

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: P196568

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196568  
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-SL2-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 800mA 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: 9330.8 lumens  
Efficiency: N/A  
Efficacy: 109.8 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): 85  
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

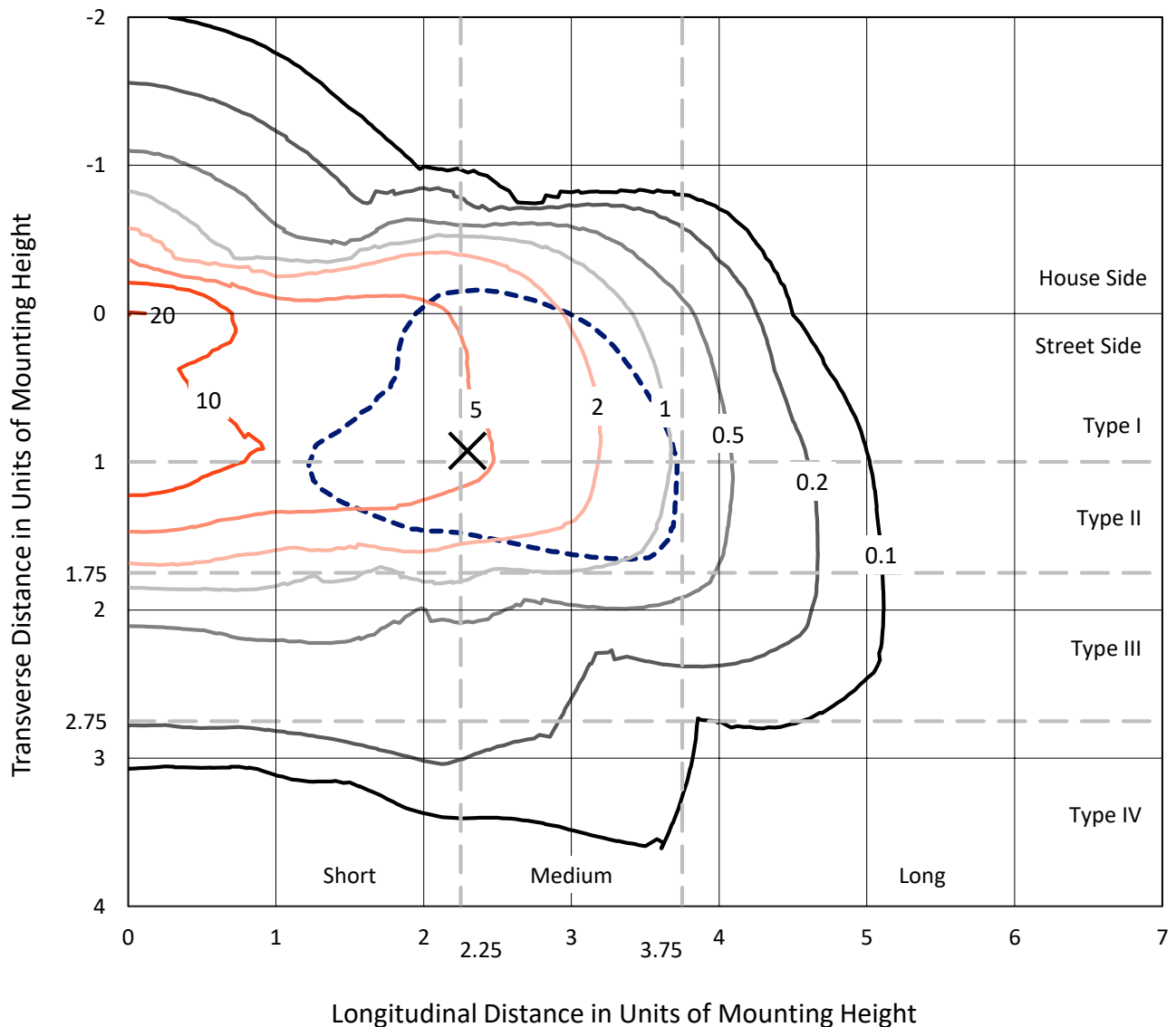


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### Iso-Footcandle Lines of Horizontal Illumination

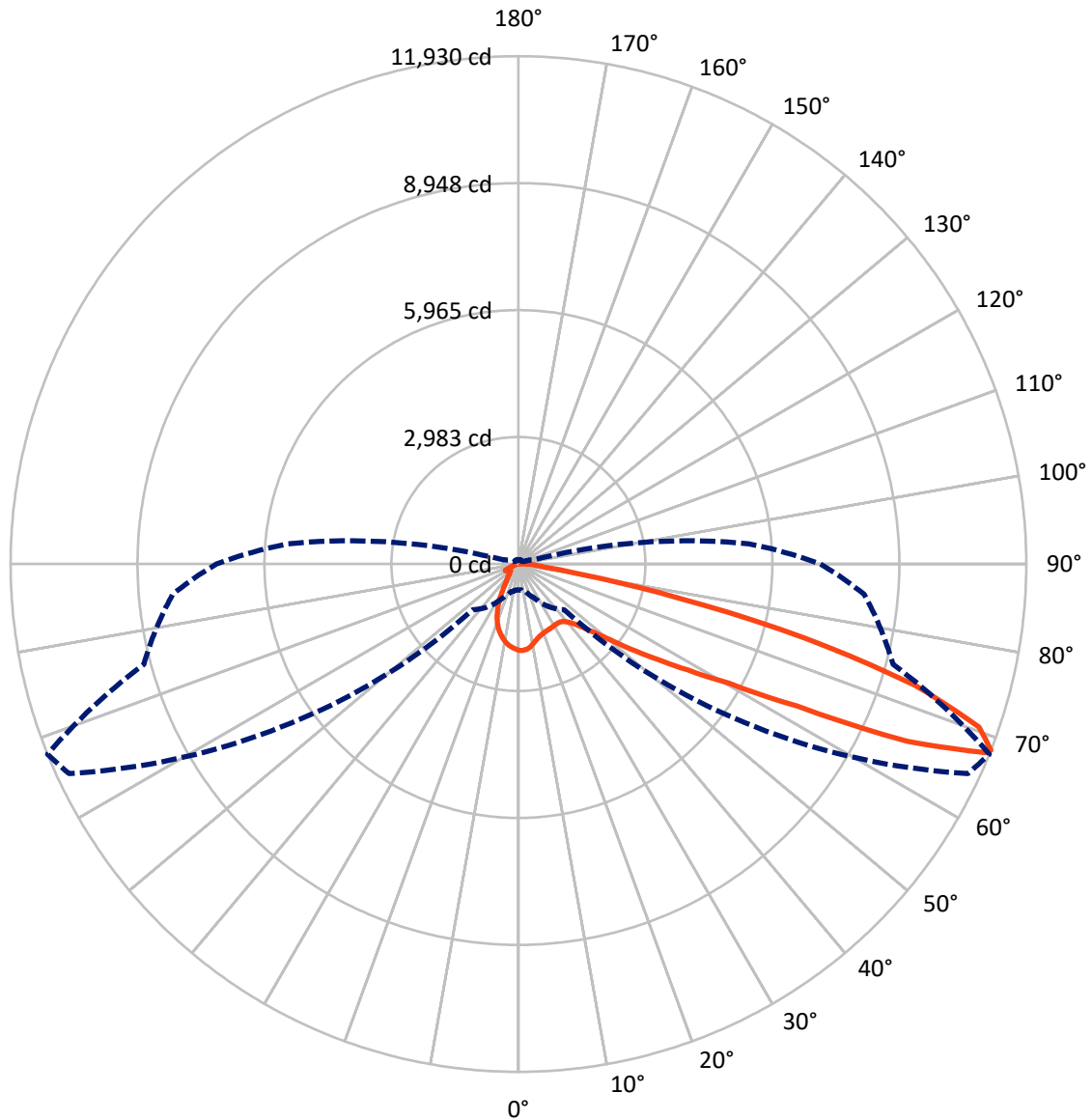
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 20.3 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	1526.5	0.0	1526.5
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	7804.2	0.0	7804.2
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	9330.8	0.0	9330.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.0	1.9
10°-20°	403.5	4.3
20°-30°	545.7	5.8
30°-40°	769.4	8.2
40°-50°	1265.2	13.6
50°-60°	1961.2	21.0
60°-70°	2542.8	27.3
70°-80°	1459.2	15.6
80°-90°	209.9	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°	9330.8	100.0
0°-180°	9330.8	100.0



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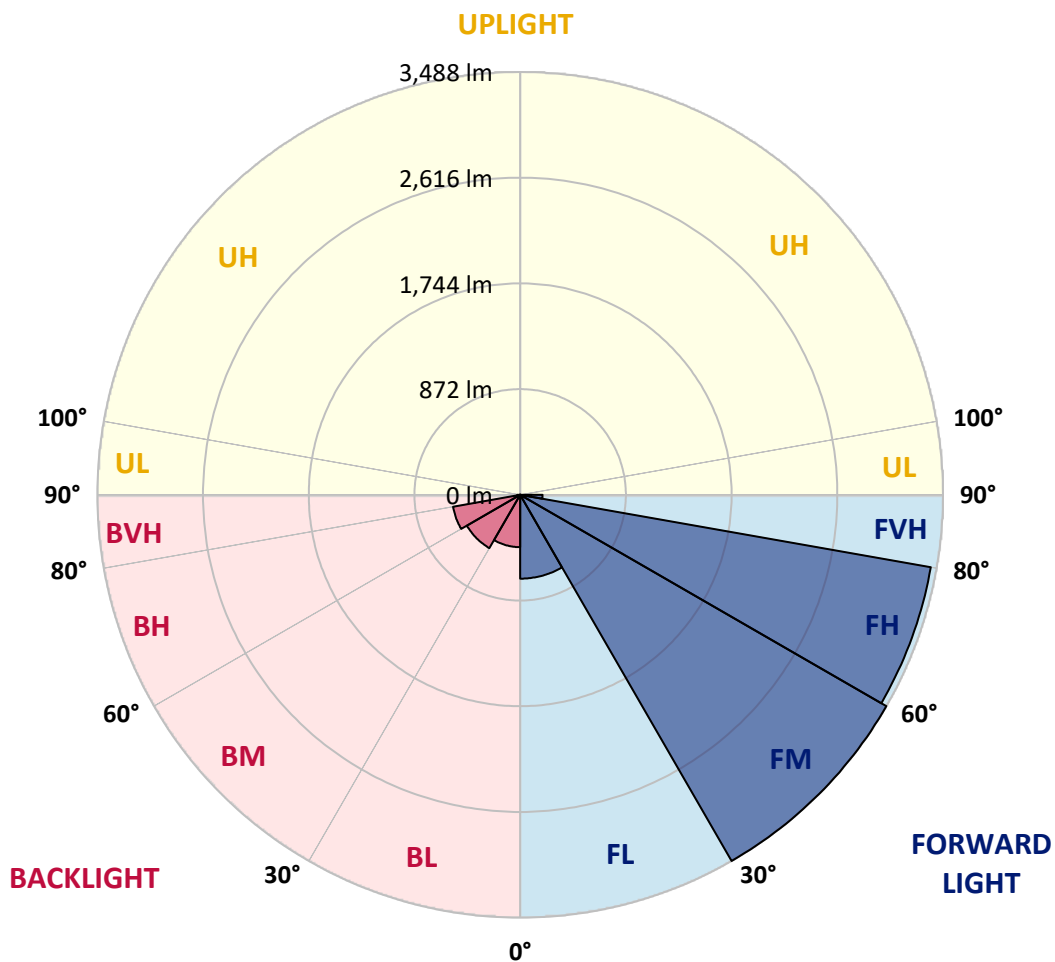
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	691.6	7.4			
FM	(30°-60°)	3488.0	37.4			
FH	(60°-80°)	3439.7	36.9			G2/5000
FVH	(80°-90°)	184.9	2.0			G2/225
BL	(0°-30°)	431.6	4.6	B1/500		
BM	(30°-60°)	507.7	5.4	B1/1000		
BH	(60°-80°)	562.2	6.0	B2/1000		G2/1000
BVH	(80°-90°)	25.0	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°	2030.2	2030.2	2030.2	2030.2	2030.2	2030.2	2030.2	2030.2	2030.2	2030.2	2030.2
2.5°	1976.1	1991.9	1991.9	2003.5	2013.8	2022.4	2029.7	2029.7	2029.7	2024.8	2020.5
5°	1768.2	1789.5	1792.6	1821.8	1860.2	1907.1	1959.6	2005.9	2015.1	2032.1	2038.8
7.5°	1623.7	1630.4	1642.0	1662.2	1701.1	1759.1	1841.3	1945.0	1970.0	2023.6	2051.7
10°	1521.3	1526.8	1536.6	1556.7	1592.0	1644.5	1725.5	1860.2	1901.6	1996.7	2052.2
12.5°	1446.4	1450.6	1459.8	1478.1	1514.0	1561.0	1643.8	1784.1	1835.2	1970.0	2060.7
15°	1387.8	1395.1	1402.5	1420.2	1456.8	1501.9	1585.9	1728.6	1784.1	1948.6	2076.6
17.5°	1364.6	1368.4	1369.6	1378.8	1411.6	1457.3	1541.4	1689.5	1746.8	1931.6	2088.8
20°	1379.3	1380.0	1367.7	1361.7	1380.6	1422.5	1504.3	1660.3	1718.8	1916.3	2093.6
22.5°	1443.4	1443.4	1411.6	1384.9	1372.0	1398.2	1479.3	1640.2	1703.6	1904.7	2093.6
25°	1565.2	1559.7	1510.4	1457.3	1400.7	1389.7	1463.4	1627.4	1692.0	1898.6	2085.8
27.5°	1725.5	1720.7	1657.9	1579.3	1476.8	1408.1	1457.9	1617.0	1680.4	1889.5	2068.8
30°	1920.6	1916.3	1845.0	1742.0	1590.9	1465.9	1470.7	1609.7	1671.2	1874.3	2040.1
32.5°	2115.0	2112.5	2055.9	1950.4	1748.0	1564.0	1504.3	1608.6	1666.4	1856.0	2005.4
35°	2310.7	2310.7	2275.9	2187.0	1959.6	1711.5	1574.3	1631.0	1675.6	1846.3	1975.4
37.5°	2599.6	2588.1	2523.4	2431.3	2225.9	1902.9	1687.7	1678.5	1710.9	1862.7	1965.7
40°	3046.9	3013.5	2851.8	2697.1	2516.7	2147.9	1853.5	1770.6	1790.1	1918.7	1988.8
42.5°	3515.1	3462.0	3248.1	3000.6	2817.1	2450.2	2071.1	1920.0	1919.3	2027.2	2062.6
45°	3916.7	3889.3	3657.7	3343.8	3160.4	2790.4	2346.1	2141.8	2119.8	2195.4	2204.7
47.5°	4150.2	4131.8	3992.4	3707.0	3567.5	3192.0	2694.7	2449.6	2408.2	2453.3	2439.3
50°	4085.5	4103.2	4063.1	3917.4	4005.1	3756.5	3139.0	2871.5	2792.7	2837.9	2803.8
52.5°	3745.4	3793.1	3829.0	3857.0	4256.8	4511.7	3697.4	3398.1	3332.9	3324.9	3292.0
55°	3132.9	3208.5	3321.8	3527.9	4189.2	5118.0	4672.5	4035.0	3939.9	3889.9	3902.7
57.5°	2132.0	2246.7	2491.1	2883.1	3837.5	5376.5	6114.5	4857.7	4696.9	4519.0	4560.4
60°	1174.5	1270.2	1561.0	1956.0	3034.7	5338.1	7392.8	6195.1	5688.6	5216.8	5302.2
62.5°	760.0	780.7	997.2	1336.0	1862.7	4712.8	8102.8	8430.1	7356.9	6137.2	6257.3
65°	610.8	625.4	731.4	1077.7	1297.7	3031.7	8134.6	10748.7	10041.2	7387.9	7391.6
67.5°	596.7	603.4	665.0	906.3	1217.1	1650.6	7031.4	11663.0	11827.0	8864.1	8150.4
68°	605.3	613.2	675.3	878.3	1216.6	1521.3	6498.6	11649.0	11930.0	9111.0	8150.4
70°	533.9	543.7	688.8	908.8	1164.8	1308.1	4450.0	11030.4	11482.6	9678.4	7733.5
72.5°	279.1	271.2	340.7	717.4	1311.1	1362.9	2350.9	9215.3	9743.0	8963.5	6681.4
75°	217.7	198.1	190.7	283.4	1153.2	1413.5	1365.3	6549.9	6948.5	6461.5	4465.9
77.5°	204.8	181.1	167.0	167.6	507.7	1470.7	1104.4	3854.5	3854.5	3082.3	1425.1
80°	164.6	142.6	133.6	152.4	245.1	1355.6	1152.5	1756.6	1498.2	796.6	392.6
82.5°	108.5	96.9	97.6	123.7	185.8	905.1	1334.8	867.3	651.6	352.9	231.0
85°	68.9	59.1	65.8	86.6	139.0	403.5	1321.4	602.8	431.6	198.1	115.2
87.5°	34.8	26.8	32.9	45.2	84.6	115.9	1088.0	538.2	320.0	82.3	62.9
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°	2030.2	2030.2	2030.2	2030.2	2030.2	2030.2	2030.2	2030.2	2030.2	2030.2	2030.2
2.5°	2020.5	2007.1	2000.4	1989.5	1976.1	1962.7	1953.4	1949.1	1946.8	1948.0	1947.4
5°	2035.2	2017.5	1988.8	1948.0	1905.9	1861.4	1827.4	1801.1	1784.6	1779.8	1778.5
7.5°	2046.1	2020.5	1966.8	1892.6	1820.6	1742.5	1676.1	1623.1	1587.2	1570.7	1570.0
10°	2044.4	2011.4	1926.7	1817.0	1711.5	1597.0	1492.7	1403.7	1339.1	1308.1	1306.7
12.5°	2046.1	2001.1	1877.3	1728.6	1577.3	1413.5	1258.6	1120.2	1024.0	978.3	976.4
15°	2053.4	1990.0	1826.7	1629.8	1420.8	1189.2	967.9	794.2	706.5	676.6	676.6
17.5°	2052.9	1971.8	1768.2	1515.2	1234.8	924.7	660.7	553.4	544.8	572.3	576.6
20°	2040.6	1942.5	1692.7	1379.3	1016.6	640.0	448.0	432.7	501.1	576.6	585.1
22.5°	2021.8	1904.7	1605.4	1221.4	762.5	417.0	345.6	368.8	461.4	555.2	568.7
25°	1995.5	1859.0	1505.5	1038.0	507.1	299.9	288.3	317.0	382.2	444.9	454.7
27.5°	1957.2	1801.1	1396.5	839.3	323.6	246.8	251.1	271.2	299.3	326.1	331.6
30°	1909.0	1733.5	1277.6	619.3	245.7	220.6	228.0	240.2	252.4	269.5	273.0
32.5°	1860.2	1664.6	1153.8	425.4	214.5	206.6	213.9	220.6	231.0	242.5	245.1
35°	1816.3	1600.5	1026.4	296.8	201.1	197.4	201.1	205.4	215.8	227.4	228.6
37.5°	1784.6	1548.2	893.5	234.7	193.2	189.6	191.4	193.2	205.4	222.5	224.3
40°	1780.4	1513.5	758.8	210.9	187.2	182.3	181.1	182.3	198.1	217.7	219.4
42.5°	1821.8	1515.2	627.1	201.1	182.3	176.8	171.9	174.3	188.4	203.5	204.8
45°	1920.0	1557.9	513.2	196.8	178.0	173.7	166.4	167.6	174.3	182.3	183.4
47.5°	2093.1	1651.1	426.0	194.5	174.3	170.7	161.4	157.9	158.4	162.7	162.7
50°	2369.9	1807.2	373.0	192.0	171.3	164.6	154.2	146.9	145.1	147.5	148.1
52.5°	2782.4	2074.9	347.5	187.2	165.7	156.7	145.1	137.7	134.7	137.1	137.1
55°	3340.2	2502.0	335.2	180.4	159.1	146.9	136.6	130.4	128.1	129.8	129.8
57.5°	3975.8	3057.3	355.9	171.3	150.6	136.6	129.3	125.0	123.1	125.0	125.5
60°	4731.0	3783.8	498.6	159.7	141.4	127.4	123.1	120.7	119.4	121.3	121.3
62.5°	5734.9	4750.6	771.6	150.6	131.6	118.9	117.7	116.5	115.2	117.0	117.0
65°	6818.7	5630.0	794.2	145.1	123.1	111.6	112.1	112.1	110.9	112.7	112.7
67.5°	7163.6	5553.8	443.7	138.3	112.7	104.3	106.6	106.6	106.1	107.8	107.3
68°	7090.5	5433.3	386.4	136.6	110.9	102.3	104.9	105.4	104.9	106.6	106.1
70°	6545.5	4770.0	254.1	126.2	103.0	96.2	100.0	100.5	100.0	102.3	101.8
72.5°	5403.3	3577.8	187.7	110.4	93.3	88.4	92.0	92.7	93.3	95.7	95.0
75°	3431.5	1976.1	148.1	93.9	83.5	79.2	82.9	84.6	86.0	89.6	87.7
77.5°	939.8	599.8	120.0	79.9	71.9	70.2	72.5	75.0	76.2	80.5	77.3
80°	329.1	265.2	100.0	67.6	59.8	59.1	61.5	64.0	65.2	68.9	65.2
82.5°	200.0	173.0	79.9	53.0	47.0	46.3	49.3	51.8	53.0	53.0	50.6
85°	104.3	91.4	58.6	37.1	32.3	30.5	35.9	39.0	39.7	39.0	37.1
87.5°	58.6	51.8	31.1	17.7	14.6	15.2	18.9	23.2	25.0	24.4	23.2
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)