

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: P197060

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-8030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197060  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-02-D-UNV-SL2-8030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10689 lumens  
Efficiency: N/A  
Efficacy: 82.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

Input Watts (W): 129  
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

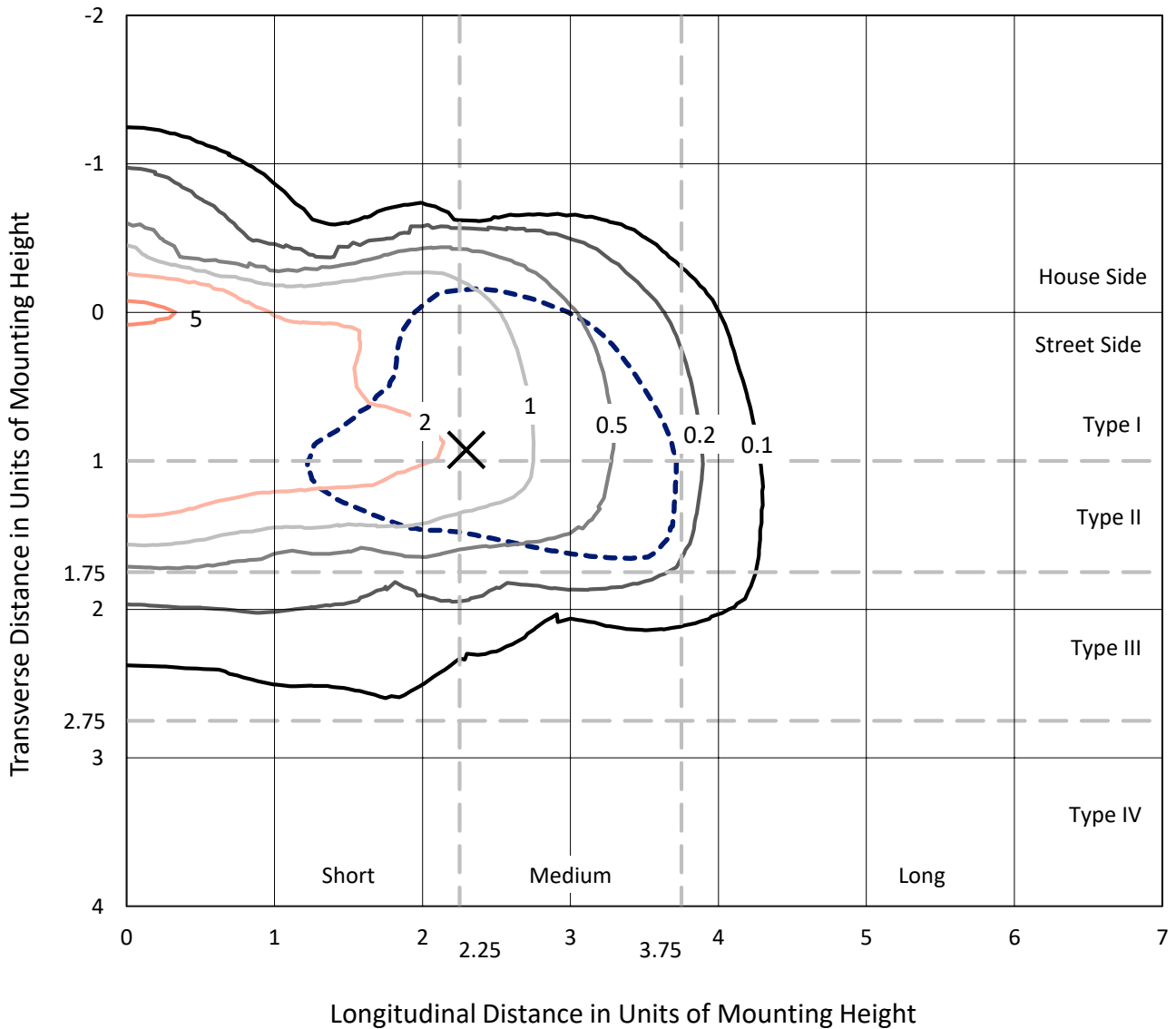


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### Iso-Footcandle Lines of Horizontal Illumination

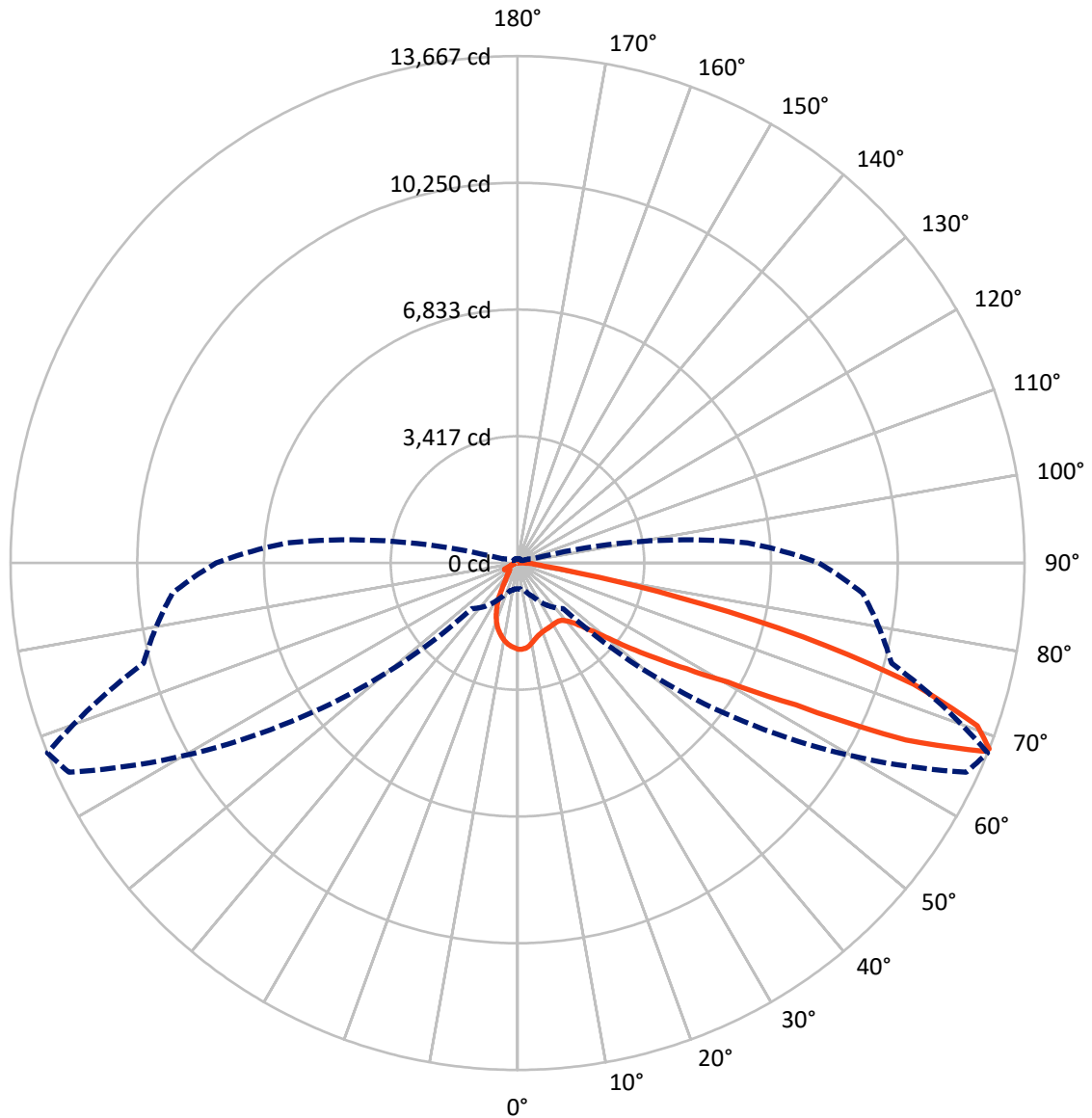
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.8 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1748.8	0.0	1748.8
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	8940.2	0.0	8940.2
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	10689.0	0.0	10689.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	199.3	1.9
10°-20°	462.2	4.3
20°-30°	625.1	5.8
30°-40°	881.4	8.2
40°-50°	1449.4	13.6
50°-60°	2246.6	21.0
60°-70°	2912.9	27.3
70°-80°	1671.6	15.6
80°-90°	240.5	2.3
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°	10689.0	100.0
0°-180°	10689.0	100.0

**Coefficient of Utilization**



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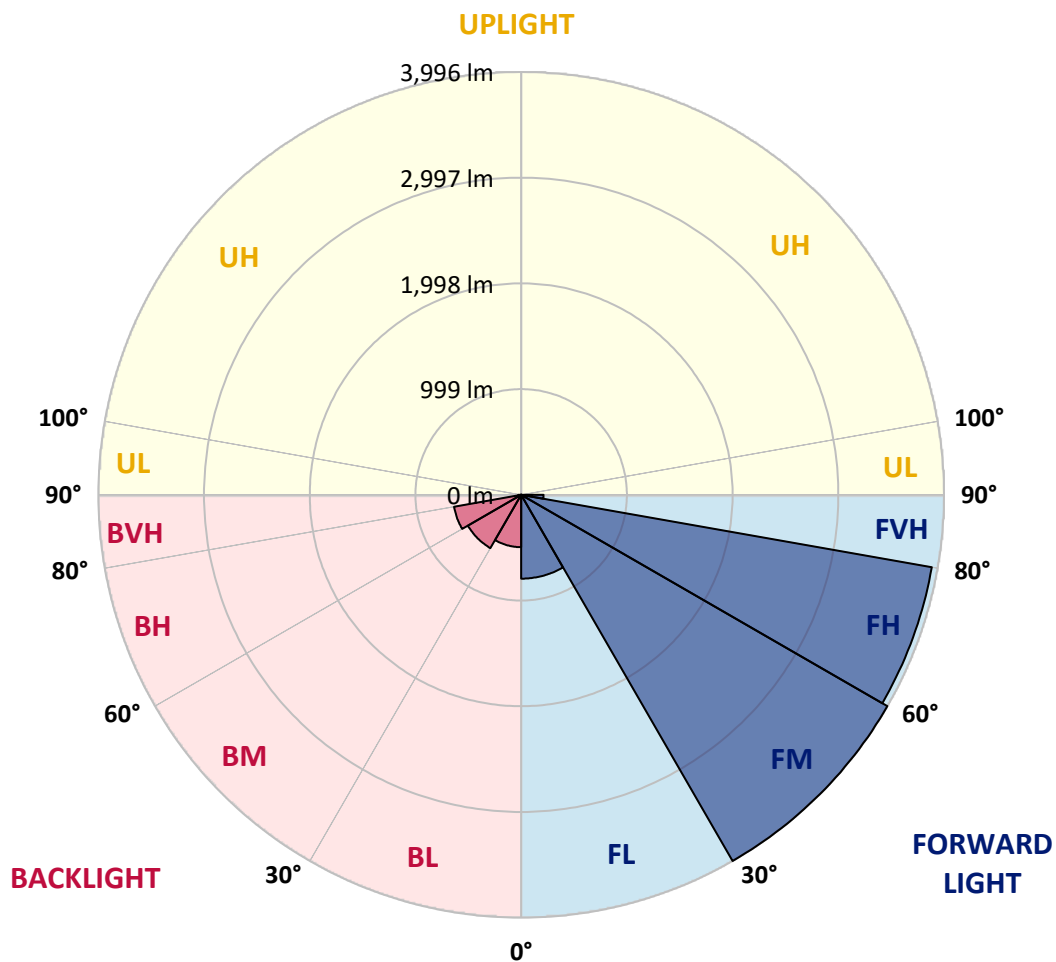
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	792.2	7.4			
FM	(30°-60°)	3995.7	37.4			
FH	(60°-80°)	3940.5	36.9			G2/5000
FVH	(80°-90°)	211.8	2.0			G2/225
BL	(0°-30°)	494.4	4.6	B1/500		
BM	(30°-60°)	581.6	5.4	B1/1000		
BH	(60°-80°)	644.1	6.0	B2/1000		G2/1000
BVH	(80°-90°)	28.7	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	2325.8	2325.8	2325.8	2325.8	2325.8	2325.8	2325.8	2325.8	2325.8	2325.8	2325.8
2.5°	2263.7	2281.8	2281.8	2295.1	2307.0	2316.8	2325.1	2325.1	2325.1	2319.5	2314.7
5°	2025.6	2050.0	2053.5	2087.0	2131.0	2184.8	2244.8	2297.9	2308.4	2327.9	2335.6
7.5°	1860.1	1867.8	1881.1	1904.1	1948.8	2015.1	2109.4	2228.1	2256.7	2318.2	2350.3
10°	1742.8	1749.1	1760.3	1783.3	1823.8	1883.8	1976.7	2131.0	2178.5	2287.4	2351.0
12.5°	1656.9	1661.8	1672.3	1693.2	1734.4	1788.2	1883.1	2043.7	2102.4	2256.7	2360.7
15°	1589.9	1598.3	1606.6	1626.9	1668.8	1720.5	1816.8	1980.2	2043.7	2232.3	2378.9
17.5°	1563.4	1567.5	1568.9	1579.4	1617.1	1669.5	1765.8	1935.5	2001.2	2212.7	2392.9
20°	1580.1	1580.8	1566.8	1559.9	1581.5	1629.7	1723.3	1902.0	1969.0	2195.3	2398.4
22.5°	1653.4	1653.4	1617.1	1586.4	1571.7	1601.8	1694.6	1879.0	1951.6	2182.0	2398.4
25°	1793.1	1786.8	1730.2	1669.5	1604.6	1592.0	1676.5	1864.3	1938.3	2175.0	2389.4
27.5°	1976.7	1971.1	1899.2	1809.1	1691.8	1612.9	1670.2	1852.4	1925.0	2164.5	2369.8
30°	2200.1	2195.3	2113.6	1995.6	1822.4	1679.3	1684.8	1844.0	1914.6	2147.1	2337.0
32.5°	2422.9	2420.1	2355.2	2234.4	2002.5	1791.7	1723.3	1842.7	1909.0	2126.1	2297.2
35°	2647.0	2647.0	2607.2	2505.3	2244.8	1960.7	1803.5	1868.5	1919.5	2115.0	2263.0
37.5°	2978.0	2964.7	2890.7	2785.3	2550.0	2179.9	1933.4	1922.9	1960.0	2133.8	2251.8
40°	3490.5	3452.1	3267.1	3089.7	2883.0	2460.6	2123.3	2028.4	2050.7	2198.1	2278.4
42.5°	4026.7	3966.0	3720.9	3437.4	3227.3	2806.9	2372.6	2199.4	2198.8	2322.3	2362.8
45°	4486.9	4455.5	4190.1	3830.5	3620.4	3196.5	2687.5	2453.6	2428.5	2515.1	2525.5
47.5°	4754.3	4733.4	4573.5	4246.7	4086.8	3656.7	3086.9	2806.2	2758.7	2810.4	2794.3
50°	4680.3	4700.5	4654.5	4487.6	4588.1	4303.2	3595.9	3289.4	3199.3	3251.0	3211.9
52.5°	4290.7	4345.1	4386.3	4418.5	4876.5	5168.4	4235.5	3892.7	3818.0	3808.9	3771.2
55°	3588.9	3675.5	3805.4	4041.4	4799.0	5863.1	5352.7	4622.3	4513.4	4456.2	4470.8
57.5°	2442.4	2573.7	2853.7	3302.7	4396.1	6159.2	7004.7	5565.0	5380.6	5176.7	5224.2
60°	1345.5	1455.1	1788.2	2240.6	3476.5	6115.2	8468.9	7096.9	6516.7	5976.2	6074.0
62.5°	870.7	894.4	1142.3	1530.5	2133.8	5398.8	9282.4	9657.3	8427.7	7030.6	7168.1
65°	699.6	716.4	837.9	1234.5	1486.5	3473.0	9318.7	12313.4	11502.8	8463.3	8467.5
67.5°	683.6	691.3	761.8	1038.3	1394.4	1890.8	8054.9	13360.8	13548.6	10154.5	9336.8
68°	693.4	702.4	773.6	1006.2	1393.7	1742.8	7444.6	13344.7	13666.6	10437.3	9336.8
70°	611.7	622.8	789.0	1041.1	1334.3	1498.4	5097.8	12636.0	13154.1	11087.3	8859.2
72.5°	319.8	310.7	390.3	821.8	1501.9	1561.3	2693.1	10556.7	11161.3	10268.3	7654.1
75°	249.3	226.9	218.5	324.7	1321.1	1619.2	1564.1	7503.3	7959.9	7402.0	5116.0
77.5°	234.6	207.4	191.3	192.0	581.6	1684.8	1265.2	4415.7	4415.7	3531.0	1632.5
80°	188.5	163.4	152.9	174.6	280.7	1552.9	1320.4	2012.3	1716.3	912.6	449.7
82.5°	124.3	111.0	111.7	141.7	213.0	1036.9	1529.1	993.6	746.4	404.3	264.6
85°	78.9	67.7	75.4	99.1	159.2	462.2	1513.8	690.6	494.4	226.9	132.0
87.5°	39.8	30.7	37.7	51.7	97.1	132.7	1246.4	616.5	366.6	94.3	71.9
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°	2325.8	2325.8	2325.8	2325.8	2325.8	2325.8	2325.8	2325.8	2325.8	2325.8	2325.8
2.5°	2314.7	2299.3	2291.6	2279.0	2263.7	2248.3	2237.9	2233.0	2230.2	2231.6	2230.9
5°	2331.4	2311.2	2278.4	2231.6	2183.4	2132.4	2093.3	2063.3	2044.4	2038.9	2037.5
7.5°	2344.0	2314.7	2253.2	2168.0	2085.6	1996.3	1920.2	1859.4	1818.2	1799.4	1798.7
10°	2341.9	2304.2	2207.1	2081.4	1960.7	1829.4	1710.0	1608.0	1534.0	1498.4	1497.0
12.5°	2344.0	2292.3	2150.6	1980.2	1807.0	1619.2	1441.9	1283.4	1173.0	1120.7	1118.6
15°	2352.4	2279.7	2092.6	1867.1	1627.6	1362.3	1108.8	909.8	809.3	775.0	775.0
17.5°	2351.7	2258.8	2025.6	1735.8	1414.6	1059.2	756.9	634.0	624.2	655.6	660.5
20°	2337.7	2225.3	1939.0	1580.1	1164.7	733.1	513.2	495.7	574.0	660.5	670.3
22.5°	2316.1	2182.0	1839.2	1399.3	873.5	477.6	395.9	422.4	528.6	636.1	651.5
25°	2286.0	2129.6	1724.6	1189.1	580.9	343.5	330.3	363.1	437.8	509.7	520.9
27.5°	2242.0	2063.3	1599.7	961.5	370.8	282.8	287.7	310.7	342.8	373.6	379.8
30°	2186.9	1985.8	1463.5	709.4	281.4	252.8	261.1	275.1	289.1	308.6	312.8
32.5°	2131.0	1906.9	1321.8	487.4	245.8	236.7	245.1	252.8	264.6	277.9	280.7
35°	2080.7	1833.6	1175.8	340.0	230.4	226.2	230.4	235.3	247.2	260.4	261.8
37.5°	2044.4	1773.5	1023.6	268.8	221.3	217.2	219.2	221.3	235.3	254.9	257.0
40°	2039.6	1733.7	869.3	241.6	214.4	208.8	207.4	208.8	226.9	249.3	251.4
42.5°	2087.0	1735.8	718.5	230.4	208.8	202.5	196.9	199.7	215.8	233.2	234.6
45°	2199.4	1784.7	587.9	225.5	203.9	199.0	190.6	192.0	199.7	208.8	210.2
47.5°	2397.7	1891.5	488.1	222.7	199.7	195.5	185.0	180.8	181.5	186.4	186.4
50°	2714.7	2070.3	427.3	219.9	196.2	188.5	176.7	168.3	166.2	169.0	169.7
52.5°	3187.5	2376.8	398.0	214.4	189.9	179.4	166.2	157.8	154.3	157.1	157.1
55°	3826.3	2866.3	384.0	206.7	182.2	168.3	156.4	149.4	146.6	148.7	148.7
57.5°	4554.6	3502.4	407.8	196.2	172.5	156.4	148.0	143.1	141.0	143.1	143.8
60°	5419.7	4334.7	571.2	182.9	162.0	145.9	141.0	138.3	136.9	138.9	138.9
62.5°	6569.7	5442.1	884.0	172.5	150.8	136.2	134.8	133.4	132.0	134.1	134.1
65°	7811.2	6449.6	909.8	166.2	141.0	127.8	128.5	128.5	127.1	129.2	129.2
67.5°	8206.4	6362.3	508.3	158.5	129.2	119.4	122.2	122.2	121.5	123.6	122.9
68°	8122.6	6224.1	442.7	156.4	127.1	117.3	120.1	120.8	120.1	122.2	121.5
70°	7498.4	5464.4	291.2	144.5	118.0	110.3	114.5	115.2	114.5	117.3	116.6
72.5°	6189.9	4098.7	215.1	126.4	106.8	101.2	105.4	106.1	106.8	109.6	108.9
75°	3931.1	2263.7	169.7	107.5	95.7	90.8	95.0	97.1	98.5	102.6	100.5
77.5°	1076.7	687.1	137.6	91.5	82.4	80.3	83.1	85.9	87.3	92.2	88.7
80°	377.0	303.7	114.5	77.5	68.4	67.7	70.5	73.3	74.7	78.9	74.7
82.5°	229.0	198.3	91.5	60.7	53.8	53.1	56.6	59.4	60.7	60.7	58.0
85°	119.4	104.7	67.0	42.6	37.0	34.9	41.2	44.7	45.4	44.7	42.6
87.5°	67.0	59.4	35.6	20.2	16.8	17.5	21.6	26.5	28.6	27.9	26.5
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)