0	798.6	799.6
30°	815.3	821.9	830.0	836.1	843.1	851.8	858.3	861.9
32.5°	885.7	901.9	912.5	934.3	947.5	962.1	974.3	979.4
35°	1030.5	1046.7	1060.9	1075.6	1078.6	1083.7	1090.3	1091.8
37.5°	1173.8	1160.7	1148.0	1147.5	1143.9	1145.0	1147.0	1149.5
40°	1236.1	1232.1	1225.5	1228.0	1228.5	1228.5	1232.6	1233.1
42.5°	1336.4	1326.8	1319.2	1325.2	1326.2	1327.3	1331.3	1335.9
45°	1464.0	1449.3	1439.7	1436.1	1439.7	1438.7	1444.2	1445.3
47.5°	1609.8	1590.6	1568.8	1561.7	1559.7	1555.1	1564.8	1563.7
50°	1788.6	1757.7	1731.4	1721.2	1716.2	1713.6	1716.2	1716.2
52.5°	2014.9	1984.1	1948.1	1936.5	1932.4	1938.0	1929.9	1938.5
55°	2326.4	2276.2	2227.1	2211.4	2208.9	2206.4	2207.4	2210.9
57.5°	2676.8	2587.7	2521.8	2483.4	2458.5	2446.4	2433.2	2431.2
60°	3015.1	2853.0	2727.9	2642.9	2582.6	2537.0	2513.7	2505.6
62.5°	3178.1	2941.1	2746.7	2601.9	2512.2	2437.8	2396.8	2386.1
63°	3182.7	2930.0	2723.9	2571.0	2466.6	2399.8	2356.3	2345.1
65°	3098.1	2810.5	2568.9	2400.8	2290.4	2220.5	2166.9	2155.2
67.5°	2790.2	2511.2	2264.1	2093.4	1973.9	1917.7	1858.5	1856.9
70°	2289.9	2040.8	1832.6	1675.7	1575.9	1520.2	1459.9	1461.5
72.5°	1674.1	1452.8	1309.5	1187.0	1081.7	1029.0	972.3	977.8
75°	1007.7	810.2	681.1	574.8	466.4	401.6	358.0	333.2
77.5°	430.9	294.7	211.7	168.1	141.8	131.2	126.1	124.6
80°	149.9	132.7	125.1	123.1	121.5	119.5	116.0	112.4
82.5°	121.5	121.5	117.5	117.0	112.4	108.9	99.8	95.2
85°	107.9	105.8	102.3	100.8	99.8	92.2	80.5	74.4
87.5°	71.4	66.3	63.3	64.8	62.8	56.2	34.4	27.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)