

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: P196507

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-7030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196507  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-01-D-UNV-AFL-7030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6640.8 lumens  
Efficiency: N/A  
Efficacy: 99.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G1

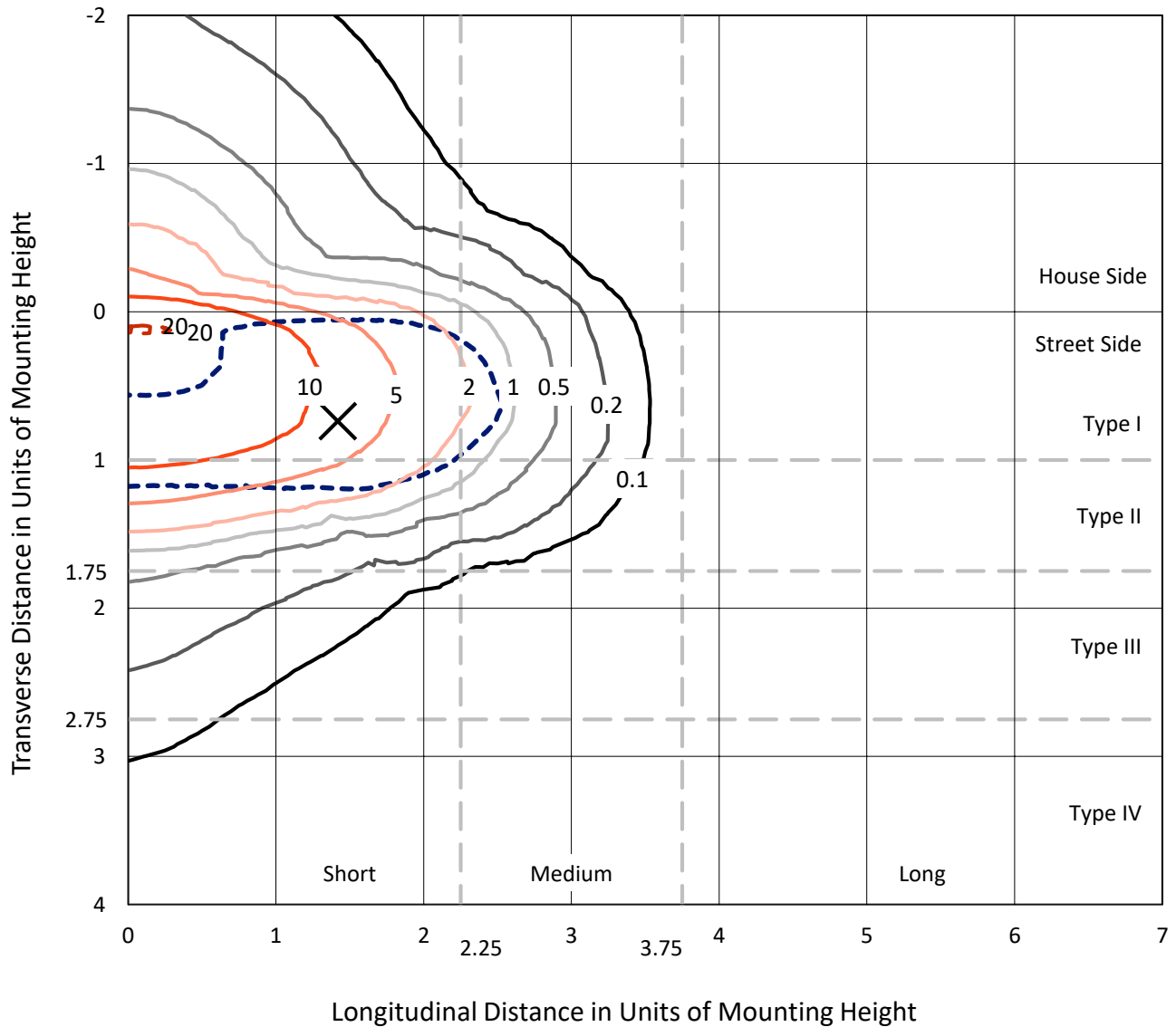
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

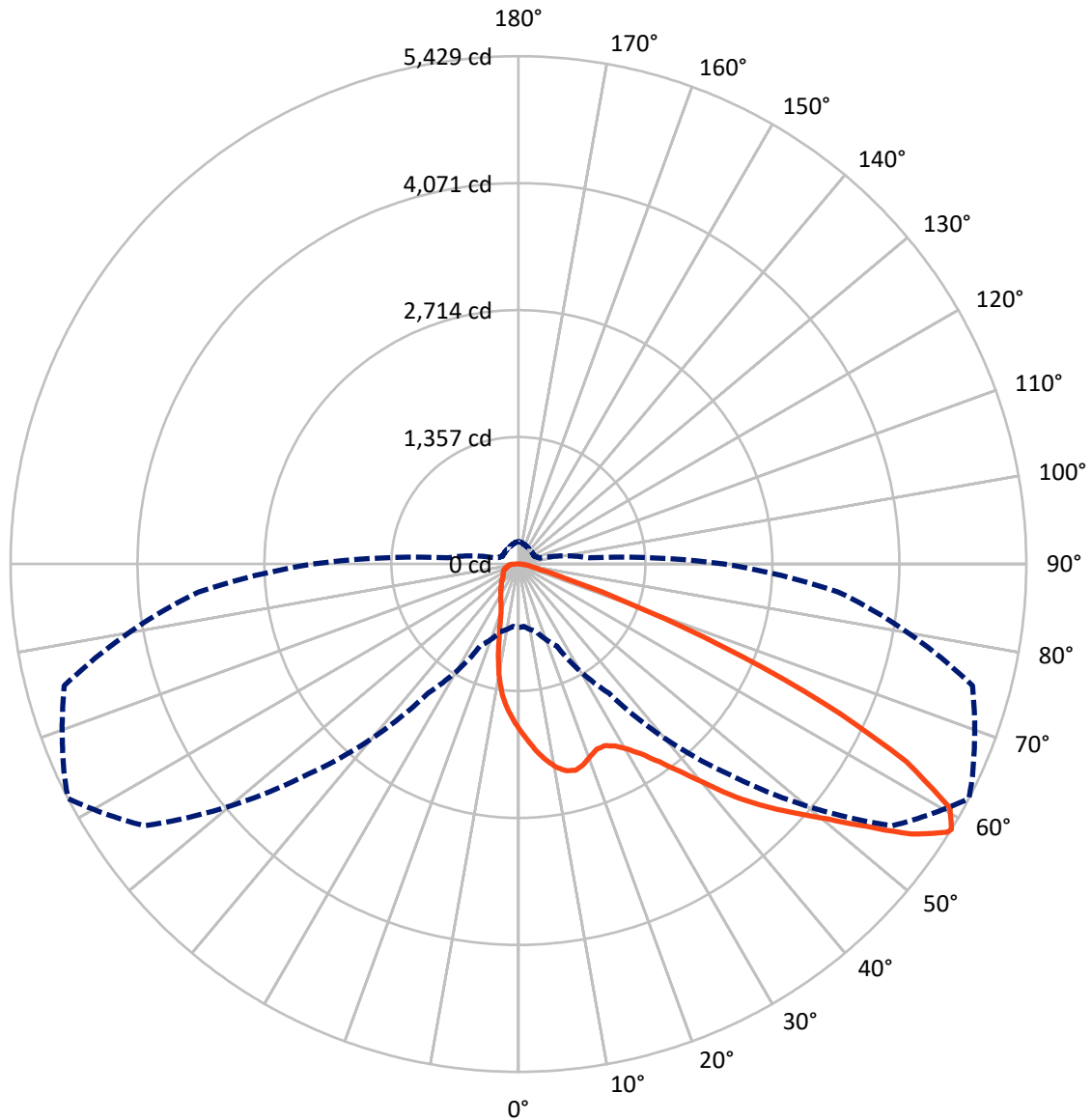
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 20.7 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral    - - - Horizontal Cone Through 58-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1019.6	0.0	1019.6
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	5621.2	0.0	5621.2
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	6640.8	0.0	6640.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	158.5	2.4
10°-20°	400.0	6.0
20°-30°	648.2	9.8
30°-40°	1034.9	15.6
40°-50°	1505.3	22.7
50°-60°	1575.1	23.7
60°-70°	960.3	14.5
70°-80°	268.5	4.0
80°-90°	90.0	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°	6640.8	100.0
0°-180°	6640.8	100.0



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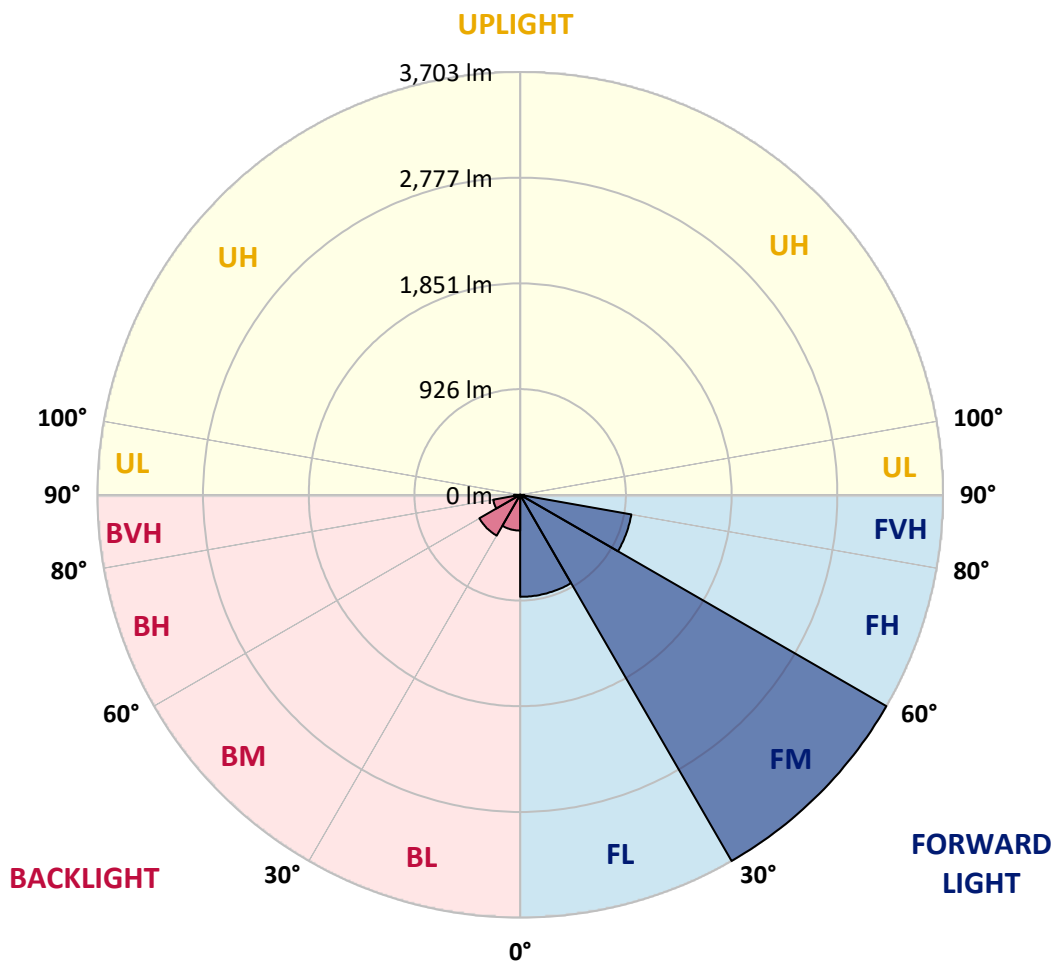
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	893.2	13.5			
FM	(30°-60°)	3703.0	55.8			
FH	(60°-80°)	988.8	14.9			G1/1800
FVH	(80°-90°)	36.2	0.5			G1/100
BL	(0°-30°)	313.4	4.7	B1/500		
BM	(30°-60°)	412.3	6.2	B1/1000		
BH	(60°-80°)	240.0	3.6	B1/500		G1/500
BVH	(80°-90°)	53.8	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	1773.1	1773.1	1773.1	1773.1	1773.1	1773.1	1773.1	1773.1	1773.1	1773.1	1773.1
2.5°	2012.5	2011.3	1994.3	1983.0	1969.7	1939.1	1908.3	1885.5	1873.9	1829.4	1786.3
5°	2178.9	2173.9	2164.4	2152.4	2134.9	2096.3	2047.8	2005.9	1989.3	1910.4	1831.1
7.5°	2091.0	2098.9	2128.4	2161.4	2196.3	2198.9	2164.4	2114.6	2096.3	1990.9	1874.8
10°	1847.3	1844.0	1881.0	1945.7	2060.6	2174.4	2231.3	2206.7	2187.7	2067.3	1918.3
12.5°	1773.5	1772.6	1778.8	1795.4	1867.7	2023.7	2214.2	2267.3	2260.7	2148.2	1964.8
15°	1795.9	1796.7	1796.3	1798.4	1818.3	1892.6	2119.2	2287.7	2308.4	2228.4	2012.1
17.5°	1867.7	1864.7	1855.7	1845.7	1848.5	1875.1	2016.7	2252.8	2315.1	2299.7	2052.0
20°	1978.4	1978.4	1954.0	1926.2	1907.8	1913.7	1973.9	2193.1	2284.4	2360.3	2081.8
22.5°	2117.6	2119.6	2083.5	2032.9	1991.4	1975.6	1998.5	2148.7	2247.0	2416.4	2108.3
25°	2290.2	2289.7	2237.1	2164.4	2098.9	2061.0	2060.6	2150.8	2235.5	2482.0	2136.2
27.5°	2503.9	2484.4	2423.1	2319.7	2227.1	2169.5	2143.2	2203.0	2259.9	2562.4	2173.6
30°	2745.0	2725.2	2644.6	2511.8	2386.4	2302.2	2259.1	2293.5	2334.6	2665.0	2230.0
32.5°	2983.8	2988.2	2893.6	2743.8	2582.8	2464.2	2400.2	2421.3	2449.9	2790.3	2306.4
35°	3333.2	3332.7	3209.1	3021.9	2830.6	2666.3	2585.3	2596.4	2622.7	2967.2	2413.4
37.5°	3593.9	3589.7	3510.0	3344.4	3128.9	2931.9	2814.7	2816.4	2838.9	3189.2	2554.6
40°	3620.5	3619.5	3619.1	3595.5	3448.1	3262.2	3115.7	3085.4	3094.5	3425.0	2704.3
42.5°	3417.4	3447.6	3534.9	3668.5	3709.6	3612.1	3473.5	3405.8	3385.8	3695.4	2862.9
45°	3128.1	3143.5	3296.3	3596.7	3841.2	3940.8	3836.6	3693.8	3659.8	3958.7	2992.1
47.5°	2993.7	2987.0	3075.4	3402.9	3828.3	4202.2	4209.8	3975.6	3917.9	4185.6	3102.0
50°	2705.3	2696.5	2808.2	3117.8	3688.0	4332.1	4592.8	4282.8	4176.1	4401.5	3201.7
52.5°	2130.4	2122.2	2271.9	2670.8	3374.3	4283.6	4915.7	4659.7	4477.9	4609.4	3294.6
55°	1386.3	1387.0	1529.8	1941.1	2730.5	4000.5	5067.2	5095.0	4891.2	4817.3	3369.7
57.5°	763.2	756.2	857.9	1110.6	1878.5	3357.6	4941.0	5408.8	5302.6	4995.8	3424.0
58°	678.6	670.3	748.8	966.6	1684.2	3176.2	4877.6	5428.6	5355.3	5025.3	3432.0
60°	483.5	469.4	457.4	544.9	970.3	2290.2	4454.2	5299.6	5370.6	5084.3	3424.5
62.5°	407.5	391.3	348.2	344.9	456.9	1120.2	3522.4	4654.2	4853.1	4948.5	3304.1
65°	378.5	362.3	305.5	285.1	310.1	483.5	2178.1	3593.9	3859.5	4476.6	3001.2
67.5°	357.8	338.7	277.6	251.1	256.1	289.3	924.4	2350.3	2658.3	3491.0	2407.6
70°	339.1	318.0	255.6	225.0	220.8	219.9	361.1	1227.3	1524.0	2284.4	1612.8
72.5°	318.0	297.1	236.1	203.3	194.3	178.4	217.1	507.2	695.2	1119.8	739.1
75°	287.3	270.2	214.5	185.5	169.8	144.9	160.2	243.2	299.7	428.8	343.2
77.5°	252.7	239.1	192.7	170.6	149.4	118.3	122.5	164.8	185.0	241.6	198.9
80°	178.8	183.9	168.0	150.2	131.5	95.5	94.2	120.7	132.9	162.2	133.7
82.5°	123.3	127.0	137.0	118.6	106.2	74.3	69.3	83.8	90.0	97.9	64.8
85°	88.0	85.5	95.0	85.1	78.0	47.3	44.4	53.1	56.9	59.8	31.1
87.5°	53.5	53.1	54.7	44.0	40.7	24.0	22.0	25.3	27.0	26.1	15.0
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°	1773.1	1773.1	1773.1	1773.1	1773.1	1773.1	1773.1	1773.1	1773.1	1773.1	1773.1
2.5°	1770.1	1749.8	1705.4	1669.7	1631.1	1601.6	1572.1	1555.6	1537.3	1526.9	1525.7
5°	1789.6	1748.1	1653.5	1565.5	1475.0	1393.7	1314.1	1255.1	1206.9	1179.6	1178.0
7.5°	1811.2	1746.1	1600.0	1447.6	1286.6	1126.5	984.9	884.9	820.5	790.6	788.6
10°	1827.8	1737.3	1534.8	1297.8	1042.6	830.9	702.2	643.3	623.8	618.9	618.0
12.5°	1847.8	1731.1	1452.6	1105.7	796.8	632.5	593.5	589.8	594.0	596.4	596.8
15°	1866.4	1719.0	1341.8	892.7	623.8	565.3	566.1	574.0	582.4	586.0	586.5
17.5°	1875.1	1689.5	1196.2	703.5	545.8	535.0	544.5	554.9	562.3	565.3	565.3
20°	1875.1	1642.2	1027.2	569.9	505.1	507.2	518.8	526.6	528.4	525.9	524.7
22.5°	1867.2	1583.8	862.8	497.2	471.9	479.7	488.9	483.5	464.1	449.0	446.3
25°	1860.2	1514.5	704.7	452.8	442.8	453.2	449.5	412.6	382.6	367.3	364.8
27.5°	1848.5	1430.6	572.7	416.3	414.6	423.0	386.0	350.2	335.3	327.0	325.4
30°	1845.7	1339.7	479.3	383.9	386.8	375.2	332.9	321.2	318.0	313.3	311.3
32.5°	1855.2	1248.9	420.8	357.4	360.2	322.1	305.9	307.6	307.1	301.3	299.3
35°	1881.3	1160.5	383.5	333.2	324.9	288.5	290.5	295.5	295.5	288.5	285.9
37.5°	1927.0	1078.3	359.8	312.9	284.3	271.1	276.4	283.1	283.1	278.1	276.0
40°	1975.6	998.2	342.0	296.7	258.6	259.0	264.4	269.4	271.4	272.3	270.6
42.5°	2019.5	915.1	322.9	279.2	246.9	249.8	252.4	256.1	264.9	270.6	269.8
45°	2045.4	831.8	302.1	257.8	239.1	240.3	239.5	246.2	256.5	265.2	265.2
47.5°	2069.0	763.2	285.1	236.1	231.2	231.2	228.7	235.4	244.8	255.2	256.1
50°	2091.3	718.8	273.1	219.5	221.2	219.9	219.2	225.4	238.1	250.6	252.7
52.5°	2114.1	703.9	262.3	207.5	210.9	209.2	210.0	218.7	233.3	246.2	248.2
55°	2146.2	713.5	251.1	199.2	200.9	200.5	203.8	213.7	226.6	239.5	240.3
57.5°	2185.6	748.3	241.6	193.0	191.3	193.8	199.2	208.8	221.2	236.5	237.8
58°	2193.5	756.6	240.0	191.3	189.2	193.0	198.5	207.5	220.3	236.5	237.8
60°	2205.5	786.1	235.8	188.0	182.3	188.8	195.5	204.7	218.7	238.6	241.1
62.5°	2147.4	791.9	234.5	184.3	174.7	183.0	190.8	201.2	217.1	245.8	251.1
65°	1946.1	732.1	225.7	178.1	168.5	178.4	186.8	198.9	222.1	266.9	269.4
67.5°	1562.2	608.0	204.7	168.5	161.4	173.0	183.4	198.9	224.1	270.2	271.8
70°	1074.1	456.9	178.1	158.1	153.2	166.4	182.3	203.3	217.1	255.6	250.6
72.5°	561.1	318.0	156.0	146.1	143.2	160.6	194.3	198.9	208.8	238.6	233.7
75°	282.7	216.3	137.3	132.4	131.9	158.5	217.4	191.3	200.1	224.5	235.4
77.5°	166.8	169.4	122.5	119.5	121.6	154.8	217.9	183.9	190.1	206.7	218.3
80°	114.1	139.9	110.8	110.1	111.7	142.4	200.9	174.7	178.4	195.5	207.9
82.5°	64.4	77.2	97.1	102.4	101.7	116.6	173.5	159.0	163.6	231.2	244.4
85°	31.1	46.4	81.4	95.8	86.8	77.6	141.2	141.2	142.4	165.6	167.7
87.5°	11.6	20.8	54.7	75.9	60.6	46.4	95.8	100.0	111.2	114.5	117.0
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)