

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: P963144

Luminaire Tested: **NAV-SB2D-830-U-T2U-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963144
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-17)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-830-U-T2U-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II U
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14324.4 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G2

Input Watts (W): 147.6
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



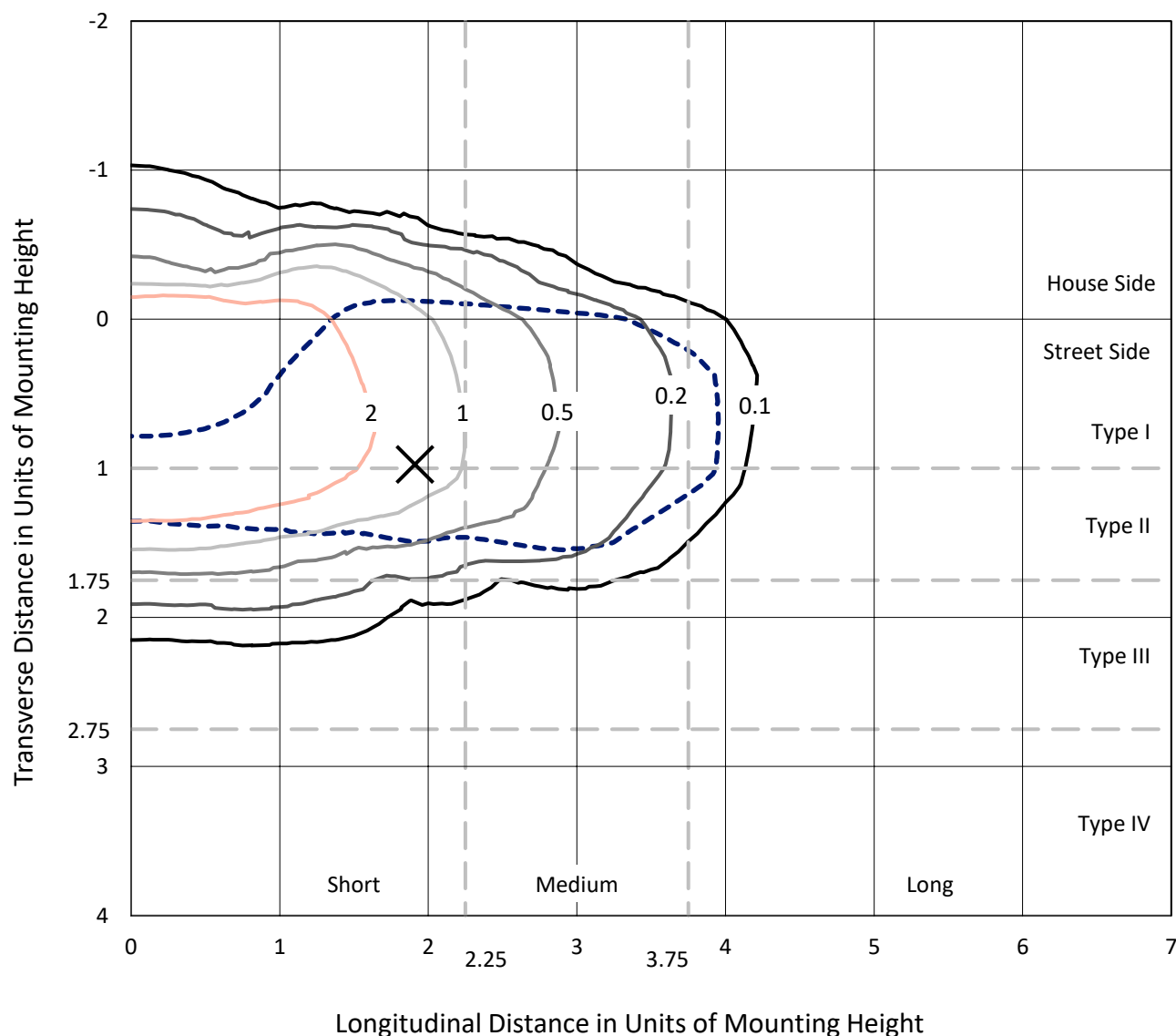
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

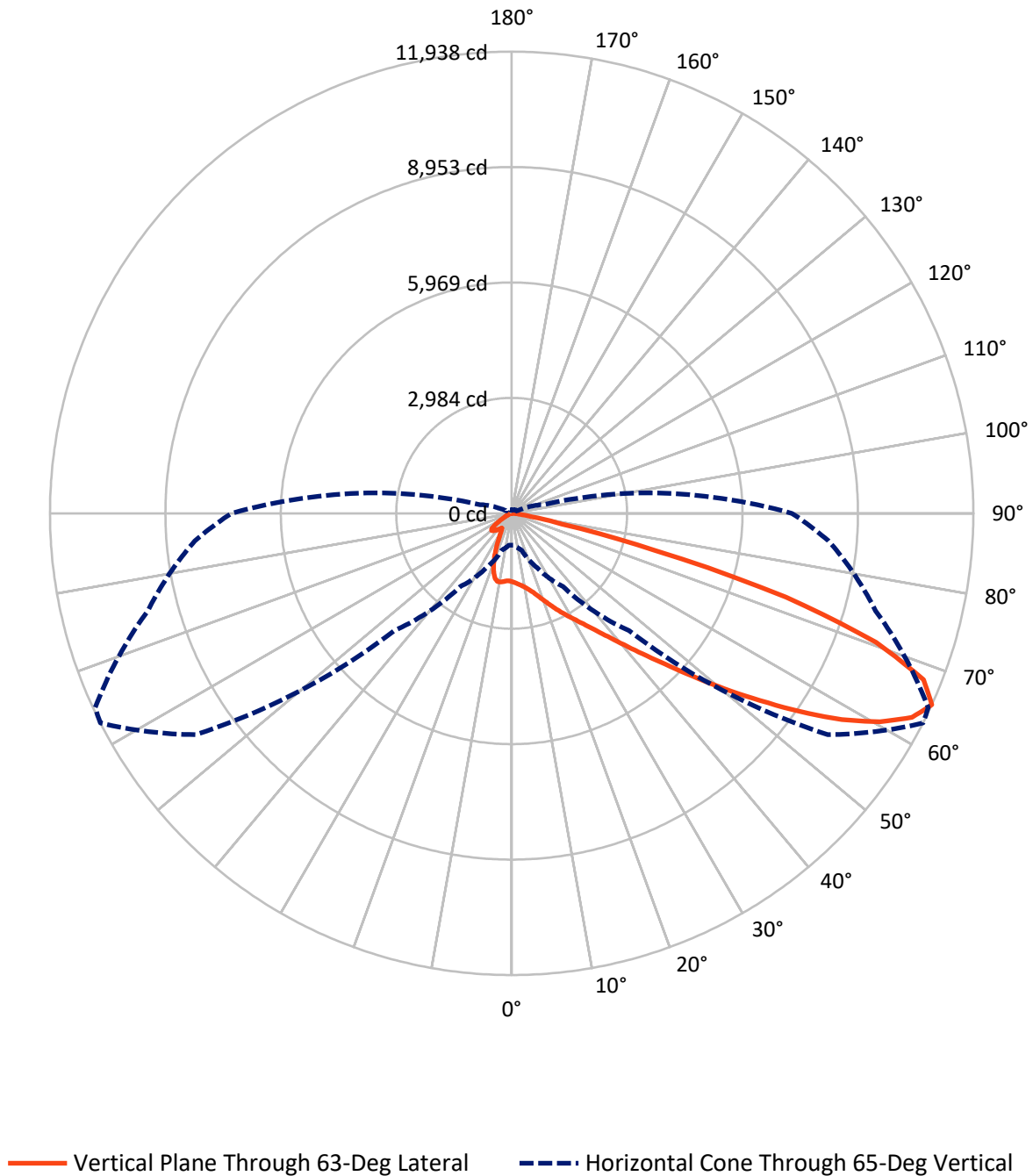


Based on 25 foot mounting height. Maximum calculated value = 4.8 fc

Type II - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2105.6	0.0	2105.6
	% Fixture	14.7	0.0	14.7
Street Side	Lumens	12218.8	0.0	12218.8
	% Fixture	85.3	0.0	85.3
Total	Lumens	14324.4	0.0	14324.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.6	1.2
10°-20°	462.2	3.2
20°-30°	804.8	5.6
30°-40°	1450.5	10.1
40°-50°	2876.8	20.1
50°-60°	3918.6	27.4
60°-70°	3127.8	21.8
70°-80°	1415.4	9.9
80°-90°	101.7	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°	14324.4	100.0
0°-180°	14324.4	100.0

Coefficient of Utilization



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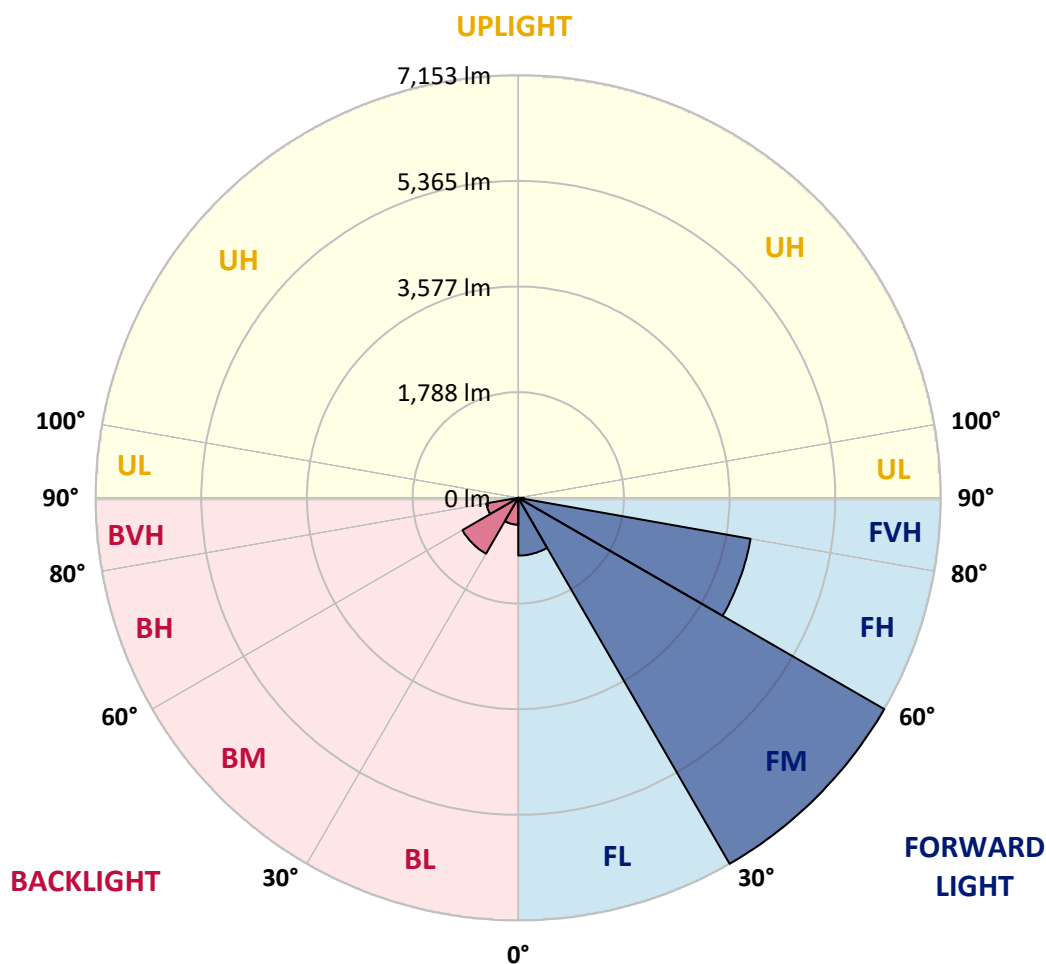
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	977.8	6.8			
FM	(30°-60°)	7153.2	49.9			
FH	(60°-80°)	3993.6	27.9			G2/5000
FVH	(80°-90°)	94.2	0.7			G1/100
BL	(0°-30°)	455.7	3.2	B1/500		
BM	(30°-60°)	1092.7	7.6	B2/2500		
BH	(60°-80°)	549.7	3.8	B2/1000		G2/1000
BVH	(80°-90°)	7.5	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	63°	65°	75°	85°
0°	1767.9	1767.9	1767.9	1767.9	1767.9	1767.9	1767.9	1767.9	1767.9	1767.9	1767.9
2.5°	1809.3	1804.4	1811.3	1808.3	1806.4	1802.4	1800.4	1798.5	1794.5	1791.6	1779.7
5°	1814.2	1811.3	1818.1	1824.1	1829.9	1835.9	1838.8	1842.7	1838.8	1831.0	1819.2
7.5°	1772.8	1770.9	1785.7	1803.4	1829.9	1852.7	1877.3	1891.1	1892.0	1889.1	1876.3
10°	1769.9	1764.9	1779.7	1801.4	1835.9	1876.3	1919.6	1949.2	1953.1	1966.0	1952.2
12.5°	1816.2	1811.3	1832.0	1855.6	1891.1	1933.5	1986.7	2028.1	2034.0	2051.7	2041.9
15°	1894.0	1887.1	1910.8	1941.4	1986.7	2034.9	2091.1	2128.6	2133.5	2155.2	2137.4
17.5°	1984.7	1977.8	2005.4	2037.9	2087.2	2153.2	2218.2	2259.6	2265.6	2279.4	2246.8
20°	2100.9	2092.1	2113.8	2143.4	2195.5	2274.4	2352.3	2411.4	2410.4	2410.4	2357.2
22.5°	2236.0	2222.2	2241.0	2264.5	2313.8	2409.5	2512.9	2582.9	2582.9	2555.2	2467.6
25°	2380.9	2367.0	2387.7	2409.5	2452.8	2561.2	2682.4	2769.1	2773.0	2725.8	2585.9
27.5°	2562.2	2544.5	2560.2	2585.9	2611.5	2721.8	2865.7	2966.2	2968.2	2895.2	2698.2
30°	2911.0	2860.8	2811.5	2783.9	2795.7	2905.2	3058.8	3170.2	3180.1	3079.5	2820.4
32.5°	3549.6	3539.7	3366.3	3139.7	3021.4	3102.2	3274.7	3408.6	3414.6	3285.5	2979.1
35°	4542.0	4530.1	4251.2	3819.6	3434.3	3366.3	3536.8	3695.4	3691.5	3545.7	3185.0
37.5°	5726.5	5715.6	5348.0	4770.6	4146.7	3765.4	3874.8	4041.4	4066.0	3874.8	3451.1
40°	6738.6	6698.1	6465.5	5908.7	5092.8	4427.6	4355.7	4466.0	4491.7	4265.0	3789.0
42.5°	7505.2	7470.7	7352.4	7004.5	6237.9	5407.2	4922.4	4964.7	4993.3	4721.3	4177.3
45°	7902.3	7894.4	7941.7	7909.2	7404.7	6609.4	5732.4	5556.0	5566.8	5226.8	4617.8
47.5°	7958.5	7954.5	8170.4	8475.8	8407.9	7965.4	6772.0	6293.1	6254.7	5797.4	5096.7
50°	7627.4	7619.5	8033.4	8605.9	9078.0	9104.6	7952.6	7123.9	7039.1	6387.7	5596.4
52.5°	6570.0	6568.0	7248.0	8200.9	9313.5	10101.9	9119.3	8036.3	7894.4	7012.4	6124.6
55°	5055.4	5091.8	5871.3	6997.7	8883.9	10581.8	10166.9	9049.4	8831.6	7641.2	6611.4
57.5°	3581.1	3634.3	4404.9	5408.1	7551.5	10298.0	10875.5	10064.4	9829.9	8268.0	7105.1
60°	1923.6	1970.9	2742.5	3939.8	5618.0	9239.6	11249.0	10945.4	10723.7	8863.2	7550.6
62.5°	1146.1	1161.8	1481.1	2543.4	3799.9	7058.8	11090.3	11616.5	11434.2	9362.8	7937.8
65°	822.9	825.8	986.5	1553.1	2307.0	4288.7	9977.7	11937.8	11881.6	9739.2	8224.6
67.5°	692.8	690.8	757.8	1031.8	1571.8	2148.3	7647.1	11483.5	11721.9	9977.7	8387.2
70°	594.2	597.2	676.0	755.8	1181.5	1216.1	3801.8	9998.4	10506.9	10040.8	8377.3
72.5°	442.5	452.3	525.2	688.8	891.9	836.6	1312.6	7413.5	8332.9	9460.3	7942.7
75°	312.4	317.3	369.5	579.4	665.2	609.1	670.1	3832.4	5011.0	7252.9	6501.1
77.5°	240.5	249.3	279.8	405.0	655.3	427.7	409.9	1326.5	2037.9	4381.4	4457.2
80°	130.1	145.9	202.0	292.6	460.2	302.6	203.1	528.2	690.8	2048.8	1718.6
82.5°	67.0	74.9	140.9	210.8	262.1	264.1	100.6	219.8	284.7	632.6	235.5
85°	26.6	32.5	94.6	116.2	135.0	130.1	45.3	88.7	102.5	175.4	72.0
87.5°	5.9	9.8	34.4	26.6	25.6	27.6	10.9	20.7	19.7	20.7	12.8
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°	1767.9	1767.9	1767.9	1767.9	1767.9	1767.9	1767.9	1767.9	1767.9	1767.9	1767.9
2.5°	1778.8	1774.8	1763.9	1752.1	1738.3	1730.4	1725.5	1724.6	1717.6	1712.7	1717.6
5°	1808.3	1804.4	1783.7	1759.0	1732.5	1711.7	1692.1	1674.2	1648.6	1643.7	1641.7
7.5°	1867.4	1856.6	1823.1	1789.5	1739.3	1679.3	1606.3	1522.5	1447.6	1425.0	1414.1
10°	1940.3	1925.6	1883.2	1824.1	1712.7	1549.1	1372.8	1209.2	1079.0	1042.6	1028.8
12.5°	2023.1	2010.3	1954.2	1844.8	1601.4	1304.7	1034.7	831.7	705.6	674.0	665.2
15°	2121.6	2103.0	2025.1	1813.2	1402.3	991.4	710.5	590.3	545.0	539.0	533.1
17.5°	2226.1	2195.5	2088.1	1699.9	1134.3	704.6	548.9	514.4	494.7	488.8	485.8
20°	2321.7	2282.3	2125.6	1528.5	847.5	548.9	491.7	469.0	451.3	444.4	440.5
22.5°	2417.4	2361.2	2125.6	1294.9	635.6	486.8	451.3	430.6	409.9	401.1	396.2
25°	2516.9	2442.0	2088.1	1034.7	511.5	446.4	412.9	390.2	372.5	361.6	357.7
27.5°	2613.4	2509.9	2002.4	788.3	455.3	410.9	377.4	355.8	339.0	331.1	331.1
30°	2705.1	2577.0	1882.2	598.2	418.8	376.5	344.9	326.2	309.4	301.6	302.6
32.5°	2829.2	2661.7	1754.1	490.8	387.2	343.9	315.4	297.6	282.8	277.0	277.0
35°	3001.7	2786.9	1643.7	481.9	360.7	317.3	288.7	272.0	257.2	252.3	252.3
37.5°	3246.1	2988.9	1585.6	541.0	339.0	293.7	267.0	249.3	235.5	231.5	230.6
40°	3547.6	3262.8	1617.1	600.1	324.2	273.0	247.3	229.6	217.8	212.9	211.9
42.5°	3905.4	3600.8	1791.6	645.4	314.4	255.2	228.6	208.9	201.0	199.1	199.1
45°	4316.3	3972.4	2058.6	693.7	298.6	238.5	209.9	195.2	189.2	188.2	187.3
47.5°	4783.4	4380.3	2368.1	753.9	282.8	222.7	195.2	185.2	180.3	178.4	178.4
50°	5246.6	4791.3	2686.3	787.4	270.0	208.0	183.3	175.4	171.5	170.5	170.5
52.5°	5731.4	5214.0	2943.5	755.8	259.2	196.1	173.4	167.5	163.6	162.6	162.6
55°	6193.6	5556.0	2987.9	641.5	237.5	184.3	162.6	159.6	154.7	154.7	153.8
57.5°	6591.7	5727.4	2674.5	471.1	215.8	166.6	151.8	148.8	144.8	143.9	142.9
60°	6957.3	5678.2	2064.6	317.3	192.2	148.8	138.0	136.0	132.0	127.1	126.2
62.5°	7163.2	5461.4	1412.1	206.9	168.5	130.1	122.2	121.3	112.3	102.5	100.6
65°	7241.1	5015.9	881.0	150.8	140.9	111.3	105.5	103.4	90.7	79.8	78.8
67.5°	7173.1	4282.8	444.4	119.2	111.3	92.7	86.7	86.7	77.9	68.0	67.0
70°	6901.1	3210.6	187.3	95.6	85.7	70.9	70.9	74.9	66.0	55.1	54.2
72.5°	6310.8	2160.1	99.5	72.9	64.1	50.2	58.1	61.1	52.3	41.4	41.4
75°	5017.0	1317.5	69.0	54.2	40.4	35.5	44.4	46.3	35.5	27.6	26.6
77.5°	3431.3	756.9	46.3	34.4	25.6	20.7	30.5	28.6	18.8	12.8	13.8
80°	1506.7	315.4	26.6	15.8	9.8	7.9	10.9	7.9	5.9	3.9	3.9
82.5°	176.4	73.9	9.8	5.9	3.9	1.9	1.0	0.0	0.0	0.0	0.0
85°	36.5	8.9	4.9	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	6.9	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)