

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: P270426

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270426  
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-03-D-UNV-SL2-7027-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 2700K, 615mA 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: 10165.2 lumens  
Efficiency: N/A  
Efficacy: 105.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

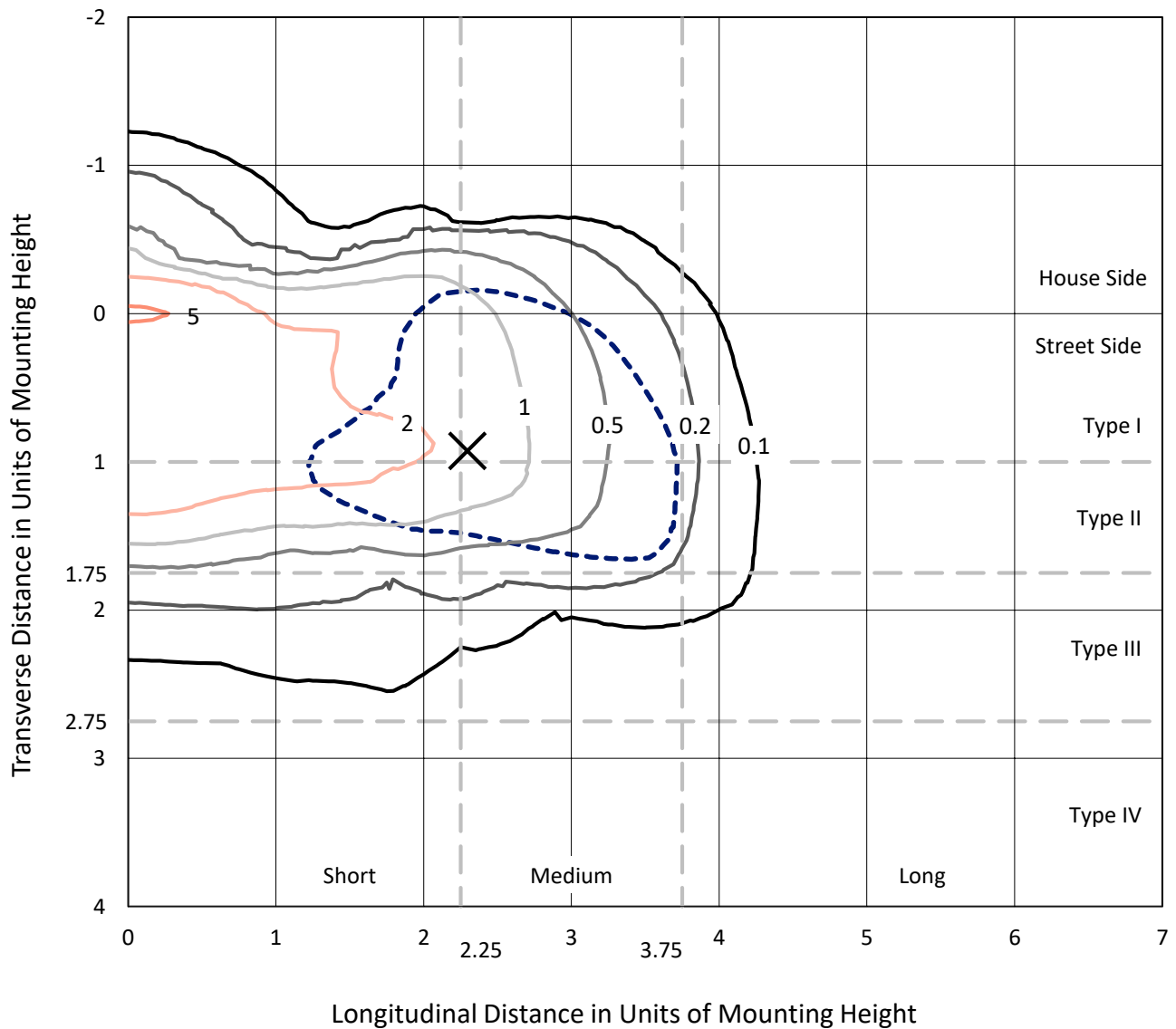
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

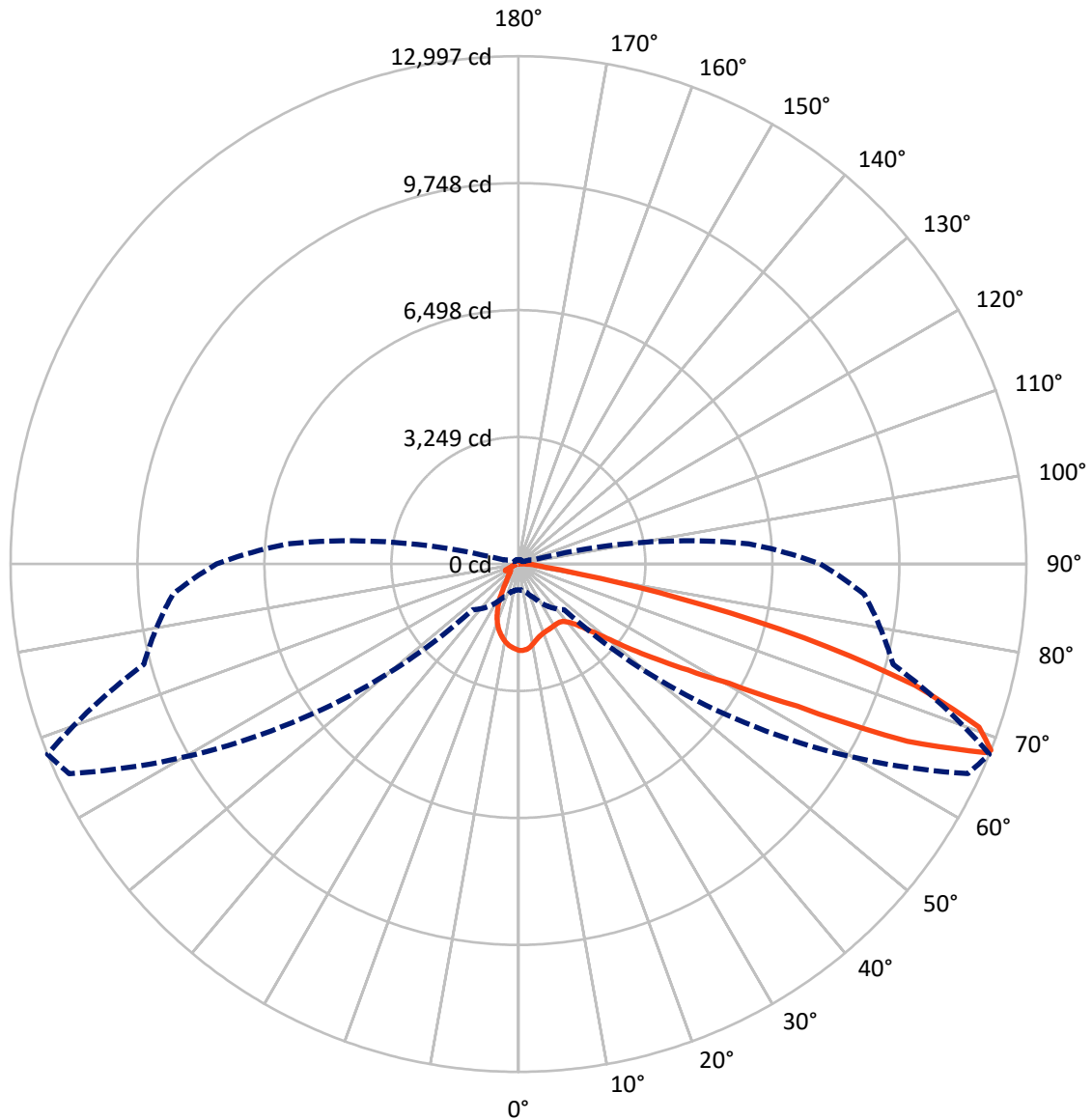
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.5 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	1663.1	0.0	1663.1
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	8502.2	0.0	8502.2
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	10165.2	0.0	10165.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	189.5	1.9
10°-20°	439.6	4.3
20°-30°	594.5	5.8
30°-40°	838.2	8.2
40°-50°	1378.3	13.6
50°-60°	2136.5	21.0
60°-70°	2770.2	27.3
70°-80°	1589.7	15.6
80°-90°	228.7	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°	10165.2	100.0
0°-180°	10165.2	100.0

**Coefficient of Utilization**



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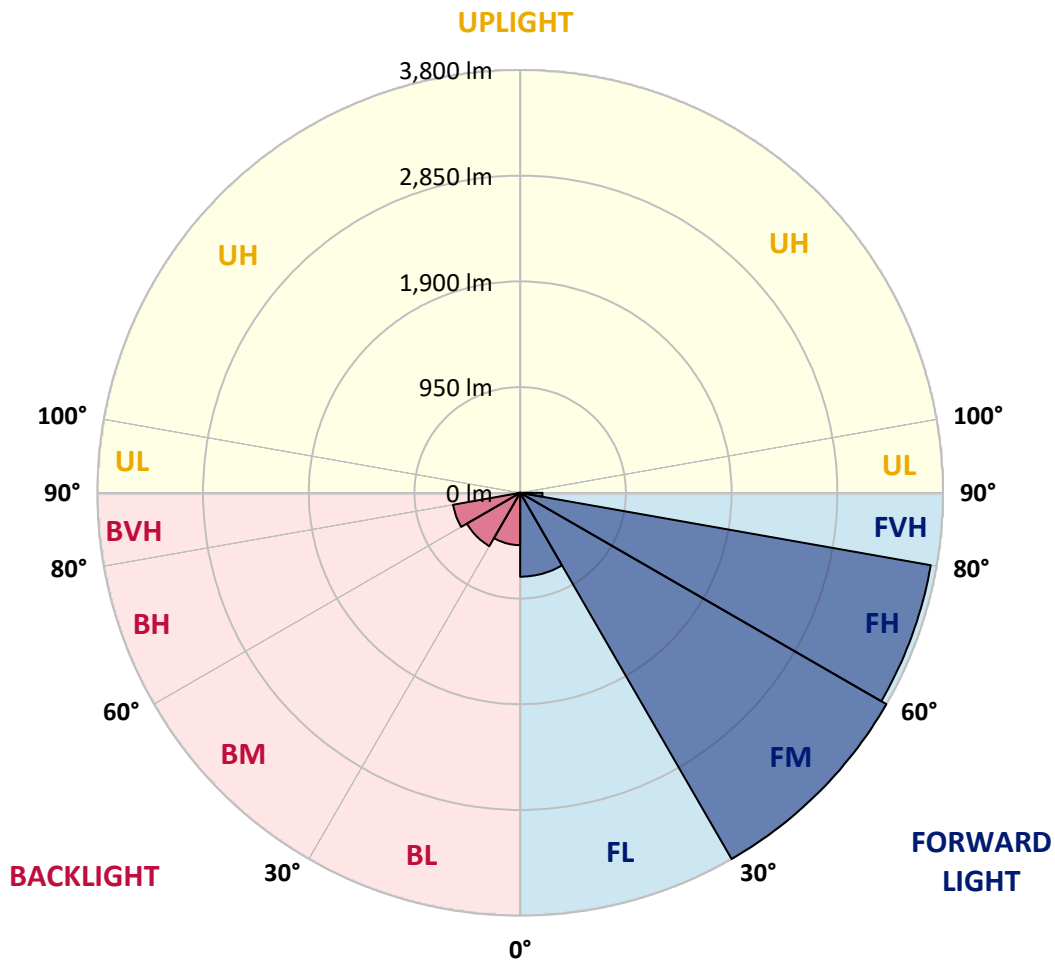
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	753.4	7.4			
FM (30°-60°)	3799.9	37.4			
FH (60°-80°)	3747.4	36.9			G2/5000
FVH (80°-90°)	201.5	2.0			G2/225
BL (0°-30°)	470.2	4.6	B1/500		
BM (30°-60°)	553.1	5.4	B1/1000		
BH (60°-80°)	612.5	6.0	B2/1000		G2/1000
BVH (80°-90°)	27.3	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°	2211.8	2211.8	2211.8	2211.8	2211.8	2211.8	2211.8	2211.8	2211.8	2211.8	2211.8
2.5°	2152.8	2170.0	2170.0	2182.6	2193.9	2203.3	2211.2	2211.2	2211.2	2205.9	2201.2
5°	1926.3	1949.6	1952.8	1984.7	2026.5	2077.7	2134.8	2185.2	2195.3	2213.9	2221.1
7.5°	1768.9	1776.3	1788.9	1810.9	1853.4	1916.4	2006.1	2118.9	2146.1	2204.5	2235.2
10°	1657.5	1663.4	1674.0	1695.9	1734.4	1791.5	1879.9	2026.5	2071.8	2175.3	2235.7
12.5°	1575.7	1580.4	1590.3	1610.2	1649.5	1700.5	1791.0	1943.7	1999.4	2146.1	2245.0
15°	1511.9	1519.9	1527.8	1547.2	1587.0	1636.2	1727.8	1883.1	1943.7	2122.9	2262.3
17.5°	1486.8	1490.7	1492.1	1502.1	1537.9	1587.7	1679.3	1840.6	1903.1	2104.3	2275.5
20°	1502.7	1503.4	1490.1	1483.5	1504.0	1549.8	1638.8	1808.7	1872.5	2087.8	2280.9
22.5°	1572.5	1572.5	1537.9	1508.7	1494.7	1523.3	1611.6	1786.9	1856.0	2075.1	2280.9
25°	1705.3	1699.2	1645.4	1587.7	1526.0	1514.0	1594.3	1773.0	1843.3	2068.4	2272.4
27.5°	1879.9	1874.6	1806.1	1720.4	1609.0	1533.9	1588.4	1761.7	1830.7	2058.5	2253.7
30°	2092.3	2087.8	2010.0	1897.8	1733.1	1596.9	1602.2	1753.8	1820.8	2041.8	2222.4
32.5°	2304.2	2301.5	2239.7	2124.9	1904.3	1703.8	1638.8	1752.4	1815.5	2021.9	2184.7
35°	2517.3	2517.3	2479.4	2382.6	2134.8	1864.6	1715.1	1776.9	1825.4	2011.3	2152.1
37.5°	2832.0	2819.4	2749.1	2648.8	2425.1	2073.1	1838.7	1828.7	1864.0	2029.2	2141.5
40°	3319.4	3282.9	3107.0	2938.3	2741.7	2340.1	2019.3	1929.0	1950.2	2090.4	2166.7
42.5°	3829.5	3771.7	3538.6	3269.0	3069.1	2669.4	2256.4	2091.7	2091.1	2208.6	2247.0
45°	4266.9	4237.1	3984.8	3642.8	3442.9	3039.9	2555.8	2333.3	2309.5	2391.7	2401.8
47.5°	4521.3	4501.3	4349.4	4038.6	3886.5	3477.5	2935.7	2668.8	2623.6	2672.6	2657.5
50°	4450.9	4470.1	4426.4	4267.7	4363.2	4092.4	3419.7	3128.2	3042.6	3091.6	3054.4
52.5°	4080.5	4132.3	4171.4	4201.9	4637.5	4915.0	4028.0	3701.9	3630.9	3622.2	3586.5
55°	3413.1	3495.5	3618.9	3843.4	4563.7	5575.8	5090.3	4395.9	4292.2	4237.8	4251.8
57.5°	2322.7	2447.6	2713.9	3140.8	4180.7	5857.4	6661.6	5292.3	5116.9	4923.0	4968.3
60°	1279.5	1383.7	1700.5	2130.9	3306.1	5815.4	8053.9	6749.1	6197.2	5683.3	5776.3
62.5°	828.1	850.7	1086.3	1455.6	2029.2	5134.3	8827.6	9184.1	8014.8	6686.1	6816.9
65°	665.4	681.3	796.8	1173.9	1413.8	3302.9	8862.0	11710.0	10939.1	8048.6	8052.5
67.5°	650.1	657.4	724.5	987.3	1326.1	1798.1	7660.1	12706.0	12884.7	9656.9	8879.2
68°	659.4	668.0	735.7	956.9	1325.4	1657.5	7079.8	12690.7	12996.9	9925.8	8879.2
70°	581.7	592.3	750.4	990.0	1268.9	1425.0	4848.1	12016.7	12509.4	10544.0	8425.2
72.5°	304.2	295.5	371.2	781.5	1428.3	1484.8	2561.2	10039.4	10614.5	9765.1	7279.1
75°	237.1	215.9	207.9	308.7	1256.3	1539.9	1487.5	7135.5	7569.8	7039.3	4865.3
77.5°	223.0	197.2	181.9	182.6	553.1	1602.2	1203.2	4199.2	4199.2	3358.0	1552.5
80°	179.3	155.3	145.4	165.9	266.9	1476.8	1255.7	1913.7	1632.2	867.9	427.7
82.5°	118.1	105.6	106.2	134.7	202.5	986.1	1454.1	944.8	709.8	384.5	251.6
85°	75.1	64.4	71.8	94.3	151.5	439.6	1439.7	656.8	470.2	215.9	125.6
87.5°	37.9	29.3	35.8	49.1	92.3	126.1	1185.3	586.4	348.6	89.7	68.5
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°	2211.8	2211.8	2211.8	2211.8	2211.8	2211.8	2211.8	2211.8	2211.8	2211.8	2211.8
2.5°	2201.2	2186.7	2179.3	2167.4	2152.8	2138.1	2128.2	2123.6	2120.9	2122.2	2121.5
5°	2217.1	2198.0	2166.7	2122.2	2076.4	2028.0	1990.7	1962.2	1944.2	1938.9	1937.6
7.5°	2229.1	2201.2	2142.7	2061.8	1983.5	1898.5	1826.1	1768.4	1729.1	1711.2	1710.6
10°	2227.2	2191.2	2099.0	1979.4	1864.6	1739.7	1626.2	1529.3	1458.8	1425.0	1423.6
12.5°	2229.1	2179.9	2045.3	1883.1	1718.5	1539.9	1371.3	1220.4	1115.5	1065.7	1063.8
15°	2237.0	2168.0	1990.0	1775.6	1547.8	1295.5	1054.5	865.2	769.6	737.1	737.1
17.5°	2236.4	2148.0	1926.3	1650.7	1345.3	1007.3	719.8	602.9	593.6	623.6	628.2
20°	2223.1	2116.2	1844.0	1502.7	1107.6	697.3	488.0	471.5	545.8	628.2	637.4
22.5°	2202.6	2075.1	1749.0	1330.7	830.8	454.3	376.5	401.7	502.6	604.9	619.6
25°	2174.0	2025.3	1640.1	1130.8	552.5	326.8	314.0	345.3	416.4	484.7	495.3
27.5°	2132.1	1962.2	1521.3	914.4	352.6	269.0	273.5	295.5	326.1	355.3	361.2
30°	2079.8	1888.4	1391.8	674.6	267.5	240.3	248.3	261.6	274.9	293.4	297.5
32.5°	2026.5	1813.5	1257.0	463.4	233.6	225.1	233.1	240.3	251.6	264.3	266.9
35°	1978.7	1743.7	1118.2	323.4	219.1	215.1	219.1	223.8	235.0	247.8	249.0
37.5°	1944.2	1686.6	973.5	255.7	210.6	206.5	208.4	210.6	223.8	242.4	244.3
40°	1939.6	1648.7	826.7	229.7	203.8	198.5	197.2	198.5	215.9	237.1	239.0
42.5°	1984.7	1650.7	683.3	219.1	198.5	192.5	187.2	189.9	205.3	221.8	223.0
45°	2091.7	1697.3	559.1	214.4	193.9	189.3	181.3	182.6	189.9	198.5	199.9
47.5°	2280.3	1798.9	464.2	211.8	189.9	185.9	176.0	171.9	172.7	177.2	177.2
50°	2581.6	1968.8	406.4	209.1	186.6	179.3	168.1	160.0	158.0	160.6	161.3
52.5°	3031.3	2260.3	378.5	203.8	180.6	170.7	158.0	150.0	146.8	149.4	149.4
55°	3638.9	2725.7	365.3	196.5	173.4	160.0	148.7	142.1	139.4	141.5	141.5
57.5°	4331.4	3330.7	387.8	186.6	164.0	148.7	140.8	136.2	134.1	136.2	136.8
60°	5154.1	4122.2	543.1	174.0	154.1	138.8	134.1	131.5	130.2	132.1	132.1
62.5°	6247.8	5175.3	840.6	164.0	143.4	129.4	128.2	126.8	125.6	127.5	127.5
65°	7428.4	6133.5	865.2	158.0	134.1	121.5	122.2	122.2	120.8	122.9	122.9
67.5°	7804.3	6050.5	483.4	150.7	122.9	113.5	116.2	116.2	115.5	117.5	116.9
68°	7724.5	5919.1	420.9	148.7	120.8	111.6	114.3	114.9	114.3	116.2	115.5
70°	7130.9	5196.6	276.9	137.4	112.2	104.9	109.0	109.6	109.0	111.6	110.9
72.5°	5886.6	3897.8	204.5	120.3	101.6	96.3	100.3	100.9	101.6	104.3	103.6
75°	3738.4	2152.8	161.3	102.2	91.0	86.3	90.3	92.3	93.7	97.6	95.6
77.5°	1023.9	653.3	130.9	87.0	78.3	76.4	79.1	81.7	83.1	87.7	84.4
80°	358.6	288.9	109.0	73.8	65.0	64.4	67.1	69.7	71.1	75.1	71.1
82.5°	217.7	188.6	87.0	57.9	51.2	50.5	53.8	56.5	57.9	57.9	55.2
85°	113.5	99.6	63.7	40.6	35.3	33.1	39.2	42.5	43.2	42.5	40.6
87.5°	63.7	56.5	33.9	19.3	15.9	16.6	20.7	25.2	27.2	26.6	25.2
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)