

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: P963151

Luminaire Tested: **NAV-SB2D-830-U-T4FT-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963151
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-830-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14191.1 lumens
Efficiency: N/A
Efficacy: 96.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

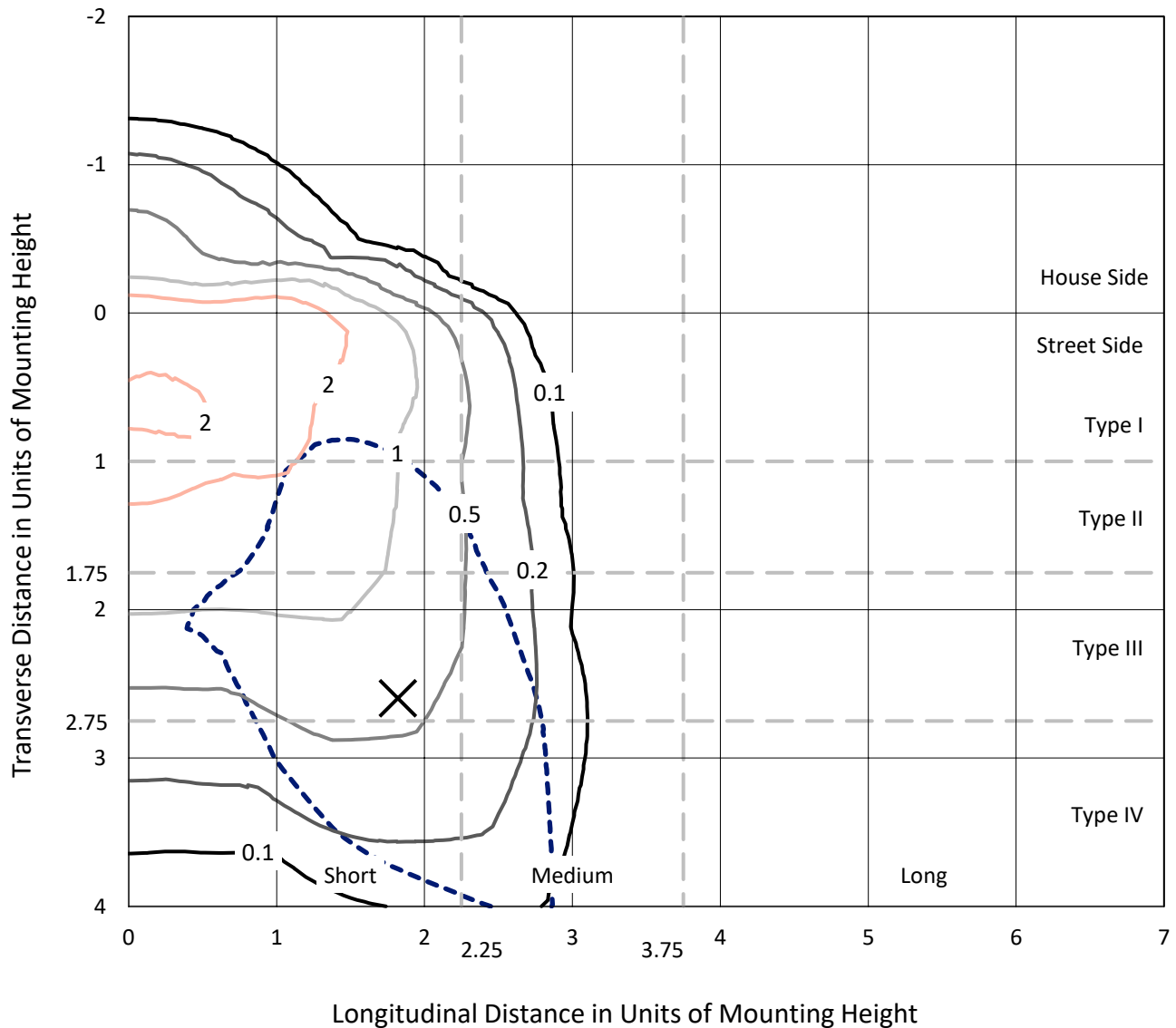
Input Watts (W): 147.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P963151
CATALOG NUMBER: NAV-SB2D-830-U-T4FT-HSS

Iso-Footcandle Lines of Horizontal Illumination

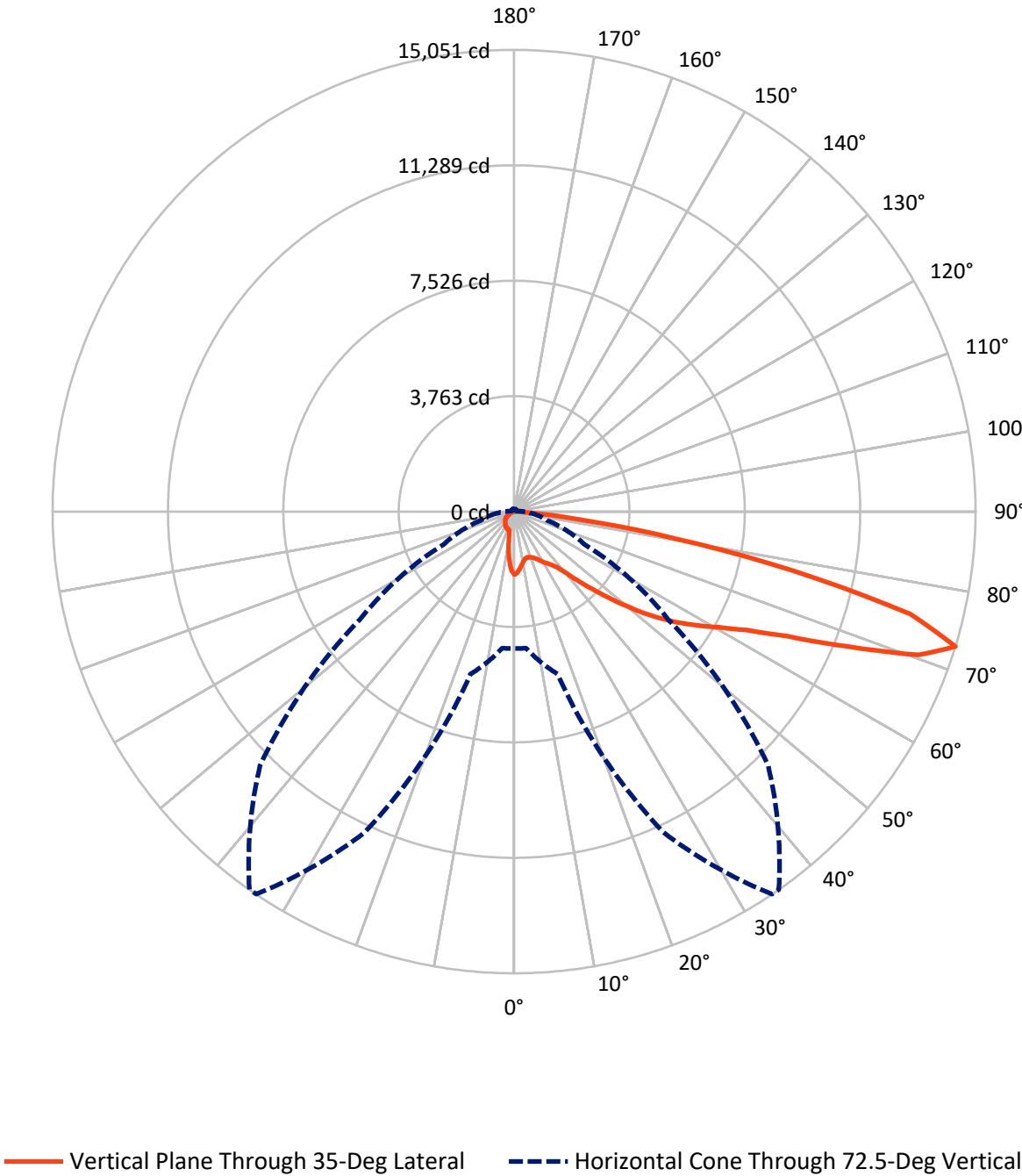
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 fc
Type IV - Short - N/A

REPORT NUMBER: P963151
CATALOG NUMBER: NAV-SB2D-830-U-T4FT-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P963151

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1597.1	0.0	1597.1
	% Fixture	11.3	0.0	11.3
Street Side	Lumens	12594.0	0.0	12594.0
	% Fixture	88.7	0.0	88.7
Total	Lumens	14191.1	0.0	14191.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.0	1.2
10°-20°	395.4	2.8
20°-30°	642.3	4.5
30°-40°	1071.6	7.6
40°-50°	2027.6	14.3
50°-60°	3221.8	22.7
60°-70°	3985.6	28.1
70°-80°	2477.5	17.5
80°-90°	200.2	1.4
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°	14191.1	100.0
0°-180°	14191.1	100.0

Coefficient of Utilization



REPORT NUMBER: P963151

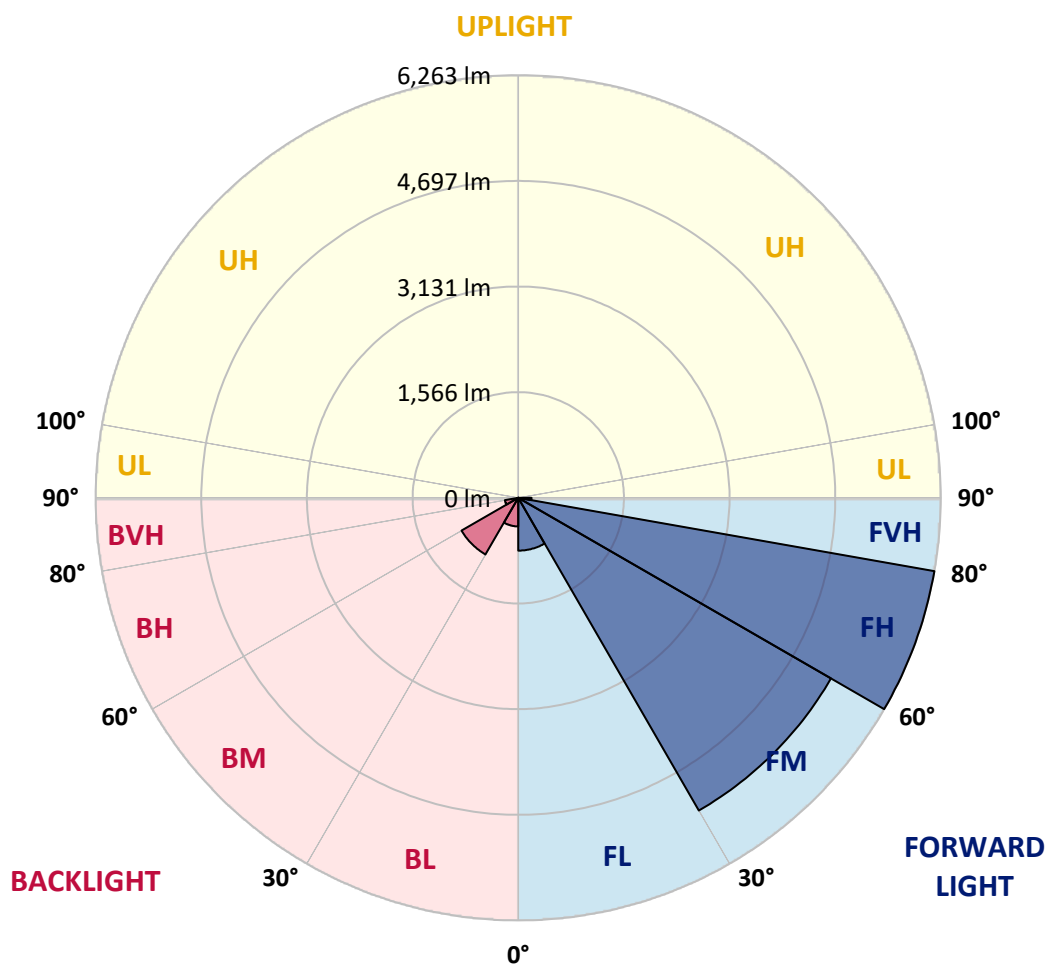
CATALOG NUMBER: NAV-SB2D-830-U-T4FT-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	782.3	5.5			
FM	(30°-60°)	5351.5	37.7			
FH	(60°-80°)	6262.7	44.1			G3/7500
FVH	(80°-90°)	197.5	1.4			G2/225
BL	(0°-30°)	424.4	3.0	B1/500		
BM	(30°-60°)	969.6	6.8	B1/1000		
BH	(60°-80°)	200.4	1.4	B1/500		G1/500
BVH	(80°-90°)	2.7	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short



REPORT NUMBER: P963151

CATALOG NUMBER: NAV-SB2D-830-U-T4FT-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	2056.8	2056.8	2056.8	2056.8	2056.8	2056.8	2056.8	2056.8	2056.8	2056.8	2056.8
2.5°	1965.2	1981.9	1985.0	1990.2	1990.2	1996.5	2006.8	2021.4	2045.3	2057.8	2066.1
5°	1811.4	1823.9	1839.5	1852.0	1875.9	1878.9	1919.5	1959.0	2014.1	2055.7	2084.8
7.5°	1656.4	1671.0	1691.8	1721.9	1753.2	1762.5	1823.9	1890.4	1977.7	2055.7	2104.6
10°	1547.2	1548.3	1567.0	1597.2	1647.1	1658.6	1733.4	1828.0	1937.1	2043.2	2123.3
12.5°	1485.9	1493.2	1501.5	1524.4	1572.2	1579.5	1659.6	1770.8	1896.7	2036.0	2145.1
15°	1485.9	1491.1	1496.3	1507.8	1546.2	1552.5	1623.2	1734.4	1875.9	2039.1	2180.5
17.5°	1501.5	1509.8	1505.6	1519.2	1559.7	1563.8	1626.3	1724.0	1874.8	2058.8	2234.6
20°	1538.9	1545.2	1536.9	1545.2	1585.8	1594.1	1658.6	1743.8	1892.5	2093.2	2302.1
22.5°	1598.2	1601.4	1581.6	1587.8	1629.4	1639.8	1714.6	1799.9	1935.1	2148.3	2392.7
25°	1673.1	1679.4	1649.1	1656.4	1696.0	1708.5	1794.8	1884.2	2002.7	2224.1	2508.1
27.5°	1759.4	1762.5	1736.6	1735.4	1786.4	1804.1	1891.4	1988.2	2093.2	2319.9	2653.6
30°	1858.1	1867.5	1842.5	1838.4	1902.9	1917.5	2003.8	2116.0	2226.3	2463.4	2860.6
32.5°	1936.1	1943.4	1928.8	1939.3	2004.8	2016.2	2140.0	2296.9	2435.3	2667.2	3142.3
35°	2048.5	2052.6	2019.4	2038.0	2112.9	2142.0	2326.1	2550.7	2698.3	2923.0	3510.4
37.5°	2455.0	2455.0	2313.6	2221.1	2292.8	2318.8	2580.8	2869.9	3022.7	3266.1	3974.2
40°	3017.6	3008.2	2801.3	2612.0	2602.7	2653.6	2943.7	3272.3	3441.8	3677.9	4496.2
42.5°	3617.5	3603.0	3321.2	3134.0	3102.9	3120.5	3362.8	3768.3	3940.9	4180.1	5057.7
45°	4149.9	4145.8	3887.9	3636.3	3580.1	3636.3	3885.8	4348.6	4472.3	4723.9	5618.1
47.5°	4596.0	4596.0	4407.8	4243.5	4214.4	4247.7	4593.9	4992.2	4980.8	5303.1	6164.0
50°	5109.7	5105.5	4926.7	4855.9	4886.2	4932.9	5409.1	5670.2	5506.9	5871.9	6651.7
52.5°	5469.5	5494.4	5433.1	5421.6	5575.5	5656.7	6236.8	6333.6	5977.9	6411.6	7016.7
55°	5754.3	5783.5	5854.2	5934.2	6230.7	6336.7	7038.6	6962.6	6372.0	6879.5	7226.8
57.5°	6157.8	6116.3	6225.4	6383.5	6862.8	6990.7	7815.3	7556.4	6689.2	7259.0	7249.6
60°	6647.6	6653.8	6672.5	6872.2	7494.0	7658.3	8580.6	8117.9	6893.0	7491.9	6995.9
62.5°	7236.1	7245.5	7284.0	7590.7	8341.4	8496.4	9395.9	8577.5	6986.6	7426.4	6340.9
65°	7195.6	7235.1	7664.5	8713.7	9629.8	9782.7	10347.3	8899.9	6845.2	6827.5	5162.7
67.5°	6555.1	6619.6	7338.1	10055.0	11572.1	11742.7	11497.3	8963.3	6234.8	5309.3	3367.9
70°	5714.9	5737.7	6601.8	11261.3	13821.3	13993.9	12526.7	8265.6	4731.2	2961.4	1508.8
72.5°	4463.0	4468.1	5481.9	11541.0	15042.1	15051.4	11718.8	6136.0	2544.5	1137.5	524.1
75°	3188.1	3156.9	3671.7	9359.5	13233.9	13339.9	8785.5	2878.2	972.2	537.6	261.0
77.5°	1709.5	1743.8	2077.6	5550.6	9142.1	9323.1	4793.6	829.7	495.0	366.0	172.6
80°	528.2	557.4	851.6	2541.3	5178.3	5287.5	1777.0	369.1	345.2	261.0	113.4
82.5°	166.4	172.6	397.2	1067.9	2149.3	2199.2	514.8	209.0	236.1	172.6	66.5
85°	47.9	48.9	176.8	398.2	531.4	541.7	144.5	81.1	135.2	107.1	34.3
87.5°	5.2	16.6	66.5	66.5	46.8	45.7	15.6	17.6	38.4	13.5	6.3
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: P963151

CATALOG NUMBER: NAV-SB2D-830-U-T4FT-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2056.8	2056.8	2056.8	2056.8	2056.8	2056.8	2056.8	2056.8	2056.8	2056.8	2056.8
2.5°	2061.0	2062.0	2048.5	2025.6	2000.6	1979.8	1953.9	1933.0	1918.5	1914.3	1921.6
5°	2075.5	2068.2	2029.7	1960.1	1876.9	1805.1	1725.1	1661.6	1620.0	1602.4	1608.6
7.5°	2097.4	2076.5	1992.3	1855.0	1696.0	1554.5	1411.0	1299.8	1229.1	1193.7	1198.9
10°	2116.0	2074.5	1929.9	1703.2	1459.9	1245.7	1052.3	918.2	843.3	807.9	809.0
12.5°	2133.7	2073.4	1848.8	1523.4	1193.7	931.7	751.8	685.2	664.4	657.1	655.1
15°	2167.0	2076.5	1746.9	1317.4	928.5	704.0	638.5	637.4	641.5	639.5	638.5
17.5°	2212.8	2079.6	1631.5	1099.1	716.5	620.7	617.7	627.0	633.2	630.2	629.0
20°	2272.0	2092.1	1508.8	882.8	615.6	599.9	607.2	615.6	620.7	615.6	614.5
22.5°	2355.2	2114.0	1374.6	709.2	583.3	587.5	593.8	603.1	608.3	601.1	599.9
25°	2457.1	2148.3	1242.6	616.6	567.7	573.0	582.3	592.7	598.9	591.6	590.6
27.5°	2589.1	2203.3	1120.9	595.8	552.2	555.2	568.8	584.4	592.7	583.3	583.3
30°	2780.5	2293.8	1015.9	605.2	542.7	535.5	554.2	576.0	585.4	577.1	576.0
32.5°	3034.2	2421.8	951.4	619.7	538.6	512.6	530.3	558.4	574.0	568.8	568.8
35°	3366.9	2616.2	926.5	636.4	535.5	488.7	501.2	531.4	558.4	563.5	563.5
37.5°	3770.4	2886.5	933.8	643.7	526.1	468.9	475.2	501.2	536.6	553.2	557.4
40°	4228.9	3201.6	975.4	636.4	515.8	452.3	453.4	473.1	504.3	529.3	537.6
42.5°	4702.1	3569.7	1052.3	609.4	506.4	437.8	434.6	448.1	468.9	486.7	493.9
45°	5152.4	3948.2	1128.2	571.9	495.0	423.2	415.9	421.2	425.3	432.6	436.8
47.5°	5545.4	4214.4	1106.4	537.6	479.4	406.6	394.1	392.1	379.6	378.5	377.4
50°	5816.8	4272.6	982.7	503.3	456.4	387.9	368.1	355.6	333.7	323.4	324.4
52.5°	5903.1	4042.8	802.8	468.9	419.0	362.8	334.9	315.1	288.0	278.7	277.7
55°	5788.7	3592.6	641.5	427.3	367.1	329.6	298.5	272.4	250.6	239.1	239.1
57.5°	5509.0	3019.6	507.5	378.5	311.9	292.2	261.0	235.0	216.3	204.8	202.7
60°	5045.3	2397.8	401.4	320.3	266.2	251.6	219.5	202.7	186.1	172.6	169.5
62.5°	4341.3	1711.5	315.1	253.7	222.5	205.9	187.2	174.7	155.0	136.2	133.1
65°	3387.7	1047.1	243.3	186.1	178.9	170.6	159.1	147.7	123.7	105.1	101.9
67.5°	2136.8	496.0	173.6	140.4	141.4	137.2	132.0	122.7	105.1	88.4	86.3
70°	941.1	240.2	114.4	107.1	105.1	105.1	109.2	106.1	89.4	73.8	70.7
72.5°	320.3	128.9	85.3	81.1	76.0	74.8	91.5	88.4	71.8	57.2	54.1
75°	167.4	86.3	62.4	58.2	45.7	55.1	72.8	68.7	50.9	37.4	34.3
77.5°	109.2	61.4	42.6	37.4	26.0	36.4	54.1	47.9	30.1	18.8	16.6
80°	68.7	40.6	24.9	17.6	12.5	19.8	29.1	20.8	11.5	4.2	3.1
82.5°	36.4	20.8	9.3	6.3	5.2	6.3	7.3	5.2	2.0	0.0	0.0
85°	14.6	7.3	3.1	2.0	1.0	0.0	2.0	1.0	0.0	0.0	0.0
87.5°	5.2	1.0	0.0	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)