

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: P143648

Luminaire Tested: **LDRL-5MQ-E04-E-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P143648  
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-E04-E-8030  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE MEDIUM  
Light Source: (84) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10491.4 lumens  
Efficiency: N/A  
Efficacy: 107.9 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B3 - U0 - G2

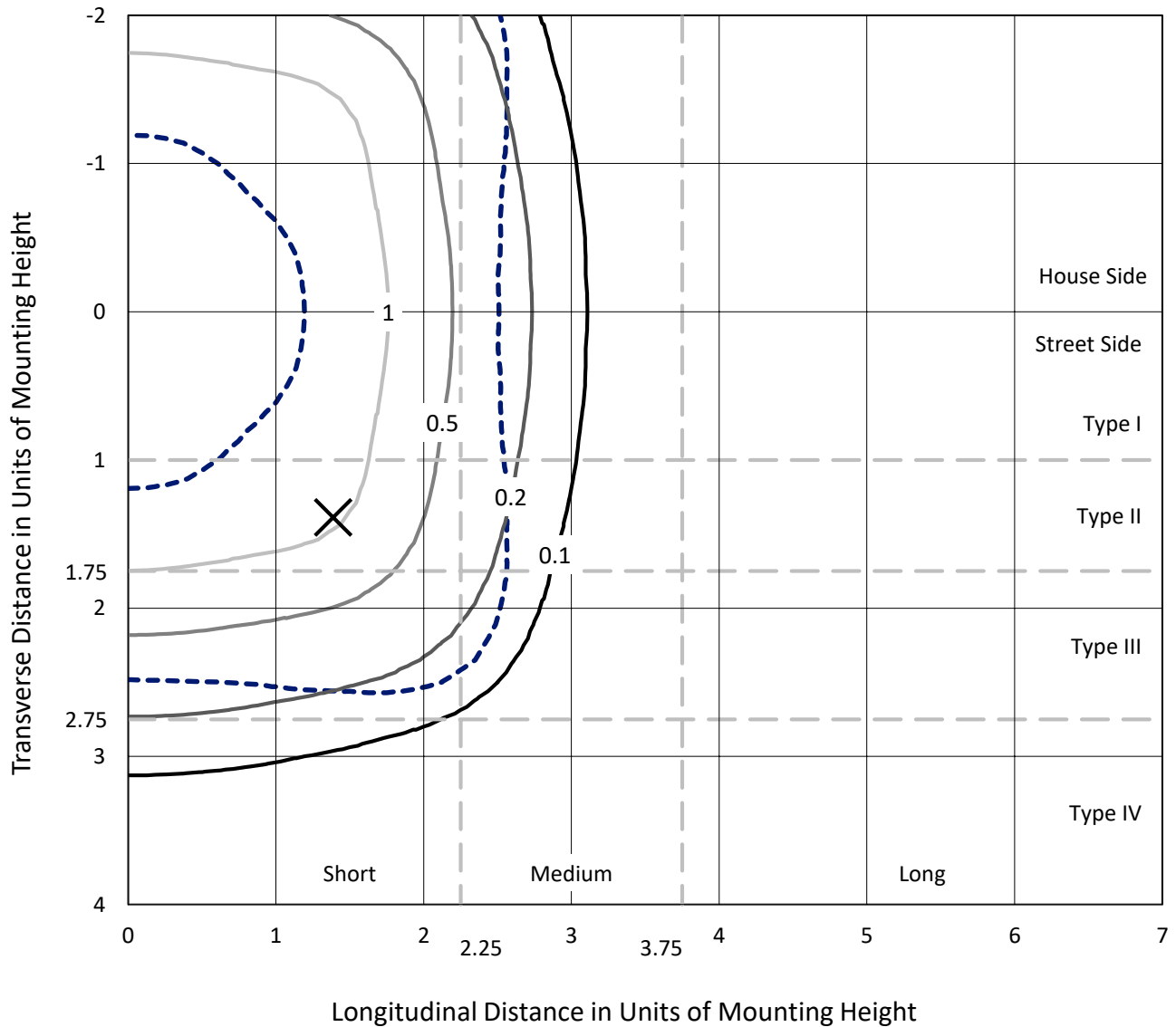
Input Watts (W): 97.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P143648  
 CATALOG NUMBER: LDRL-5MQ-E04-E-8030

### Iso-Footcandle Lines of Horizontal Illumination

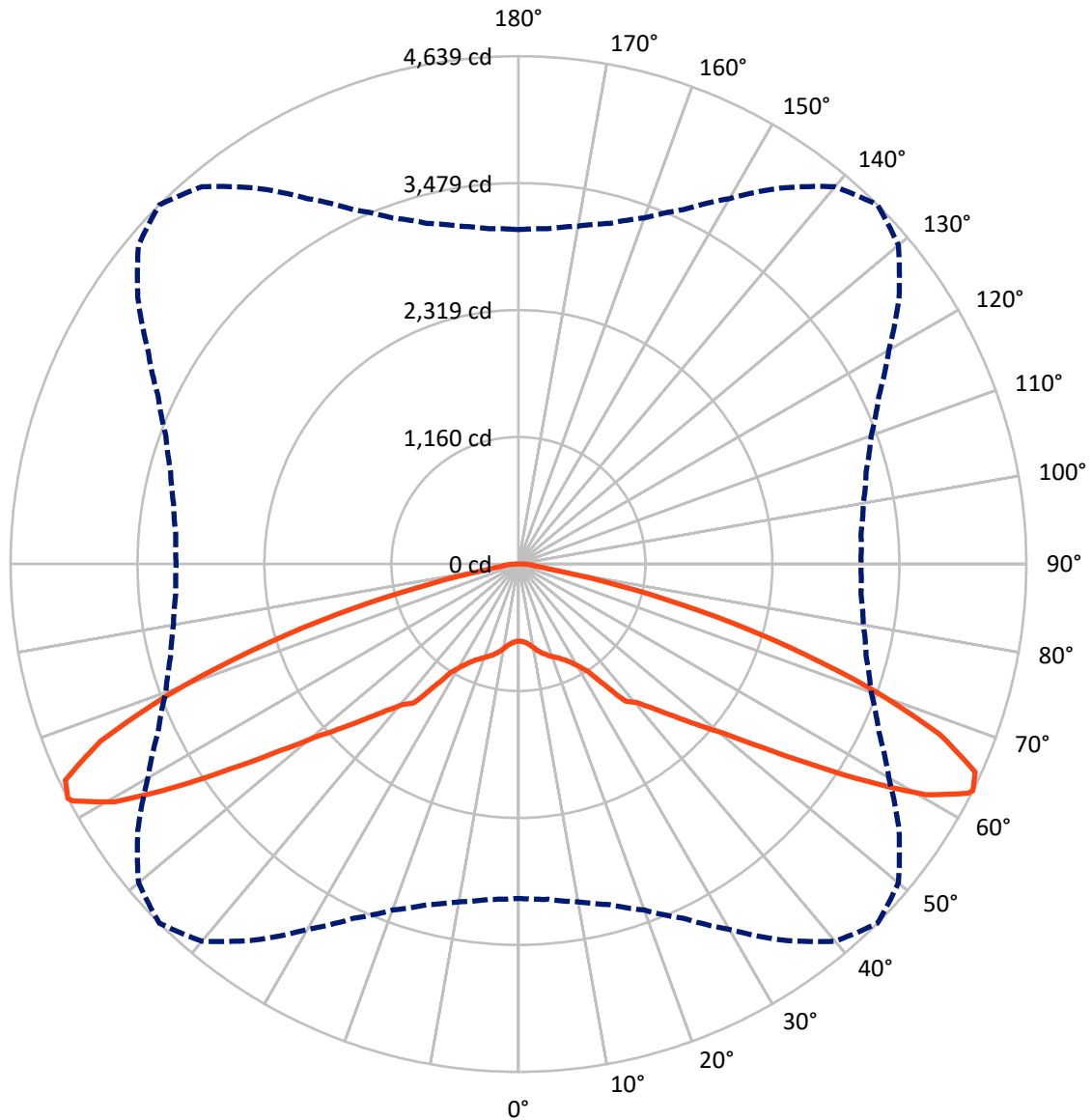
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 1.9 fc  
 Type V - Short - Full Cutoff

REPORT NUMBER: P143648  
CATALOG NUMBER: LDRL-5MQ-E04-E-8030

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P143648

CATALOG NUMBER: LDRL-5MQ-E04-E-8030

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5245.7	0.0	5245.7
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	5245.7	0.0	5245.7
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	10491.4	0.0	10491.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.9	0.7
10°-20°	242.2	2.3
20°-30°	462.6	4.4
30°-40°	881.3	8.4
40°-50°	1517.7	14.5
50°-60°	2712.0	25.8
60°-70°	3303.3	31.5
70°-80°	1176.6	11.2
80°-90°	124.8	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°	10491.4	100.0
0°-180°	10491.4	100.0



REPORT NUMBER: P143648

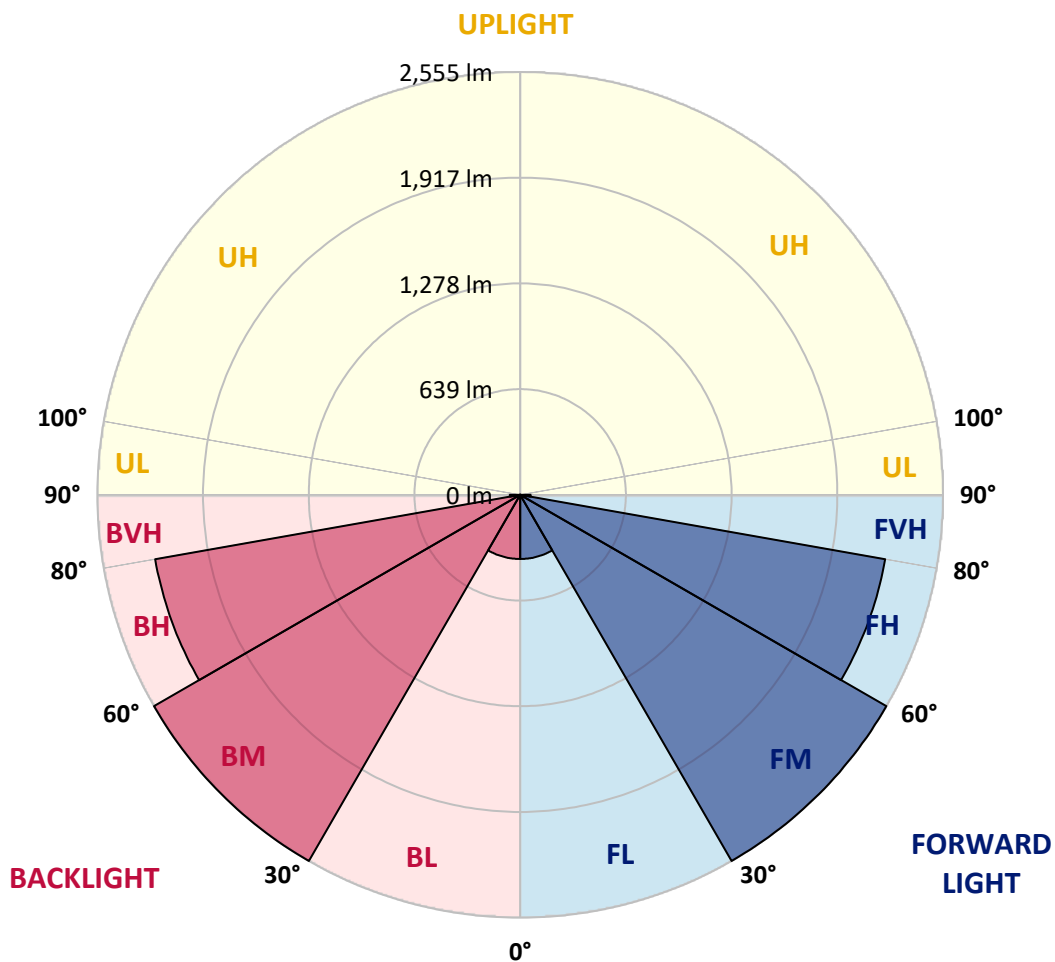
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	387.9	3.7			
FM	(30°-60°)	2555.5	24.4			
FH	(60°-80°)	2240.0	21.4			G2/5000
FVH	(80°-90°)	62.4	0.6			G1/100
BL	(0°-30°)	387.9	3.7	B1/500		
BM	(30°-60°)	2555.5	24.4	B3/5000		
BH	(60°-80°)	2240.0	21.4	B3/2500		G2/5000
BVH	(80°-90°)	62.4	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-G2**

Type V Short





REPORT NUMBER: P143648

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	704.2	704.2	704.2	704.2	704.2	704.2	704.2	704.2	704.2	704.2	704.2
2.5°	709.6	709.0	709.6	708.3	708.3	707.6	707.6	707.6	706.3	707.6	706.3
5°	724.5	723.8	724.5	723.1	723.1	721.8	721.8	721.8	720.4	721.8	721.1
7.5°	750.1	751.5	750.1	748.8	748.8	747.4	746.8	746.8	746.1	745.4	746.8
10°	785.9	787.3	785.2	783.9	783.2	782.5	781.2	780.5	780.5	777.8	778.5
12.5°	823.7	823.7	821.7	821.0	821.0	819.7	817.0	816.3	816.3	815.0	813.6
15°	857.5	857.5	856.1	853.4	854.1	852.1	850.1	848.7	848.7	847.4	846.0
17.5°	888.6	888.6	886.5	883.8	882.5	881.8	879.1	877.8	877.8	876.4	875.0
20°	919.6	921.0	917.6	914.9	912.2	909.5	906.8	905.4	903.4	904.1	903.4
22.5°	956.7	957.4	952.0	948.6	943.2	939.9	935.8	934.5	931.8	931.8	933.1
25°	1004.0	1003.3	997.3	991.2	985.1	978.4	972.3	970.9	968.2	967.6	968.2
27.5°	1066.1	1065.5	1058.0	1049.9	1041.8	1031.7	1024.3	1020.2	1018.2	1015.5	1016.8
30°	1142.4	1143.8	1135.0	1125.5	1115.4	1103.3	1093.8	1088.4	1084.4	1081.7	1083.0
32.5°	1297.7	1296.4	1282.9	1262.6	1241.0	1212.6	1189.7	1180.2	1172.8	1170.1	1172.1
35°	1453.7	1452.3	1446.9	1440.9	1435.5	1417.2	1400.3	1380.8	1364.6	1354.4	1357.1
37.5°	1527.3	1527.3	1523.2	1521.9	1521.9	1532.7	1546.2	1570.5	1589.4	1590.8	1584.7
40°	1642.1	1642.1	1635.3	1631.9	1629.9	1633.3	1642.1	1650.8	1660.3	1662.3	1655.6
42.5°	1777.1	1771.0	1766.3	1759.6	1758.9	1762.3	1771.7	1782.5	1792.0	1800.1	1785.9
45°	1922.9	1917.5	1912.8	1908.8	1911.5	1920.2	1933.1	1952.0	1965.5	1977.6	1966.2
47.5°	2085.7	2074.2	2078.9	2074.9	2081.6	2099.2	2122.1	2150.5	2164.7	2186.3	2168.0
50°	2288.2	2290.9	2288.2	2288.2	2296.3	2319.3	2353.0	2391.5	2415.8	2428.0	2417.2
52.5°	2589.4	2581.3	2563.0	2568.4	2579.2	2615.7	2659.6	2713.6	2744.7	2773.7	2739.9
55°	2918.9	2920.2	2917.5	2924.9	2945.9	2983.0	3038.4	3120.1	3159.2	3209.9	3169.4
57.5°	3191.6	3201.1	3217.3	3239.6	3284.8	3346.9	3455.6	3580.5	3684.5	3739.2	3675.7
60°	3280.1	3289.5	3328.7	3390.8	3475.9	3602.8	3779.1	3993.1	4180.1	4277.3	4194.3
62.5°	3109.9	3127.5	3185.6	3271.3	3411.7	3610.3	3872.2	4188.9	4477.2	4610.2	4509.6
63°	3054.6	3074.2	3133.6	3220.7	3363.8	3571.1	3854.0	4192.9	4498.1	4638.6	4529.9
65°	2808.8	2821.6	2884.4	2983.7	3143.0	3359.1	3673.7	4074.8	4422.5	4585.2	4469.8
67.5°	2421.9	2438.8	2496.2	2581.9	2736.6	2965.4	3274.7	3674.4	4016.7	4147.0	4048.5
70°	1942.5	1961.4	2008.7	2088.4	2209.9	2421.9	2686.6	3060.0	3317.2	3419.2	3313.8
72.5°	1365.2	1373.3	1407.8	1491.5	1582.7	1751.4	1961.4	2251.8	2498.9	2565.7	2464.5
75°	578.0	578.6	623.9	677.2	791.3	959.4	1142.4	1392.2	1614.4	1718.4	1590.1
77.5°	185.0	187.0	199.9	219.4	257.2	332.2	467.2	604.3	808.2	906.8	786.6
80°	154.6	157.3	162.7	166.8	169.5	173.5	189.1	210.7	265.4	308.6	249.1
82.5°	133.0	137.7	149.9	154.6	157.3	158.7	160.7	160.0	156.6	155.3	156.0
85°	101.3	112.8	126.3	137.1	138.4	139.1	143.1	144.5	133.7	122.9	133.7
87.5°	43.9	56.7	87.1	96.6	94.5	87.8	93.9	99.3	90.5	66.2	88.5
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: P143648

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	704.2	704.2	704.2	704.2	704.2	704.2	704.2	704.2
2.5°	706.9	708.3	708.3	708.3	708.3	709.0	709.6	709.0
5°	721.8	723.1	722.5	723.1	723.1	723.8	724.5	723.8
7.5°	747.4	747.4	747.4	748.8	748.8	750.1	750.1	750.1
10°	779.2	778.5	778.5	779.8	781.2	781.9	783.2	782.5
12.5°	813.6	812.3	812.9	814.3	815.6	816.3	817.7	817.0
15°	844.7	844.0	844.0	846.0	846.7	847.4	850.1	850.1
17.5°	874.4	874.4	874.4	877.1	877.8	880.5	882.5	882.5
20°	904.1	904.1	904.1	906.8	908.8	912.9	916.9	916.2
22.5°	934.5	935.1	936.5	939.2	943.9	950.0	953.4	953.4
25°	972.3	975.0	977.7	981.7	988.5	996.6	1002.0	1004.0
27.5°	1020.9	1027.0	1033.7	1039.8	1047.2	1057.4	1064.8	1066.1
30°	1087.1	1095.8	1106.6	1114.7	1124.2	1135.7	1144.5	1149.2
32.5°	1180.9	1202.5	1216.7	1245.7	1263.3	1282.9	1299.1	1305.8
35°	1374.0	1395.6	1414.5	1434.1	1438.2	1444.9	1453.7	1455.7
37.5°	1565.1	1547.5	1530.7	1530.0	1525.3	1526.6	1529.3	1532.7
40°	1648.1	1642.7	1634.0	1637.3	1638.0	1638.0	1643.4	1644.1
42.5°	1781.8	1769.0	1758.9	1767.0	1768.3	1769.7	1775.1	1781.2
45°	1952.0	1932.4	1919.6	1914.8	1919.6	1918.2	1925.6	1927.0
47.5°	2146.4	2120.8	2091.7	2082.3	2079.6	2073.5	2086.3	2085.0
50°	2384.8	2343.6	2308.5	2295.0	2288.2	2284.9	2288.2	2288.2
52.5°	2686.6	2645.4	2597.5	2581.9	2576.5	2584.0	2573.2	2584.6
55°	3101.8	3035.0	2969.5	2948.6	2945.2	2941.8	2943.2	2947.9
57.5°	3569.1	3450.2	3362.5	3311.1	3278.1	3261.9	3244.3	3241.6
60°	4020.1	3804.0	3637.3	3523.8	3443.5	3382.7	3351.7	3340.9
62.5°	4237.5	3921.5	3662.2	3469.1	3349.6	3250.4	3195.7	3181.5
63°	4243.6	3906.7	3631.9	3428.0	3288.9	3199.7	3141.7	3126.8
65°	4130.8	3747.3	3425.3	3201.1	3053.9	2960.7	2889.1	2873.6
67.5°	3720.3	3348.3	3018.8	2791.2	2631.9	2557.0	2478.0	2475.9
70°	3053.2	2721.0	2443.5	2234.2	2101.2	2026.9	1946.6	1948.6
72.5°	2232.2	1937.1	1746.0	1582.7	1442.2	1372.0	1296.4	1303.8
75°	1343.6	1080.3	908.1	766.3	621.9	535.4	477.4	444.3
77.5°	574.6	393.0	282.2	224.2	189.1	174.9	168.1	166.1
80°	199.9	176.9	166.8	164.1	162.0	159.3	154.6	149.9
82.5°	162.0	162.0	156.6	156.0	149.9	145.2	133.0	126.9
85°	143.8	141.1	136.4	134.4	133.0	122.9	107.4	99.3
87.5°	95.2	88.5	84.4	86.4	83.7	74.9	45.9	36.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)