

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: P143649

Luminaire Tested: **LDRL-5MQ-E04-E-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P143649
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-7030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE MEDIUM
Light Source: (84) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11353.6 lumens
Efficiency: N/A
Efficacy: 116.8 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

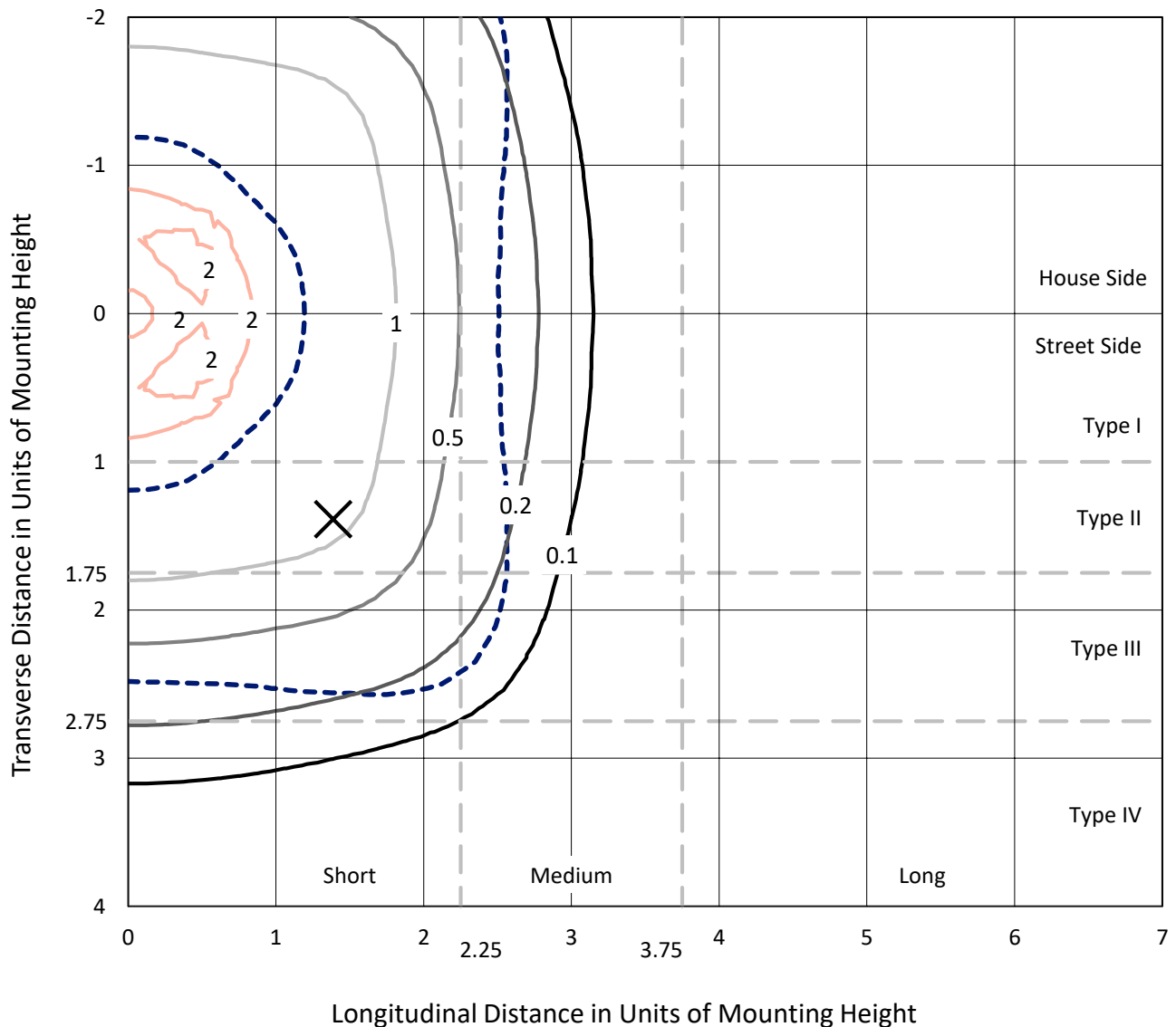
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

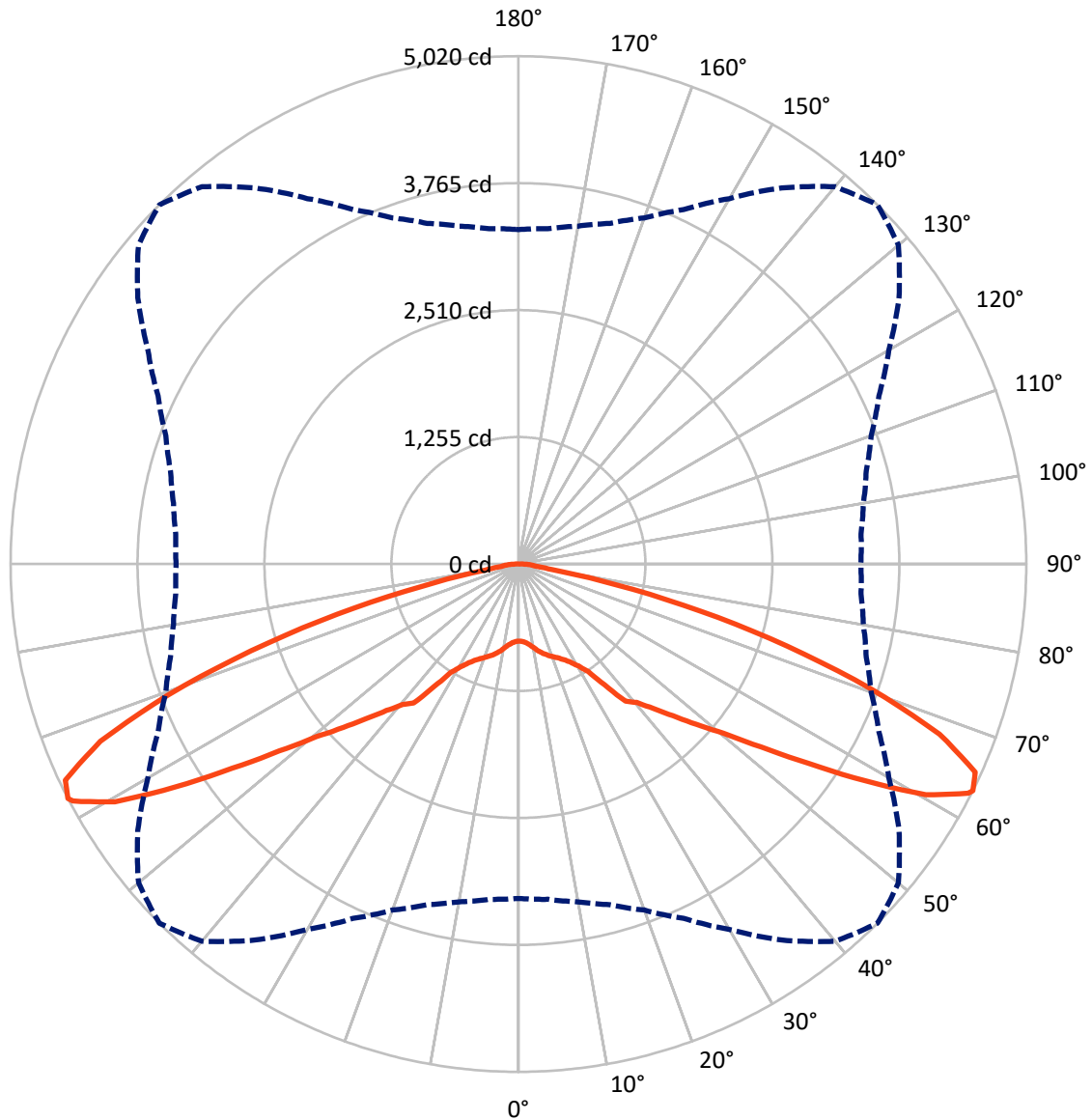
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2.1 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	5676.8	0.0	5676.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5676.8	0.0	5676.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	11353.6	0.0	11353.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.7	0.7
10°-20°	262.1	2.3
20°-30°	500.7	4.4
30°-40°	953.8	8.4
40°-50°	1642.4	14.5
50°-60°	2934.9	25.8
60°-70°	3574.7	31.5
70°-80°	1273.3	11.2
80°-90°	135.0	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°	11353.6	100.0
0°-180°	11353.6	100.0



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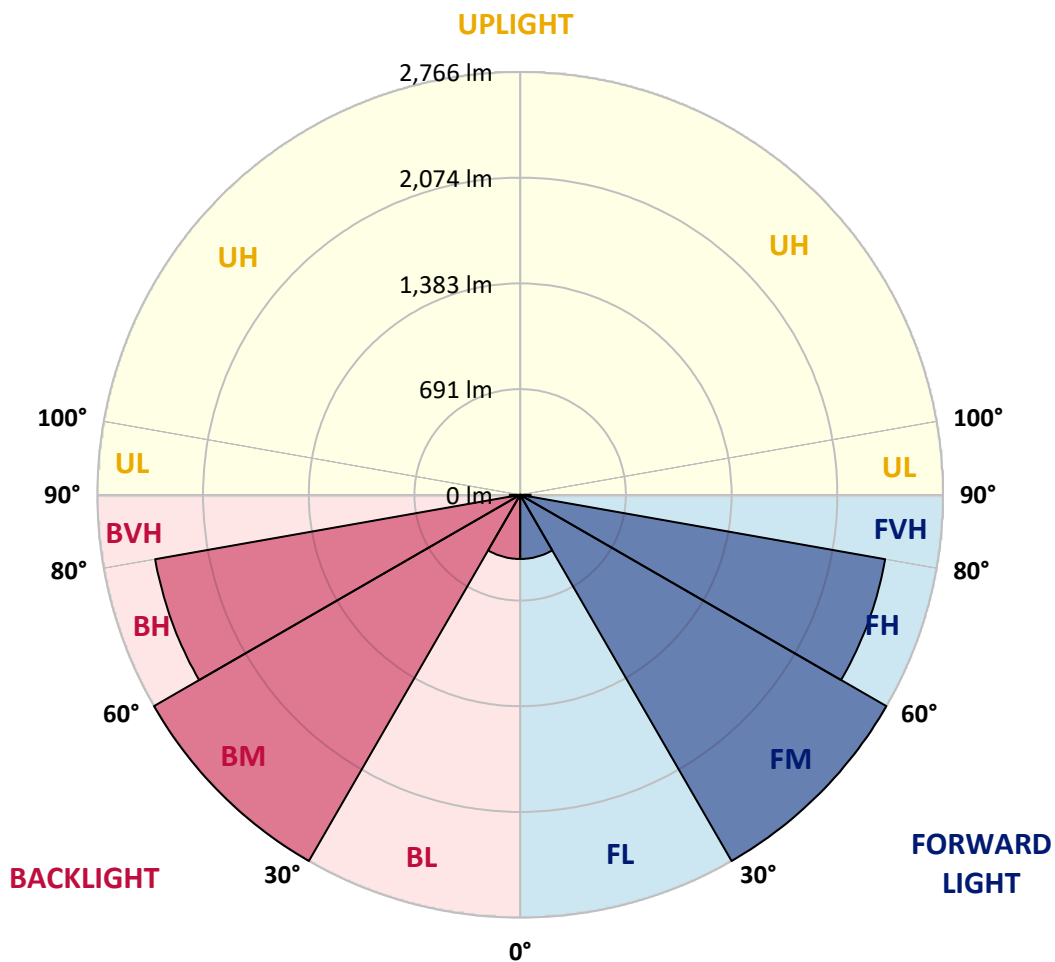
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	419.7	3.7			
FM	(30°-60°)	2765.5	24.4			
FH	(60°-80°)	2424.0	21.4			G2/5000
FVH	(80°-90°)	67.5	0.6			G1/100
BL	(0°-30°)	419.7	3.7	B1/500		
BM	(30°-60°)	2765.5	24.4	B3/5000		
BH	(60°-80°)	2424.0	21.4	B3/2500		G2/5000
BVH	(80°-90°)	67.5	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-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	762.1	762.1	762.1	762.1	762.1	762.1	762.1	762.1	762.1	762.1	762.1
2.5°	767.9	767.2	767.9	766.5	766.5	765.8	765.8	765.8	764.3	765.8	764.3
5°	784.0	783.3	784.0	782.6	782.6	781.1	781.1	781.1	779.6	781.1	780.4
7.5°	811.8	813.2	811.8	810.3	810.3	808.9	808.1	808.1	807.4	806.7	808.1
10°	850.5	852.0	849.8	848.3	847.6	846.9	845.4	844.7	844.7	841.7	842.5
12.5°	891.4	891.4	889.2	888.5	888.5	887.0	884.1	883.4	883.4	881.9	880.5
15°	928.0	928.0	926.5	923.6	924.3	922.1	919.9	918.5	918.5	917.0	915.5
17.5°	961.6	961.6	959.4	956.5	955.0	954.3	951.3	949.9	949.9	948.4	947.0
20°	995.2	996.6	993.0	990.1	987.1	984.2	981.3	979.8	977.7	978.4	977.7
22.5°	1035.4	1036.1	1030.3	1026.6	1020.8	1017.1	1012.7	1011.3	1008.3	1008.3	1009.8
25°	1086.5	1085.8	1079.2	1072.6	1066.1	1058.8	1052.2	1050.7	1047.8	1047.1	1047.8
27.5°	1153.7	1153.0	1145.0	1136.2	1127.4	1116.5	1108.4	1104.1	1101.9	1098.9	1100.4
30°	1236.3	1237.8	1228.3	1218.0	1207.1	1193.9	1183.7	1177.9	1173.5	1170.5	1172.0
32.5°	1404.4	1402.9	1388.3	1366.4	1343.0	1312.3	1287.5	1277.2	1269.2	1266.3	1268.5
35°	1573.2	1571.7	1565.8	1559.3	1553.4	1533.7	1515.4	1494.2	1476.7	1465.7	1468.7
37.5°	1652.8	1652.8	1648.4	1647.0	1647.0	1658.6	1673.3	1699.6	1720.0	1721.5	1714.9
40°	1777.0	1777.0	1769.7	1766.1	1763.9	1767.5	1777.0	1786.5	1796.7	1798.9	1791.6
42.5°	1923.2	1916.6	1911.5	1904.2	1903.4	1907.1	1917.3	1929.0	1939.2	1948.0	1932.6
45°	2081.0	2075.1	2070.0	2065.6	2068.6	2078.1	2091.9	2112.4	2127.0	2140.2	2127.7
47.5°	2257.1	2244.6	2249.8	2245.4	2252.7	2271.7	2296.5	2327.2	2342.6	2365.9	2346.2
50°	2476.3	2479.2	2476.3	2476.3	2485.0	2509.9	2546.4	2588.1	2614.4	2627.5	2615.8
52.5°	2802.2	2793.4	2773.7	2779.5	2791.2	2830.7	2878.1	2936.6	2970.2	3001.6	2965.1
55°	3158.7	3160.2	3157.3	3165.3	3188.0	3228.1	3288.1	3376.5	3418.9	3473.7	3429.8
57.5°	3453.9	3464.2	3481.7	3505.8	3554.8	3622.0	3739.6	3874.8	3987.3	4046.5	3977.8
60°	3549.6	3559.9	3602.3	3669.5	3761.5	3898.9	4089.6	4321.2	4523.6	4628.9	4539.0
62.5°	3365.5	3384.5	3447.3	3540.1	3692.1	3906.9	4190.5	4533.1	4845.1	4989.1	4880.2
63°	3305.6	3326.8	3391.1	3485.3	3640.2	3864.6	4170.7	4537.5	4867.8	5019.8	4902.1
65°	3039.6	3053.5	3121.5	3228.9	3401.3	3635.1	3975.6	4409.7	4786.0	4962.0	4837.1
67.5°	2621.0	2639.2	2701.3	2794.1	2961.4	3209.1	3543.8	3976.4	4346.8	4487.8	4381.2
70°	2102.2	2122.6	2173.8	2260.0	2391.5	2621.0	2907.4	3311.4	3589.8	3700.2	3586.2
72.5°	1477.4	1486.2	1523.5	1614.1	1712.7	1895.4	2122.6	2436.8	2704.2	2776.6	2667.0
75°	625.5	626.2	675.1	732.9	856.4	1038.3	1236.3	1506.7	1747.1	1859.6	1720.8
77.5°	200.2	202.4	216.3	237.5	278.4	359.5	505.6	654.0	874.6	981.3	851.2
80°	167.3	170.2	176.1	180.5	183.4	187.8	204.6	228.0	287.2	333.9	269.6
82.5°	143.9	149.1	162.2	167.3	170.2	171.7	173.9	173.2	169.5	168.1	168.8
85°	109.6	122.0	136.6	148.3	149.8	150.5	154.9	156.4	144.7	133.0	144.7
87.5°	47.5	61.4	94.3	104.5	102.3	95.0	101.6	107.4	97.9	71.6	95.7
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°	762.1	762.1	762.1	762.1	762.1	762.1	762.1	762.1
2.5°	765.0	766.5	766.5	766.5	766.5	767.2	767.9	767.2
5°	781.1	782.6	781.8	782.6	782.6	783.3	784.0	783.3
7.5°	808.9	808.9	808.9	810.3	810.3	811.8	811.8	811.8
10°	843.2	842.5	842.5	843.9	845.4	846.1	847.6	846.9
12.5°	880.5	879.0	879.7	881.2	882.7	883.4	884.9	884.1
15°	914.1	913.4	913.4	915.5	916.3	917.0	919.9	919.9
17.5°	946.2	946.2	946.2	949.2	949.9	952.8	955.0	955.0
20°	978.4	978.4	978.4	981.3	983.5	987.9	992.3	991.5
22.5°	1011.3	1012.0	1013.5	1016.4	1021.5	1028.1	1031.7	1031.7
25°	1052.2	1055.1	1058.0	1062.4	1069.7	1078.5	1084.3	1086.5
27.5°	1104.8	1111.4	1118.7	1125.2	1133.3	1144.2	1152.3	1153.7
30°	1176.4	1185.9	1197.6	1206.4	1216.6	1229.0	1238.5	1243.6
32.5°	1278.0	1301.3	1316.7	1348.1	1367.1	1388.3	1405.8	1413.1
35°	1486.9	1510.3	1530.8	1552.0	1556.3	1563.7	1573.2	1575.3
37.5°	1693.7	1674.7	1656.5	1655.7	1650.6	1652.1	1655.0	1658.6
40°	1783.6	1777.7	1768.2	1771.9	1772.6	1772.6	1778.5	1779.2
42.5°	1928.3	1914.4	1903.4	1912.2	1913.7	1915.1	1921.0	1927.5
45°	2112.4	2091.2	2077.3	2072.2	2077.3	2075.9	2083.9	2085.4
47.5°	2322.8	2295.1	2263.6	2253.4	2250.5	2243.9	2257.8	2256.3
50°	2580.8	2536.2	2498.2	2483.6	2476.3	2472.6	2476.3	2476.3
52.5°	2907.4	2862.8	2810.9	2794.1	2788.3	2796.3	2784.6	2797.0
55°	3356.7	3284.4	3213.5	3190.9	3187.2	3183.6	3185.0	3190.2
57.5°	3862.4	3733.8	3638.8	3583.3	3547.5	3529.9	3510.9	3508.0
60°	4350.5	4116.7	3936.2	3813.4	3726.5	3660.7	3627.1	3615.4
62.5°	4585.7	4243.8	3963.2	3754.2	3624.9	3517.5	3458.3	3443.0
63°	4592.3	4227.7	3930.3	3709.7	3559.1	3462.7	3399.9	3383.8
65°	4470.3	4055.3	3706.7	3464.2	3304.9	3204.0	3126.6	3109.8
67.5°	4026.0	3623.4	3266.9	3020.6	2848.2	2767.1	2681.6	2679.4
70°	3304.1	2944.6	2644.3	2417.8	2273.9	2193.5	2106.6	2108.7
72.5°	2415.6	2096.3	1889.5	1712.7	1560.7	1484.7	1402.9	1410.9
75°	1454.1	1169.1	982.8	829.3	673.0	579.4	516.6	480.8
77.5°	621.8	425.3	305.4	242.6	204.6	189.2	181.9	179.7
80°	216.3	191.4	180.5	177.6	175.4	172.4	167.3	162.2
82.5°	175.4	175.4	169.5	168.8	162.2	157.1	143.9	137.4
85°	155.6	152.7	147.6	145.4	143.9	133.0	116.2	107.4
87.5°	103.0	95.7	91.3	93.5	90.6	81.1	49.7	39.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)