

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: P196466

Luminaire Tested: **NAV-AF-02-D-UNV-AFL-7030-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196466  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)  
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-AFL-7030-600-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6515.1 lumens  
Efficiency: N/A  
Efficacy: 98.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G1

Input Watts (W): 66  
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

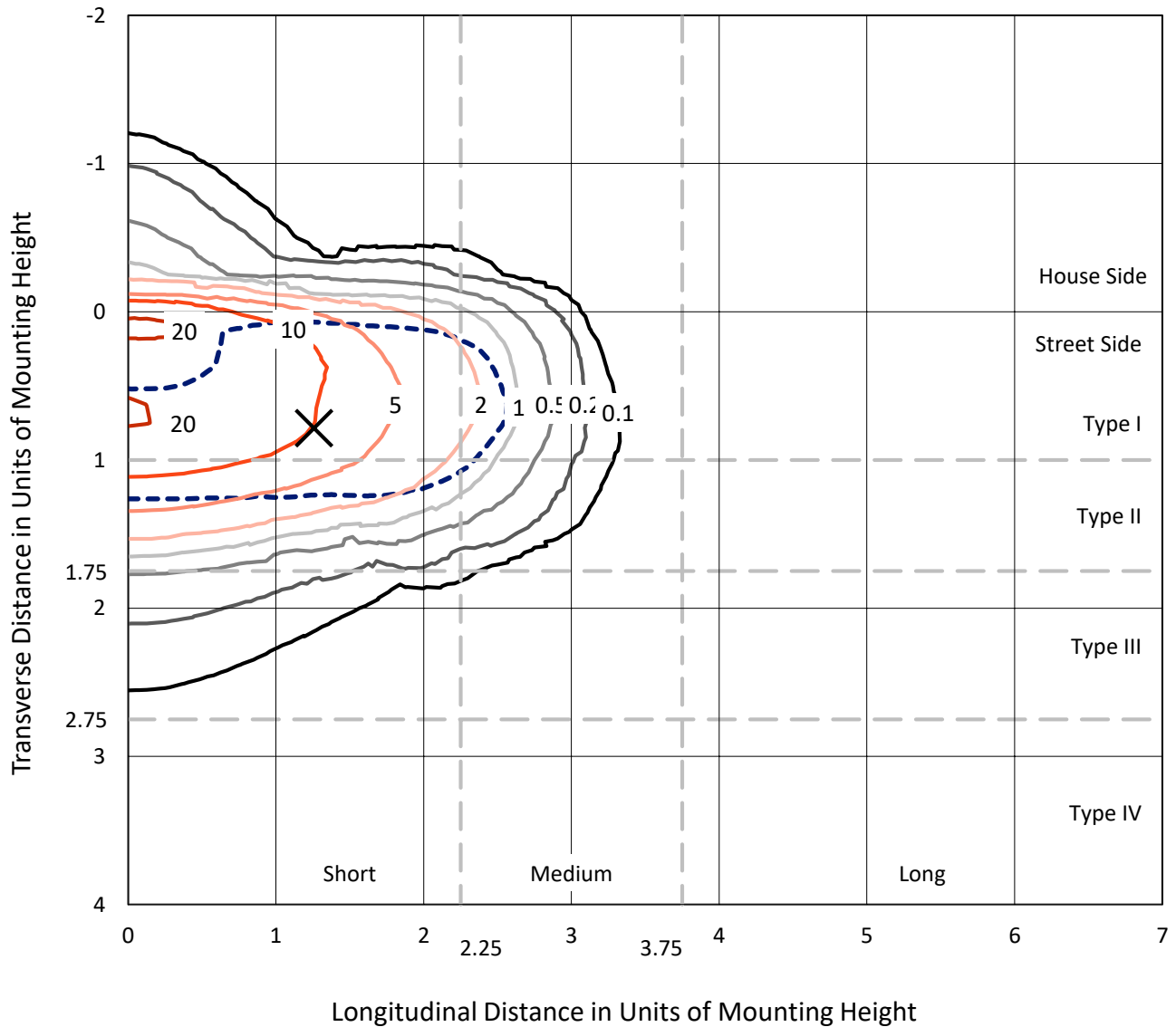


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

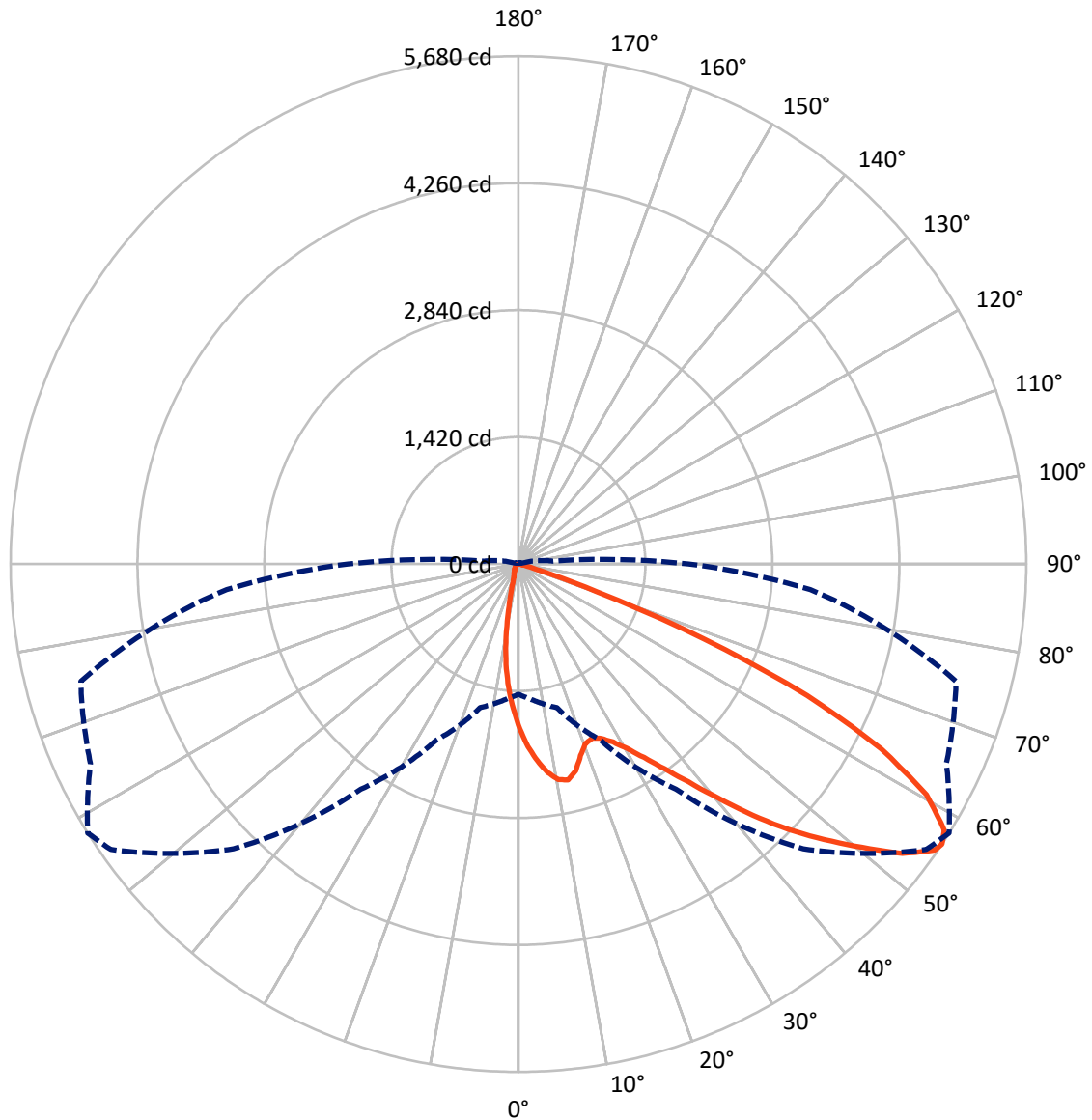


Based on 10 foot mounting height. Maximum calculated value = 22.9 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 56-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	406.7	0.0	406.7
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	6108.4	0.0	6108.4
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	6515.1	0.0	6515.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	157.4	2.4
10°-20°	366.2	5.6
20°-30°	616.1	9.5
30°-40°	1055.0	16.2
40°-50°	1592.0	24.4
50°-60°	1654.9	25.4
60°-70°	929.0	14.3
70°-80°	127.3	2.0
80°-90°	17.2	0.3
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°	6515.1	100.0
0°-180°	6515.1	100.0



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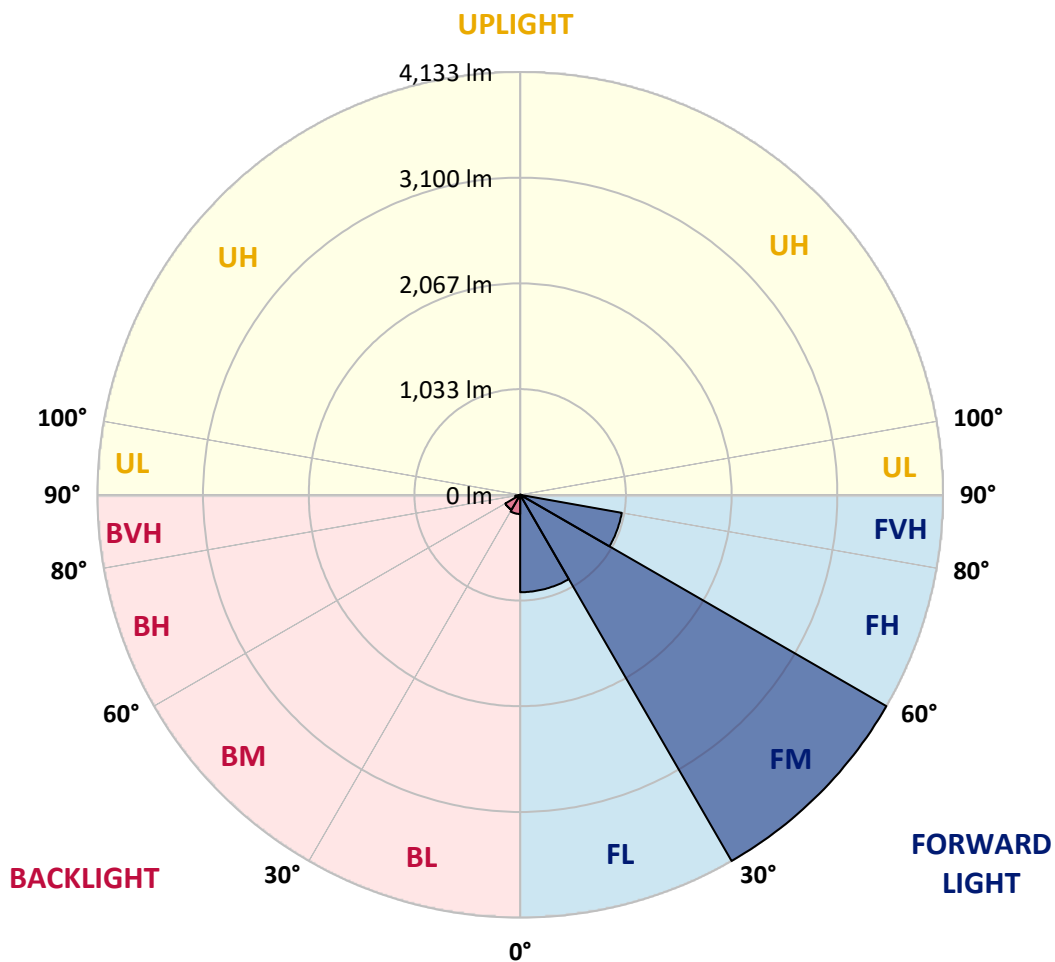
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	952.0	14.6			
FM	(30°-60°)	4133.5	63.4			
FH	(60°-80°)	1008.1	15.5			G1/1800
FVH	(80°-90°)	14.9	0.2			G1/100
BL	(0°-30°)	187.6	2.9	B1/500		
BM	(30°-60°)	168.5	2.6	B0/220		
BH	(60°-80°)	48.2	0.7	B0/110		G0/110
BVH	(80°-90°)	2.4	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-G1**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1844.7	1844.7	1844.7	1844.7	1844.7	1844.7	1844.7	1844.7	1844.7	1844.7	1844.7
2.5°	2219.4	2206.1	2192.1	2166.3	2142.3	2105.7	2054.8	2042.5	2002.7	1937.0	1876.0
5°	2410.8	2408.3	2398.9	2378.0	2352.2	2307.4	2250.2	2212.0	2150.3	2047.0	1929.1
7.5°	2297.5	2318.4	2352.7	2401.3	2434.2	2429.7	2385.9	2352.7	2291.5	2150.3	1981.3
10°	1936.6	1940.6	1987.8	2090.1	2252.3	2403.3	2460.5	2451.6	2395.4	2240.8	2027.1
12.5°	1809.4	1811.8	1822.8	1855.5	1960.9	2171.7	2430.7	2477.5	2473.0	2327.3	2075.8
15°	1819.2	1820.8	1823.7	1834.3	1864.0	1970.0	2279.5	2398.3	2522.7	2409.2	2123.5
17.5°	1897.9	1896.8	1887.4	1877.4	1886.9	1921.7	2125.5	2250.7	2512.2	2478.4	2162.8
20°	2050.9	2055.9	2024.0	1979.9	1957.0	1958.5	2049.3	2143.3	2453.5	2532.1	2192.1
22.5°	2266.1	2269.7	2217.4	2140.9	2073.7	2040.0	2065.3	2115.0	2385.9	2581.8	2216.0
25°	2523.2	2523.2	2450.0	2341.2	2237.3	2163.3	2141.4	2160.3	2360.1	2637.9	2239.9
27.5°	2800.6	2810.4	2715.0	2572.3	2435.2	2326.7	2258.2	2254.7	2380.0	2708.5	2266.7
30°	3102.2	3111.1	2997.8	2823.4	2660.8	2522.1	2416.7	2393.9	2456.0	2803.5	2305.9
32.5°	3402.5	3409.9	3284.7	3106.7	2917.3	2754.3	2615.5	2579.3	2592.7	2942.2	2363.6
35°	3784.2	3785.8	3627.1	3415.3	3213.1	3021.7	2846.2	2810.4	2795.5	3117.1	2446.6
37.5°	4087.9	4076.0	3975.6	3775.2	3543.2	3343.4	3137.1	3090.3	3054.5	3363.2	2575.3
40°	4159.5	4159.5	4144.5	4084.4	3900.0	3707.6	3507.9	3438.3	3359.1	3653.0	2748.3
42.5°	3973.1	3985.0	4083.4	4214.1	4215.7	4092.5	3897.1	3838.4	3699.2	3983.0	2937.2
45°	3556.1	3559.5	3795.6	4148.6	4388.2	4458.8	4314.5	4233.6	4040.7	4326.0	3110.2
47.5°	3405.9	3416.9	3517.3	3948.7	4401.1	4755.5	4715.2	4603.8	4356.8	4639.1	3271.8
50°	3175.3	3188.7	3311.5	3654.5	4284.7	4945.8	5098.5	4979.2	4644.6	4900.2	3351.7
52.5°	2623.6	2644.4	2817.9	3265.2	3994.0	4953.9	5449.5	5377.8	4939.4	5039.8	3342.3
55°	1805.4	1820.8	2023.1	2549.0	3407.5	4710.7	5600.5	5649.7	5202.4	5071.2	3296.6
56°	1456.4	1514.2	1662.2	2171.7	3073.4	4504.0	5565.6	5679.6	5280.4	5066.2	3276.6
57.5°	962.8	973.7	1135.3	1573.8	2467.9	4055.1	5408.7	5615.9	5380.8	5040.7	3262.3
60°	452.9	457.8	515.9	726.2	1335.5	2955.1	4898.1	5242.2	5417.6	4987.5	3261.8
62.5°	295.2	296.2	303.2	346.5	546.3	1609.5	4060.6	4555.7	5112.9	4981.6	3252.3
65°	243.1	245.5	237.1	242.5	285.8	606.9	2864.1	3551.6	4397.5	4841.5	3146.0
67.5°	214.2	214.7	203.3	196.8	209.2	266.5	1443.0	2240.3	3289.1	4113.7	2591.2
70°	195.3	194.8	181.9	167.0	167.5	177.0	470.3	930.6	1819.8	2442.6	1487.8
72.5°	173.5	174.5	167.0	146.2	139.2	125.2	177.0	251.0	619.4	784.4	392.2
75°	152.1	150.1	142.7	129.3	116.4	84.0	88.9	106.8	161.6	160.1	84.4
77.5°	115.3	113.3	116.8	110.4	91.0	58.7	48.7	55.7	73.1	68.1	34.3
80°	88.0	87.0	79.5	94.4	83.0	44.2	33.4	34.3	39.8	36.3	16.9
82.5°	63.6	63.2	60.1	58.1	52.7	32.3	25.3	26.9	29.8	25.3	12.4
85°	24.4	24.4	47.2	39.8	36.3	21.9	17.9	19.3	22.8	18.3	8.4
87.5°	4.0	4.0	31.8	26.3	16.4	10.9	11.5	12.4	13.4	10.9	6.4
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°	1844.7	1844.7	1844.7	1844.7	1844.7	1844.7	1844.7	1844.7	1844.7	1844.7	1844.7
2.5°	1839.7	1806.4	1733.3	1662.7	1601.0	1533.5	1499.1	1459.3	1444.5	1414.7	1417.6
5°	1858.5	1789.0	1642.2	1487.8	1346.1	1202.0	1099.4	1003.1	949.4	896.3	896.3
7.5°	1877.9	1771.5	1544.9	1297.9	1059.3	812.3	637.2	497.0	419.0	366.9	365.4
10°	1891.4	1749.2	1434.0	1077.7	725.7	418.6	252.5	198.9	179.4	171.0	170.5
12.5°	1908.8	1726.9	1307.9	818.2	403.1	198.9	157.6	149.1	145.7	143.6	143.6
15°	1923.6	1695.0	1154.7	550.2	211.8	149.1	135.7	132.8	132.2	131.7	132.2
17.5°	1927.2	1649.9	971.4	322.1	153.6	130.2	124.2	121.9	121.9	121.3	121.3
20°	1919.1	1590.2	768.4	198.9	132.8	119.7	113.3	110.4	109.8	109.8	109.8
22.5°	1902.7	1514.2	568.1	150.6	120.8	110.4	101.9	98.9	98.9	99.4	99.9
25°	1882.4	1424.0	390.2	129.7	111.9	100.4	92.0	88.9	89.9	91.0	91.4
27.5°	1856.6	1316.8	255.4	112.3	99.9	90.4	83.0	81.1	83.0	85.0	86.0
30°	1830.7	1198.9	172.9	97.5	86.6	79.5	75.1	74.6	77.6	82.1	82.5
32.5°	1813.8	1078.2	130.8	87.5	76.1	70.0	68.1	69.1	73.5	78.5	79.5
35°	1812.3	960.4	111.3	79.5	69.1	63.6	62.6	65.7	70.6	74.6	75.6
37.5°	1835.7	850.0	100.9	73.5	63.6	58.1	56.7	62.2	66.6	70.6	71.6
40°	1882.9	751.0	94.0	68.1	59.1	52.7	51.7	56.2	60.6	65.1	66.6
42.5°	1942.1	658.7	86.0	62.6	54.2	46.8	45.8	49.1	53.6	60.1	61.1
45°	1993.2	572.6	77.6	56.7	48.7	40.3	39.8	43.7	47.2	53.2	54.2
47.5°	2036.5	501.1	69.6	50.1	41.7	35.8	35.3	37.2	39.3	44.7	45.8
50°	2013.6	440.5	61.6	41.3	33.8	30.8	30.4	30.4	32.8	38.2	39.3
52.5°	1957.5	402.6	54.2	34.3	27.9	26.3	24.8	25.3	27.9	30.4	30.8
55°	1912.2	384.7	47.7	30.4	23.4	21.9	20.4	19.8	20.4	19.3	18.3
56°	1901.3	382.7	46.2	29.3	22.4	20.4	18.3	17.4	16.9	14.9	14.4
57.5°	1896.3	382.7	43.7	27.4	20.9	18.3	16.0	13.8	11.9	10.5	10.5
60°	1892.4	385.2	40.8	23.8	17.9	14.9	11.5	8.4	7.0	7.0	7.0
62.5°	1883.8	384.3	37.2	19.8	15.4	11.5	7.0	5.5	4.9	5.5	6.0
65°	1789.0	356.9	32.8	16.0	11.9	7.9	4.0	4.0	4.5	5.5	6.0
67.5°	1441.4	270.4	26.9	12.4	8.4	6.0	3.5	3.5	4.5	5.5	6.0
70°	791.8	142.7	22.8	9.0	6.4	4.9	3.5	2.9	4.5	5.5	6.0
72.5°	193.4	59.6	20.9	7.0	6.0	4.5	2.9	2.9	4.5	5.5	6.0
75°	47.7	44.7	16.9	5.5	4.9	4.0	2.9	2.9	4.5	5.5	6.0
77.5°	22.4	59.1	11.5	4.9	4.5	3.5	2.9	2.9	4.5	5.5	5.5
80°	13.4	44.7	7.0	4.5	4.0	3.5	2.9	2.9	4.5	5.5	6.0
82.5°	7.9	12.9	4.9	4.5	4.0	2.9	2.9	2.9	4.5	5.5	6.0
85°	7.0	6.4	4.9	4.5	4.0	3.5	2.9	2.9	4.9	6.0	6.0
87.5°	5.5	4.9	4.5	4.0	4.0	3.5	2.9	2.9	4.5	5.5	6.0
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)