

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: P143645

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P143645
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-F03-E
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE MEDIUM
Light Source: (21) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7696.4 lumens
Efficiency: N/A
Efficacy: 98.3 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

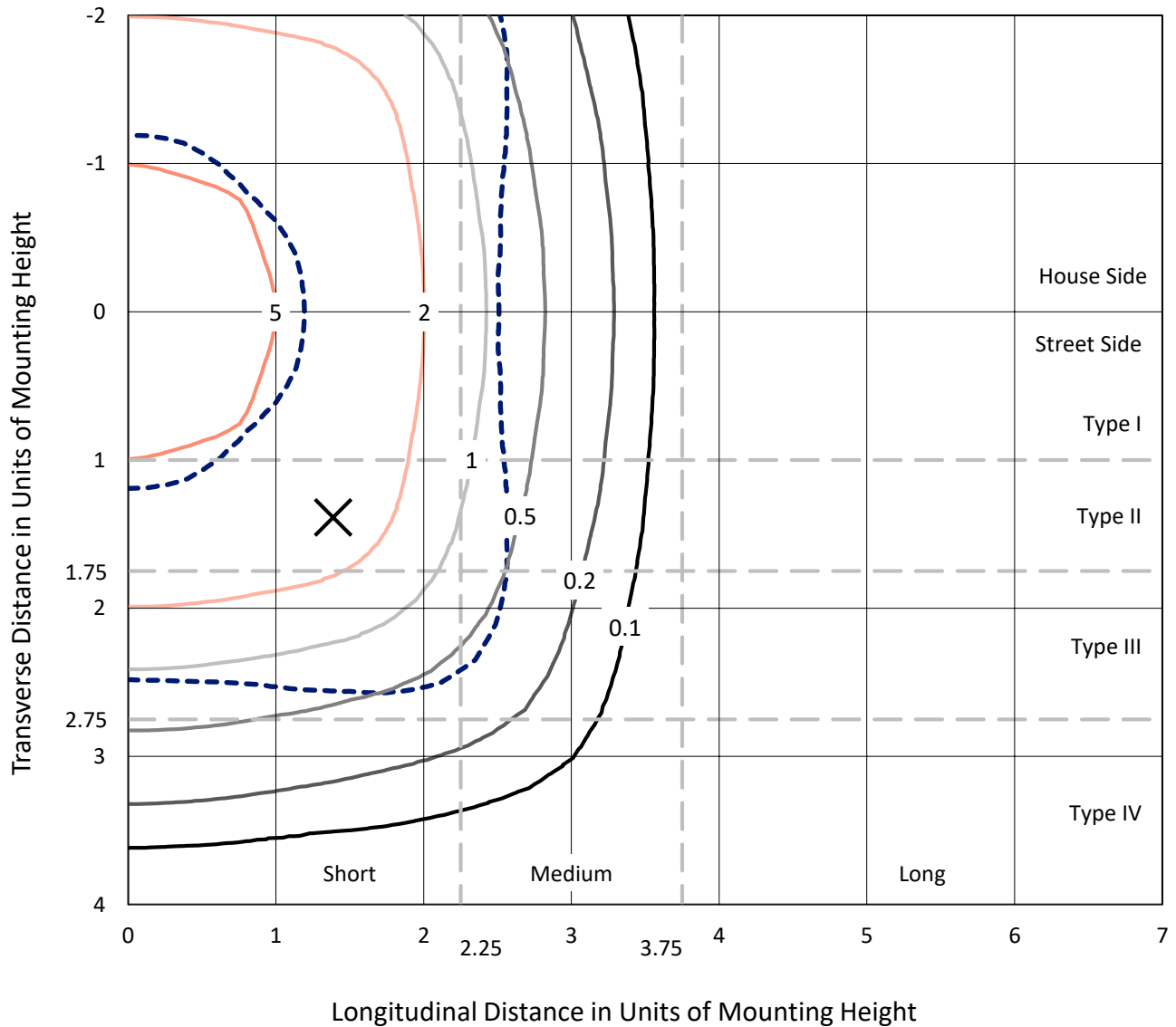
Input Watts (W): 78.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

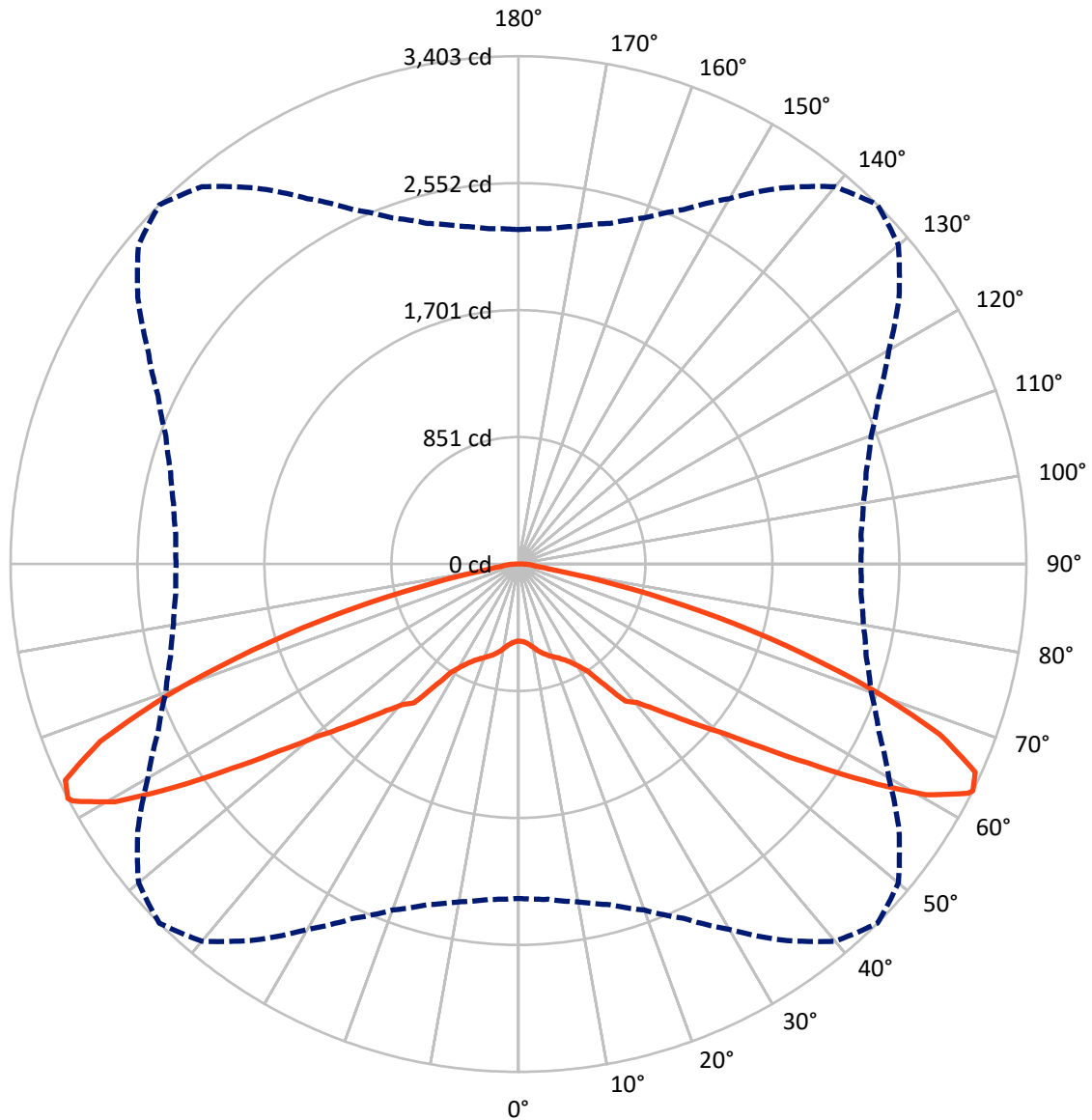
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.7 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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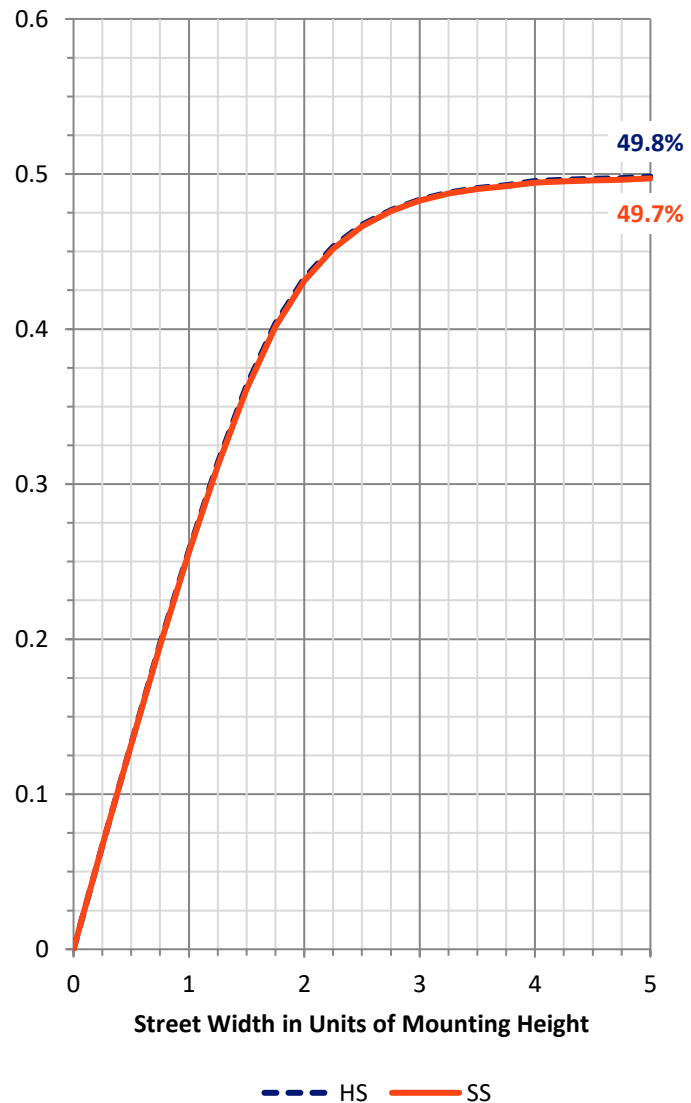
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3848.2	0.0	3848.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3848.2	0.0	3848.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	7696.4	0.0	7696.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.0	0.7
10°-20°	177.7	2.3
20°-30°	339.4	4.4
30°-40°	646.5	8.4
40°-50°	1113.3	14.5
50°-60°	1989.5	25.8
60°-70°	2423.2	31.5
70°-80°	863.2	11.2
80°-90°	91.5	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°	7696.4	100.0
0°-180°	7696.4	100.0



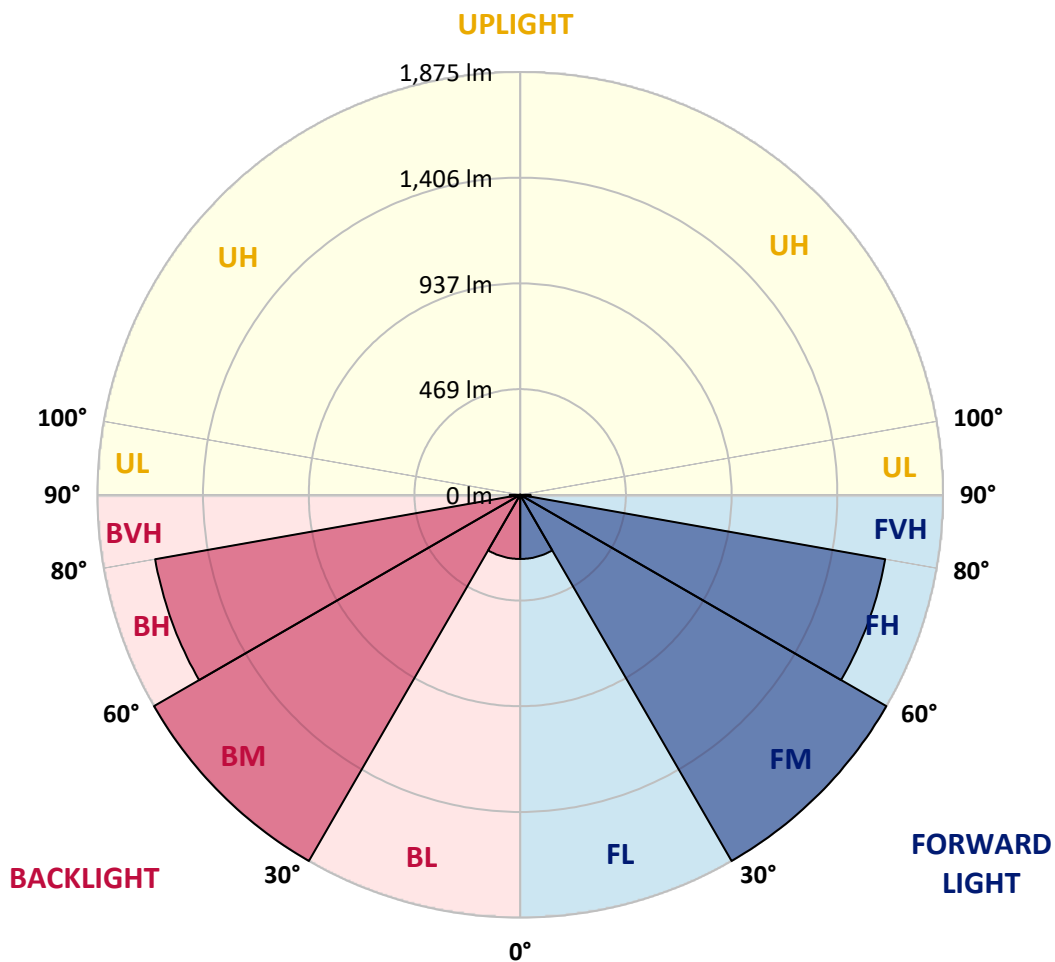
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	284.5	3.7			
FM (30°-60°)	1874.7	24.4			
FH (60°-80°)	1643.2	21.4			G1/1800
FVH (80°-90°)	45.8	0.6			G1/100
BL (0°-30°)	284.5	3.7	B1/500		
BM (30°-60°)	1874.7	24.4	B2/2500		
BH (60°-80°)	1643.2	21.4	B3/2500		G1/1800
BVH (80°-90°)	45.8	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°	516.6	516.6	516.6	516.6	516.6	516.6	516.6	516.6	516.6	516.6	516.6
2.5°	520.6	520.1	520.6	519.6	519.6	519.1	519.1	519.1	518.1	519.1	518.1
5°	531.5	531.0	531.5	530.5	530.5	529.5	529.5	529.5	528.5	529.5	529.0
7.5°	550.3	551.3	550.3	549.3	549.3	548.3	547.8	547.8	547.3	546.8	547.8
10°	576.5	577.5	576.1	575.1	574.6	574.1	573.1	572.6	572.6	570.6	571.1
12.5°	604.3	604.3	602.8	602.3	602.3	601.3	599.3	598.8	598.8	597.8	596.9
15°	629.0	629.0	628.1	626.1	626.6	625.1	623.6	622.6	622.6	621.6	620.6
17.5°	651.8	651.8	650.3	648.4	647.4	646.9	644.9	643.9	643.9	642.9	641.9
20°	674.6	675.6	673.1	671.2	669.2	667.2	665.2	664.2	662.7	663.2	662.7
22.5°	701.9	702.4	698.4	695.9	692.0	689.5	686.5	685.5	683.5	683.5	684.5
25°	736.5	736.0	731.6	727.1	722.7	717.7	713.3	712.3	710.3	709.8	710.3
27.5°	782.1	781.6	776.2	770.2	764.3	756.8	751.4	748.4	746.9	745.0	745.9
30°	838.1	839.1	832.6	825.7	818.3	809.3	802.4	798.4	795.5	793.5	794.5
32.5°	952.0	951.0	941.1	926.2	910.4	889.6	872.7	865.8	860.4	858.4	859.9
35°	1066.4	1065.4	1061.5	1057.0	1053.0	1039.7	1027.3	1012.9	1001.0	993.6	995.6
37.5°	1120.4	1120.4	1117.4	1116.4	1116.4	1124.4	1134.3	1152.1	1166.0	1167.0	1162.5
40°	1204.6	1204.6	1199.7	1197.2	1195.7	1198.2	1204.6	1211.0	1218.0	1219.5	1214.5
42.5°	1303.7	1299.2	1295.7	1290.8	1290.3	1292.8	1299.7	1307.6	1314.6	1320.5	1310.1
45°	1410.7	1406.7	1403.2	1400.3	1402.2	1408.7	1418.1	1432.0	1441.9	1450.8	1442.4
47.5°	1530.0	1521.6	1525.1	1522.1	1527.1	1539.9	1556.8	1577.6	1588.0	1603.8	1590.5
50°	1678.6	1680.6	1678.6	1678.6	1684.6	1701.4	1726.2	1754.4	1772.2	1781.2	1773.2
52.5°	1899.5	1893.6	1880.2	1884.2	1892.1	1918.9	1951.0	1990.7	2013.5	2034.8	2010.0
55°	2141.2	2142.2	2140.3	2145.7	2161.1	2188.3	2228.9	2288.9	2317.6	2354.7	2325.0
57.5°	2341.4	2348.3	2360.2	2376.5	2409.7	2455.3	2535.0	2626.7	2702.9	2743.1	2696.5
60°	2406.2	2413.2	2441.9	2487.5	2549.9	2643.0	2772.3	2929.3	3066.5	3137.8	3076.9
62.5°	2281.4	2294.3	2336.9	2399.8	2502.8	2648.4	2840.6	3072.9	3284.4	3382.0	3308.2
63°	2240.8	2255.2	2298.8	2362.7	2467.7	2619.7	2827.3	3075.9	3299.8	3402.8	3323.1
65°	2060.5	2069.9	2116.0	2188.8	2305.7	2464.2	2695.0	2989.2	3244.3	3363.7	3279.0
67.5°	1776.7	1789.1	1831.2	1894.1	2007.5	2175.4	2402.3	2695.5	2946.6	3042.2	2969.9
70°	1425.0	1438.9	1473.6	1532.0	1621.2	1776.7	1970.9	2244.8	2433.5	2508.3	2431.0
72.5°	1001.5	1007.5	1032.7	1094.2	1161.0	1284.8	1438.9	1651.9	1833.2	1882.2	1807.9
75°	424.0	424.5	457.7	496.8	580.5	703.8	838.1	1021.3	1184.3	1260.6	1166.5
77.5°	135.7	137.2	146.6	161.0	188.7	243.7	342.8	443.3	592.9	665.2	577.0
80°	113.4	115.4	119.4	122.3	124.3	127.3	138.7	154.5	194.7	226.4	182.8
82.5°	97.6	101.0	110.0	113.4	115.4	116.4	117.9	117.4	114.9	113.9	114.4
85°	74.3	82.7	92.6	100.5	101.5	102.0	105.0	106.0	98.1	90.1	98.1
87.5°	32.2	41.6	63.9	70.8	69.3	64.4	68.8	72.8	66.4	48.5	64.9
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°	516.6	516.6	516.6	516.6	516.6	516.6	516.6	516.6
2.5°	518.6	519.6	519.6	519.6	519.6	520.1	520.6	520.1
5°	529.5	530.5	530.0	530.5	530.5	531.0	531.5	531.0
7.5°	548.3	548.3	548.3	549.3	549.3	550.3	550.3	550.3
10°	571.6	571.1	571.1	572.1	573.1	573.6	574.6	574.1
12.5°	596.9	595.9	596.4	597.3	598.3	598.8	599.8	599.3
15°	619.6	619.1	619.1	620.6	621.1	621.6	623.6	623.6
17.5°	641.4	641.4	641.4	643.4	643.9	645.9	647.4	647.4
20°	663.2	663.2	663.2	665.2	666.7	669.7	672.6	672.1
22.5°	685.5	686.0	687.0	689.0	692.5	696.9	699.4	699.4
25°	713.3	715.2	717.2	720.2	725.1	731.1	735.0	736.5
27.5°	748.9	753.4	758.3	762.8	768.2	775.7	781.1	782.1
30°	797.5	803.9	811.8	817.8	824.7	833.1	839.6	843.0
32.5°	866.3	882.2	892.6	913.9	926.7	941.1	953.0	957.9
35°	1008.0	1023.8	1037.7	1052.0	1055.0	1060.0	1066.4	1067.9
37.5°	1148.1	1135.3	1122.9	1122.4	1118.9	1119.9	1121.9	1124.4
40°	1209.1	1205.1	1198.7	1201.1	1201.6	1201.6	1205.6	1206.1
42.5°	1307.1	1297.7	1290.3	1296.2	1297.2	1298.2	1302.2	1306.6
45°	1432.0	1417.6	1408.2	1404.7	1408.2	1407.2	1412.6	1413.6
47.5°	1574.6	1555.8	1534.5	1527.6	1525.6	1521.1	1530.5	1529.5
50°	1749.5	1719.2	1693.5	1683.6	1678.6	1676.1	1678.6	1678.6
52.5°	1970.9	1940.6	1905.5	1894.1	1890.1	1895.6	1887.6	1896.1
55°	2275.5	2226.4	2178.4	2163.0	2160.6	2158.1	2159.1	2162.5
57.5°	2618.2	2531.1	2466.7	2429.0	2404.8	2392.9	2380.0	2378.0
60°	2949.1	2790.6	2668.3	2585.0	2526.1	2481.5	2458.7	2450.8
62.5°	3108.6	2876.8	2686.6	2544.9	2457.3	2384.4	2344.3	2333.9
63°	3113.1	2865.9	2664.3	2514.7	2412.7	2347.3	2304.7	2293.8
65°	3030.3	2749.0	2512.7	2348.3	2240.3	2172.0	2119.5	2108.1
67.5°	2729.2	2456.3	2214.6	2047.6	1930.7	1875.8	1817.8	1816.3
70°	2239.8	1996.1	1792.5	1639.0	1541.4	1486.9	1428.0	1429.5
72.5°	1637.5	1421.1	1280.9	1161.0	1058.0	1006.5	951.0	956.5
75°	985.7	792.5	666.2	562.2	456.2	392.8	350.2	325.9
77.5°	421.5	288.3	207.0	164.4	138.7	128.3	123.3	121.8
80°	146.6	129.8	122.3	120.4	118.9	116.9	113.4	110.0
82.5°	118.9	118.9	114.9	114.4	110.0	106.5	97.6	93.1
85°	105.5	103.5	100.1	98.6	97.6	90.1	78.8	72.8
87.5°	69.8	64.9	61.9	63.4	61.4	55.0	33.7	26.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)