

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: P967223

Luminaire Tested: **NAV-SB4D-740-U-SL2**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967223
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-10)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-740-U-SL2
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 43958.1 lumens
Efficiency: N/A
Efficacy: 149.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B4 - U0 - G5

Input Watts (W): 293.6
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: 24 FT



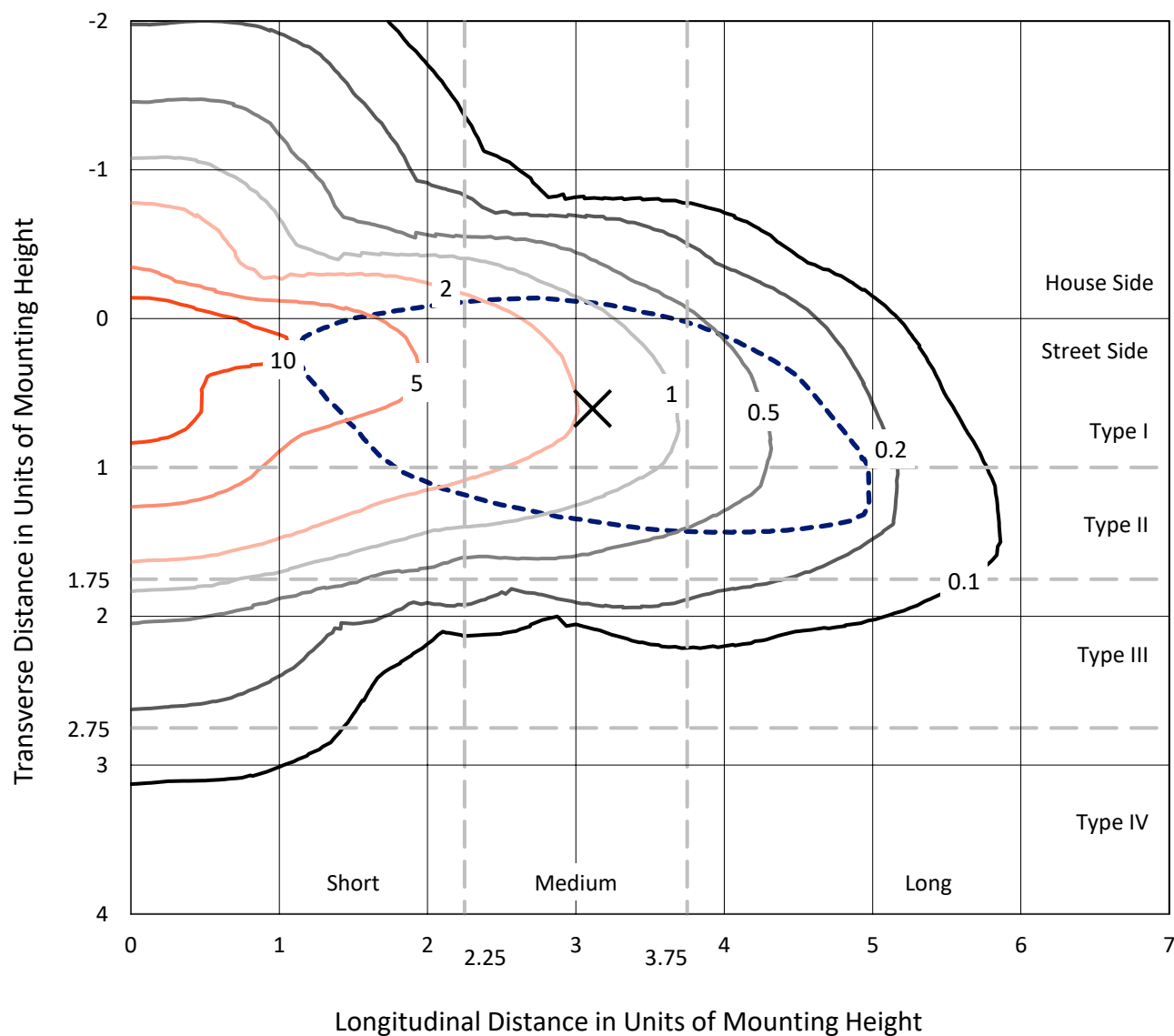
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

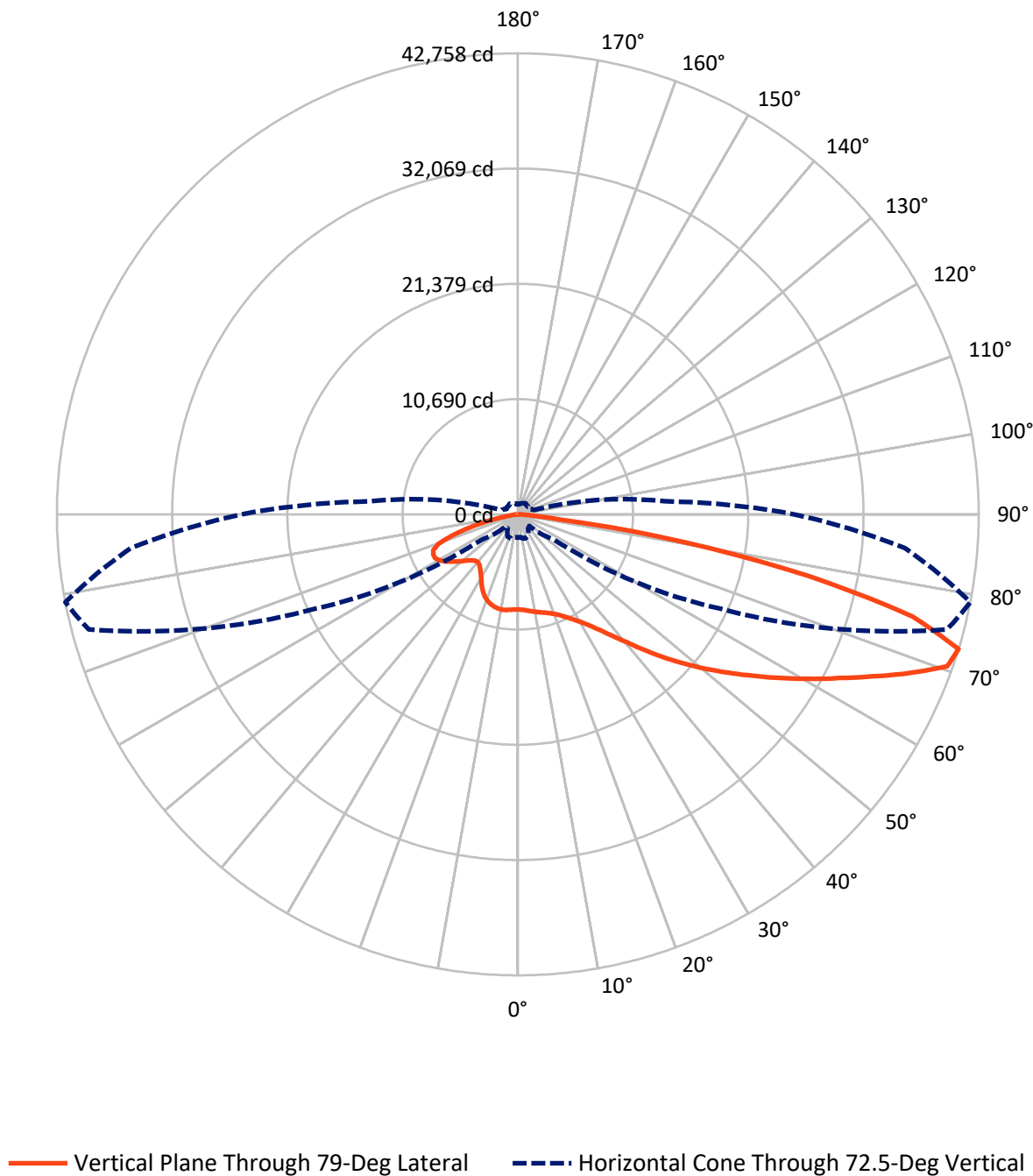
--- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14.2 fc
Type II - Medium - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9673.2	0.0	9673.2
	% Fixture	22.0	0.0	22.0
Street Side	Lumens	34284.9	0.0	34284.9
	% Fixture	78.0	0.0	78.0
Total	Lumens	43958.1	0.0	43958.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	801.0	1.8
10°-20°	2094.2	4.8
20°-30°	3379.1	7.7
30°-40°	5071.6	11.5
40°-50°	7194.3	16.4
50°-60°	9085.5	20.7
60°-70°	9227.5	21.0
70°-80°	6289.0	14.3
80°-90°	815.9	1.9
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°	43958.1	100.0
0°-180°	43958.1	100.0

Coefficient of Utilization



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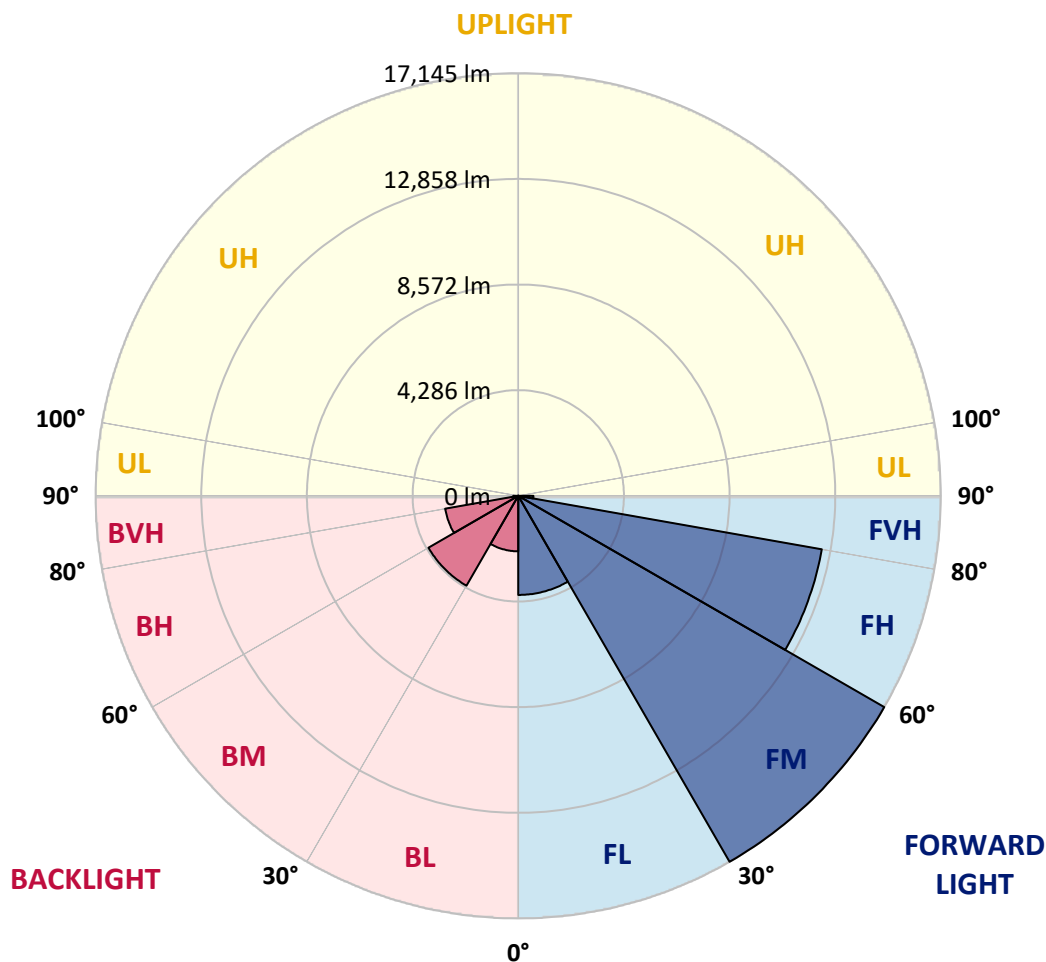
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4021.1	9.1			
FM	(30°-60°)	17144.6	39.0			
FH	(60°-80°)	12504.6	28.4			G5
FVH	(80°-90°)	614.7	1.4			G4/750
BL	(0°-30°)	2253.2	5.1	B3/2500		
BM	(30°-60°)	4206.8	9.6	B3/5000		
BH	(60°-80°)	3011.9	6.9	B4/5000		G4/5000
BVH	(80°-90°)	201.3	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	8824.2	8824.2	8824.2	8824.2	8824.2	8824.2	8824.2	8824.2	8824.2	8824.2	8824.2
2.5°	8828.8	8787.0	8812.5	8803.2	8814.9	8828.8	8833.4	8840.4	8863.7	8861.4	8859.1
5°	8810.2	8768.4	8803.2	8791.6	8821.9	8854.4	8882.3	8907.9	8945.1	8961.4	8938.1
7.5°	8770.7	8742.8	8777.7	8812.5	8868.4	8917.2	8956.8	9014.9	9068.3	9077.6	9093.9
10°	8540.5	8519.6	8601.0	8691.7	8845.1	8977.7	9063.7	9131.1	9189.2	9198.6	9221.8
12.5°	8301.0	8275.4	8366.2	8489.4	8738.1	8977.7	9159.0	9247.3	9298.5	9328.7	9363.6
15°	8261.5	8240.6	8291.7	8398.6	8605.6	8914.8	9224.1	9386.8	9431.0	9466.0	9479.9
17.5°	8452.2	8412.6	8433.5	8470.7	8591.7	8856.7	9275.2	9545.0	9612.4	9649.7	9649.7
20°	8893.9	8838.2	8805.6	8731.2	8710.2	8866.0	9270.6	9735.7	9824.0	9870.5	9882.1
22.5°	9482.2	9445.0	9375.3	9186.9	8982.3	8979.9	9359.0	9979.8	10144.9	10189.1	10161.1
25°	10193.7	10138.0	10049.6	9793.8	9400.8	9205.5	9507.8	10291.4	10568.1	10579.7	10498.4
27.5°	11012.2	10928.4	10807.6	10470.5	9940.2	9558.9	9735.7	10649.4	11054.0	11049.4	10882.0
30°	11874.8	11791.2	11663.3	11254.0	10586.7	10035.6	10051.9	11035.5	11630.7	11605.2	11319.2
32.5°	12505.0	12442.2	12416.6	12100.4	11330.8	10598.3	10414.6	11463.3	12342.2	12319.0	11919.0
35°	12988.6	12907.2	12937.4	12777.0	12142.3	11228.5	10858.7	11972.5	13207.2	13204.9	12707.3
37.5°	13467.7	13395.5	13421.1	13314.1	12893.3	12028.3	11400.6	12595.7	14279.2	14330.3	13660.6
40°	13904.7	13828.1	13930.4	13830.3	13476.9	12879.3	12016.7	13300.2	15520.8	15618.4	14813.9
42.5°	14167.6	14107.1	14276.8	14279.2	13983.9	13597.9	12693.3	14076.8	16957.8	17176.3	16232.3
45°	14258.2	14237.2	14493.1	14546.5	14432.6	14014.0	13302.6	14923.2	18506.4	18897.0	17848.3
47.5°	14160.6	14121.0	14474.4	14672.1	14762.8	14209.4	13807.2	15839.3	20087.5	20659.5	19610.8
50°	13667.6	13590.9	14116.4	14532.6	14855.7	14337.3	14316.4	16897.3	21884.9	22510.3	21382.6
52.5°	12781.6	12723.5	13321.1	14044.2	14651.1	14400.0	14888.3	18052.9	23591.6	24400.7	23198.6
55°	11649.3	11572.6	12230.6	13174.6	14141.9	14379.1	15460.4	19345.7	25605.2	26426.0	25075.1
57.5°	9854.2	9700.8	10533.2	11649.3	13311.9	14353.5	16055.6	20631.6	27651.4	28635.0	27077.1
60°	7236.1	7008.2	8028.9	9352.0	11688.8	14104.7	16792.7	22073.3	30106.8	30992.7	29262.8
62.5°	4213.3	4080.7	4748.1	5982.7	8810.2	12639.9	17206.6	23749.8	32520.4	33450.5	31411.3
65°	3271.6	3234.4	3292.5	3387.8	4903.9	9463.6	15930.0	25384.3	35589.7	36240.7	33650.4
67.5°	2992.6	2964.6	2990.2	2811.2	2488.0	5271.3	12602.7	25798.2	38877.5	39272.9	35610.7
70°	2660.1	2627.5	2711.2	2557.7	1957.9	2397.3	8142.9	24296.2	41493.4	42235.1	37101.1
72.5°	2167.1	2129.8	2325.2	2255.4	1648.6	1539.2	4090.1	20726.9	41219.0	42758.3	36033.8
75°	1664.8	1643.9	1876.5	1934.6	1344.0	1211.4	1962.5	15406.9	36273.3	37824.2	31055.6
77.5°	1292.8	1276.5	1395.1	1606.7	1083.5	939.4	1206.8	9772.9	27335.2	27607.2	21401.3
80°	969.6	923.1	1032.4	1243.9	844.1	685.9	818.5	5699.1	17278.6	15662.6	9314.8
82.5°	606.9	583.6	674.3	830.1	595.2	472.0	532.5	3148.3	6924.5	4078.4	1797.4
85°	346.4	337.1	367.4	474.4	323.2	272.0	304.6	1390.5	1265.0	869.6	541.8
87.5°	139.5	134.9	167.4	211.6	118.6	99.9	107.0	334.9	279.0	258.1	179.1
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	8824.2	8824.2	8824.2	8824.2	8824.2	8824.2	8824.2	8824.2	8824.2	8824.2	8824.2
2.5°	8849.7	8849.7	8817.3	8766.0	8707.9	8670.7	8610.3	8594.0	8531.2	8512.6	8542.9
5°	8956.8	8938.1	8838.2	8693.9	8496.3	8315.0	8115.0	7989.5	7812.8	7749.9	7796.5
7.5°	9091.5	9040.4	8868.4	8552.1	8138.2	7731.4	7308.1	6987.2	6680.3	6571.1	6585.0
10°	9214.9	9142.7	8849.7	8296.3	7580.2	6875.7	6201.4	5729.3	5371.2	5224.7	5257.3
12.5°	9338.1	9205.5	8726.5	7870.9	6787.3	5831.6	5113.1	4745.8	4524.9	4348.2	4406.3
15°	9454.3	9268.3	8535.9	7301.2	5917.6	4948.1	4417.9	4124.9	3948.2	3832.0	3852.9
17.5°	9589.2	9321.8	8249.8	6578.0	5089.8	4336.6	3904.0	3727.3	3692.5	3678.5	3687.7
20°	9777.5	9370.7	7873.1	5768.8	4480.7	3848.3	3625.0	3608.7	3606.4	3599.4	3622.7
22.5°	9979.8	9428.8	7375.6	5034.1	3962.1	3543.6	3504.1	3471.6	3450.7	3448.3	3473.8
25°	10219.4	9447.3	6752.4	4431.9	3520.4	3399.4	3353.0	3304.1	3290.1	3290.1	3304.1
27.5°	10451.8	9384.6	6027.0	3908.6	3271.6	3266.9	3206.5	3190.2	3187.9	3194.8	3213.5
30°	10684.4	9266.0	5306.1	3425.0	3127.4	3127.4	3106.5	3118.2	3127.4	3150.6	3166.9
32.5°	10998.2	9140.4	4703.9	3067.0	3001.8	2978.5	2999.6	3022.7	3032.1	3062.3	3087.9
35°	11458.7	9052.1	4224.9	2871.6	2871.6	2841.4	2853.0	2848.4	2827.5	2813.5	2846.0
37.5°	12067.8	9047.4	3829.6	2780.9	2762.4	2757.7	2760.0	2729.8	2648.4	2550.7	2553.1
40°	12800.3	9172.9	3525.0	2718.2	2704.3	2732.1	2718.2	2636.8	2413.6	2243.8	2239.2
42.5°	13783.9	9531.1	3329.7	2641.4	2683.2	2718.2	2662.3	2381.0	2229.9	2115.9	2111.3
45°	14941.8	10112.3	3229.7	2560.0	2643.8	2685.6	2415.9	2292.6	2171.8	2034.5	2025.3
47.5°	16253.2	10844.8	3206.5	2483.4	2555.4	2581.0	2311.3	2255.4	2118.3	1969.4	1957.9
50°	17680.9	11712.1	3269.2	2392.7	2427.5	2339.2	2276.4	2225.3	2083.4	1936.9	1920.6
52.5°	19157.5	12667.8	3394.8	2269.5	2299.6	2202.0	2262.5	2218.2	2062.5	1864.8	1850.8
55°	20608.3	13630.3	3515.7	2125.2	2169.4	2078.7	2222.9	2190.3	1967.2	1743.9	1732.2
57.5°	22082.5	14588.4	3634.3	1997.3	2043.8	1960.1	2160.1	2115.9	1860.2	1632.3	1627.6
60°	23614.9	15518.5	3690.1	1874.1	1906.7	1850.8	2064.8	1988.1	1739.2	1518.3	1511.4
62.5°	25049.5	16292.8	3599.4	1750.9	1771.8	1748.5	1939.2	1836.9	1618.4	1390.5	1388.2
65°	26488.8	16753.1	3320.4	1630.0	1634.7	1623.0	1762.5	1674.1	1476.5	1278.9	1265.0
67.5°	27793.3	17011.2	2876.3	1499.8	1488.1	1483.5	1597.5	1497.4	1339.4	1167.3	1153.3
70°	28069.9	16355.5	2197.3	1346.3	1346.3	1334.7	1416.0	1313.7	1188.2	1048.7	1044.1
72.5°	25637.8	13758.3	1560.3	1171.9	1190.5	1167.3	1234.7	1148.6	1034.7	941.7	913.8
75°	20673.4	10089.1	1134.7	992.8	1025.4	985.8	1048.7	988.2	890.5	888.3	799.9
77.5°	14204.8	6238.6	823.1	818.5	841.7	790.6	862.6	830.1	741.8	702.2	658.0
80°	6061.8	2488.0	599.9	632.4	632.4	586.0	669.6	679.0	602.2	583.6	583.6
82.5°	1206.8	706.8	420.9	434.8	409.3	395.2	474.4	525.5	725.5	806.9	809.1
85°	362.7	260.5	253.5	237.2	209.3	211.6	279.0	527.8	651.1	372.1	320.9
87.5°	99.9	65.1	67.4	53.5	44.2	58.1	95.3	400.0	218.5	93.0	79.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)