

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: P196885

Luminaire Tested: **NAV-AF-01-D-UNV-5MQ-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196885
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-01-D-UNV-5MQ-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5309 lumens
Efficiency: N/A
Efficacy: 90.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G1

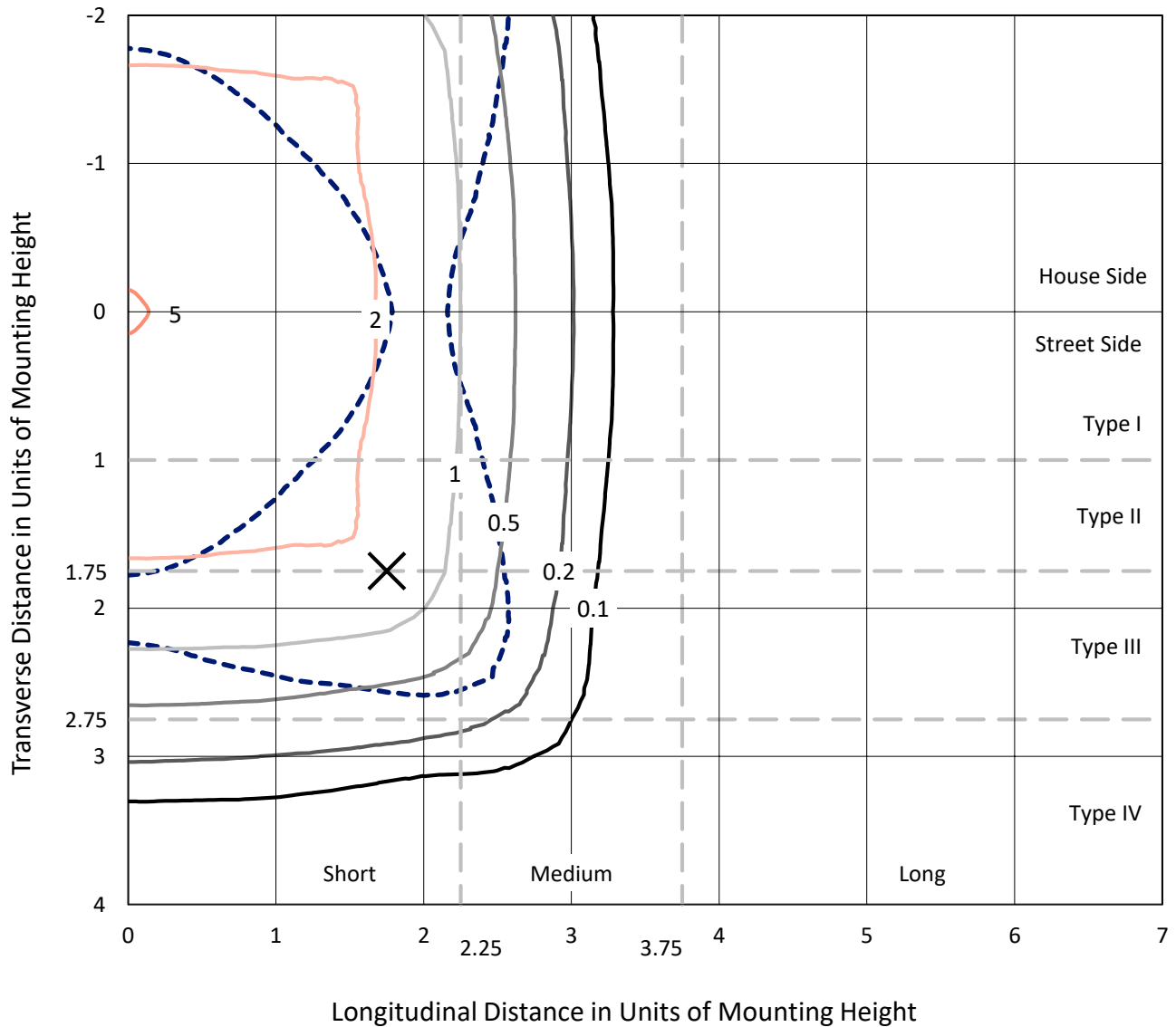
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

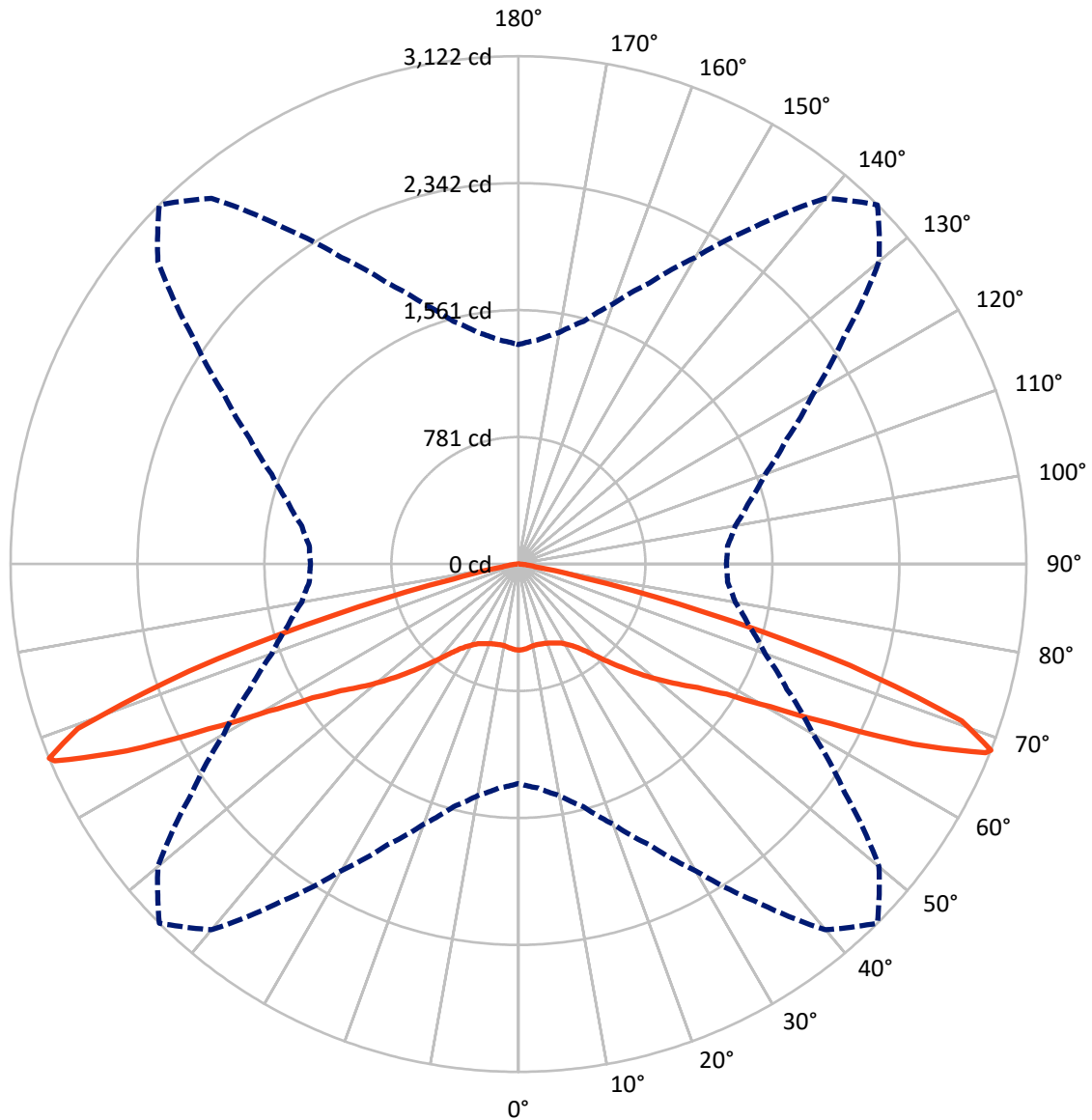
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.3 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2654.5	0.0	2654.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2654.5	0.0	2654.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	5309.0	0.0	5309.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.6	0.9
10°-20°	143.7	2.7
20°-30°	244.3	4.6
30°-40°	399.9	7.5
40°-50°	714.6	13.5
50°-60°	1206.8	22.7
60°-70°	1871.3	35.2
70°-80°	643.4	12.1
80°-90°	35.4	0.7
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°	5309.0	100.0
0°-180°	5309.0	100.0



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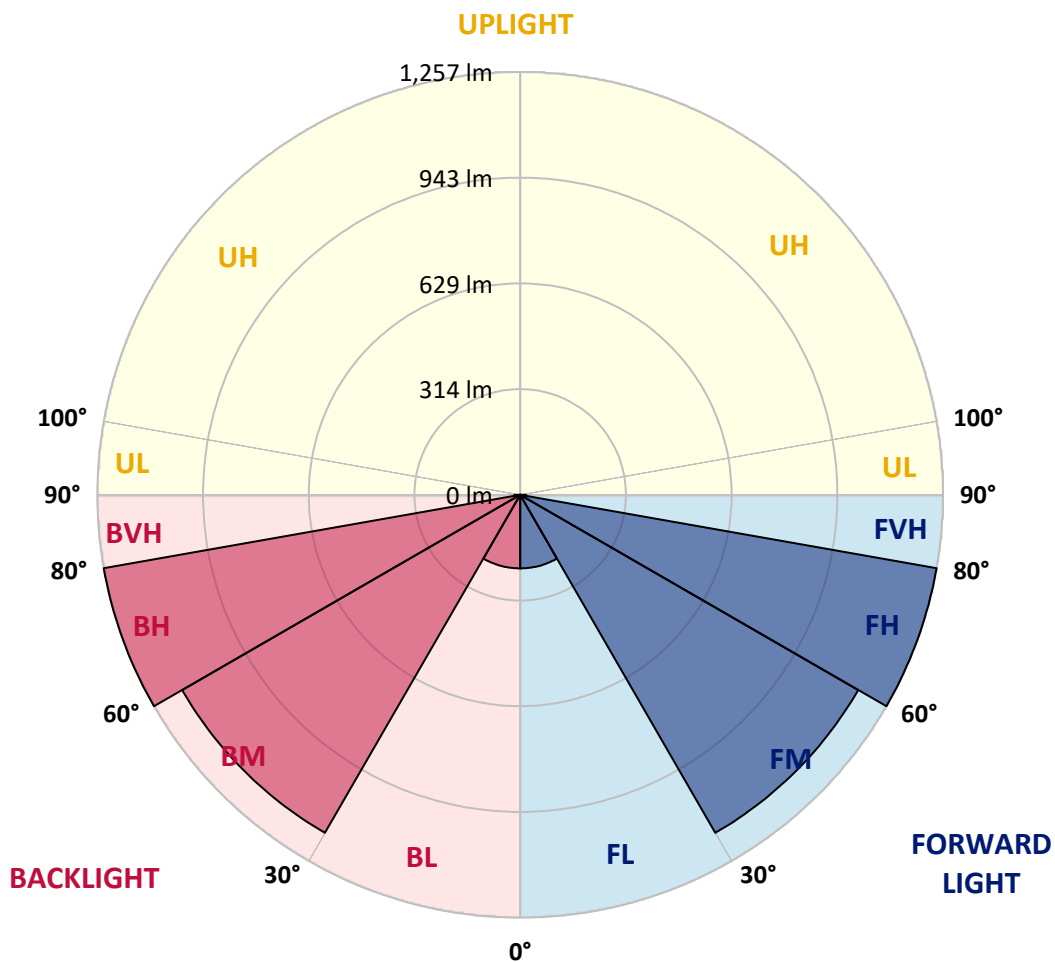
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	218.8	4.1			
FM	(30°-60°)	1160.6	21.9			
FH	(60°-80°)	1257.4	23.7			G1/1800
FVH	(80°-90°)	17.7	0.3			G1/100
BL	(0°-30°)	218.8	4.1	B1/500		
BM	(30°-60°)	1160.6	21.9	B2/2500		
BH	(60°-80°)	1257.4	23.7	B3/2500		G1/1800
BVH	(80°-90°)	17.7	0.3			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°	529.6	529.6	529.6	529.6	529.6	529.6	529.6	529.6	529.6	529.6	529.6
2.5°	531.9	531.9	532.5	532.2	531.2	530.2	529.3	528.3	527.6	527.0	526.3
5°	526.3	526.3	527.3	526.7	526.0	525.0	524.4	523.4	522.8	522.1	522.4
7.5°	519.2	519.8	520.5	520.2	518.9	518.5	517.6	517.2	516.6	515.6	515.9
10°	513.0	513.3	514.0	513.7	513.3	512.4	512.0	511.7	511.4	510.1	509.8
12.5°	506.8	507.5	508.1	508.5	508.1	508.5	508.8	509.1	508.8	508.1	508.1
15°	502.0	502.6	503.6	504.6	504.9	506.8	508.1	509.4	510.4	510.7	509.8
17.5°	499.4	500.3	501.6	503.6	505.2	507.5	509.8	511.7	513.3	513.7	512.7
20°	499.0	500.0	502.0	504.2	507.2	510.1	513.7	516.6	518.2	519.2	518.2
22.5°	501.3	502.6	505.2	508.1	511.7	515.6	520.2	523.4	526.7	528.0	527.0
25°	507.8	509.1	512.0	515.6	519.5	524.4	528.9	533.2	536.4	538.0	536.7
27.5°	521.5	521.8	525.0	528.9	533.5	537.7	543.6	545.5	548.1	549.7	548.1
30°	540.6	541.3	544.2	550.4	554.6	560.1	563.4	565.3	568.3	569.9	568.0
32.5°	569.9	570.6	573.2	579.0	582.9	587.1	591.0	592.3	595.3	597.2	594.9
35°	611.2	612.5	614.8	618.7	621.9	625.2	628.1	627.1	629.1	631.7	629.4
37.5°	667.8	667.4	668.1	671.0	674.3	676.2	680.8	678.5	680.4	682.7	681.4
40°	733.8	733.8	733.4	738.6	739.9	741.9	746.8	743.8	746.4	749.0	746.8
42.5°	808.8	810.2	811.8	816.0	819.6	820.2	822.5	821.2	824.5	826.7	824.5
45°	895.3	897.3	899.2	909.0	910.6	911.9	913.5	909.3	912.9	914.8	914.2
47.5°	985.1	988.6	992.9	1002.9	1009.4	1012.4	1013.7	1008.8	1009.1	1012.0	1012.4
50°	1086.5	1090.4	1094.6	1106.0	1112.2	1117.4	1119.0	1113.5	1114.1	1116.4	1117.0
52.5°	1180.1	1184.7	1193.8	1209.0	1217.8	1226.9	1227.6	1220.8	1223.7	1225.3	1224.0
55°	1268.2	1274.1	1286.1	1306.6	1322.5	1340.4	1348.5	1341.0	1341.0	1339.7	1339.1
57.5°	1370.9	1377.5	1389.8	1413.5	1435.6	1461.3	1483.4	1490.9	1504.6	1509.1	1502.0
60°	1525.7	1532.5	1545.2	1576.4	1604.4	1641.8	1678.2	1707.8	1755.9	1781.9	1758.5
62.5°	1667.1	1677.5	1707.4	1762.0	1822.5	1891.8	1972.1	2029.3	2116.7	2160.3	2101.4
65°	1634.9	1656.1	1714.6	1800.4	1925.2	2075.4	2239.0	2396.0	2576.7	2669.4	2549.8
67.5°	1428.2	1446.0	1509.1	1608.9	1764.6	1971.7	2226.0	2551.1	2924.0	3097.6	2885.9
68°	1349.2	1382.7	1445.4	1544.6	1701.6	1905.1	2176.5	2527.7	2934.7	3122.3	2893.7
70°	1034.5	1046.5	1106.6	1195.7	1365.1	1564.7	1838.8	2239.0	2699.0	2892.1	2657.0
72.5°	491.6	498.7	537.7	625.5	733.1	895.7	1137.5	1515.0	1929.5	2130.4	1896.0
75°	180.1	181.7	190.8	211.6	252.0	313.1	429.1	663.9	982.8	1172.0	986.7
77.5°	97.2	97.5	101.1	106.3	113.5	121.6	139.1	186.6	301.0	409.6	317.9
80°	61.1	60.8	64.4	68.6	73.5	77.4	79.0	84.5	95.3	111.5	102.4
82.5°	31.2	34.1	42.3	46.8	54.0	55.3	53.6	53.3	56.6	61.1	63.1
85°	17.2	15.3	22.4	29.9	32.5	33.5	33.8	31.9	31.2	30.6	32.2
87.5°	8.8	8.1	9.8	15.0	15.9	13.0	13.3	11.4	7.8	7.8	8.1
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°	529.6	529.6	529.6	529.6	529.6	529.6	529.6	529.6
2.5°	525.7	526.0	525.4	525.4	525.4	525.7	525.4	525.0
5°	521.5	522.1	522.1	522.4	522.8	522.8	522.8	522.8
7.5°	515.3	515.6	516.3	516.3	516.3	516.3	516.3	516.3
10°	509.4	508.8	508.5	507.8	507.8	506.8	507.2	507.5
12.5°	506.5	505.2	504.6	503.6	502.9	502.0	502.0	502.3
15°	507.8	505.9	503.9	503.3	502.6	502.0	501.3	501.6
17.5°	510.4	508.1	505.9	504.6	503.3	502.3	502.0	502.3
20°	515.9	512.7	509.1	506.8	504.2	503.6	502.6	503.6
22.5°	523.4	519.5	515.0	510.7	507.8	506.5	505.2	506.2
25°	532.5	528.3	523.7	518.9	515.6	514.6	513.0	513.0
27.5°	545.2	541.6	537.7	533.2	529.9	528.9	526.3	526.3
30°	565.3	561.8	558.2	554.3	551.0	550.1	546.8	546.8
32.5°	592.0	588.1	585.8	582.6	580.0	578.4	574.5	574.1
35°	627.8	624.2	623.9	621.6	619.0	619.3	615.4	614.8
37.5°	679.1	676.2	677.2	675.2	673.0	674.9	672.6	672.6
40°	744.8	743.8	744.8	743.5	743.8	744.2	742.2	742.9
42.5°	824.1	821.5	827.4	826.7	825.8	828.4	823.8	820.6
45°	915.5	914.5	920.4	921.3	919.4	921.0	912.9	912.6
47.5°	1014.6	1014.6	1019.8	1019.2	1017.2	1017.6	1007.8	1001.6
50°	1118.0	1117.4	1122.6	1121.3	1118.7	1118.3	1108.3	1102.1
52.5°	1225.6	1225.6	1233.1	1229.5	1223.4	1220.4	1208.1	1199.9
55°	1344.6	1343.0	1345.3	1333.6	1321.5	1312.8	1297.5	1291.3
57.5°	1495.1	1476.3	1460.0	1445.1	1428.2	1417.8	1399.9	1393.4
60°	1708.7	1658.3	1636.6	1606.6	1578.7	1564.7	1541.0	1528.3
62.5°	2004.6	1921.0	1861.8	1795.9	1732.1	1687.3	1651.2	1635.3
65°	2346.6	2164.5	2014.0	1872.6	1752.6	1657.4	1604.4	1587.8
67.5°	2476.6	2142.4	1882.7	1679.8	1534.1	1420.7	1357.3	1344.0
68°	2449.0	2091.7	1821.9	1614.1	1467.8	1353.4	1290.3	1278.3
70°	2160.3	1764.6	1479.9	1273.1	1136.6	1027.6	983.1	963.9
72.5°	1472.7	1133.3	869.3	695.4	593.3	524.4	483.4	469.4
75°	677.8	458.1	305.9	228.5	194.1	177.5	164.8	161.6
77.5°	197.7	143.7	123.5	114.4	107.6	101.8	97.5	97.2
80°	94.0	88.1	85.5	79.6	73.5	67.9	64.0	64.7
82.5°	63.1	61.4	61.4	55.6	45.8	39.3	32.5	29.3
85°	33.5	34.8	36.7	34.8	30.2	22.4	14.6	15.9
87.5°	11.4	13.0	13.7	13.3	12.0	9.1	6.8	6.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)