

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: P197127

Luminaire Tested: **NAV-AF-03-D-UNV-SL4-8030-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197127  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)  
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-SL4-8030-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12041 lumens  
Efficiency: N/A  
Efficacy: 72.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G3

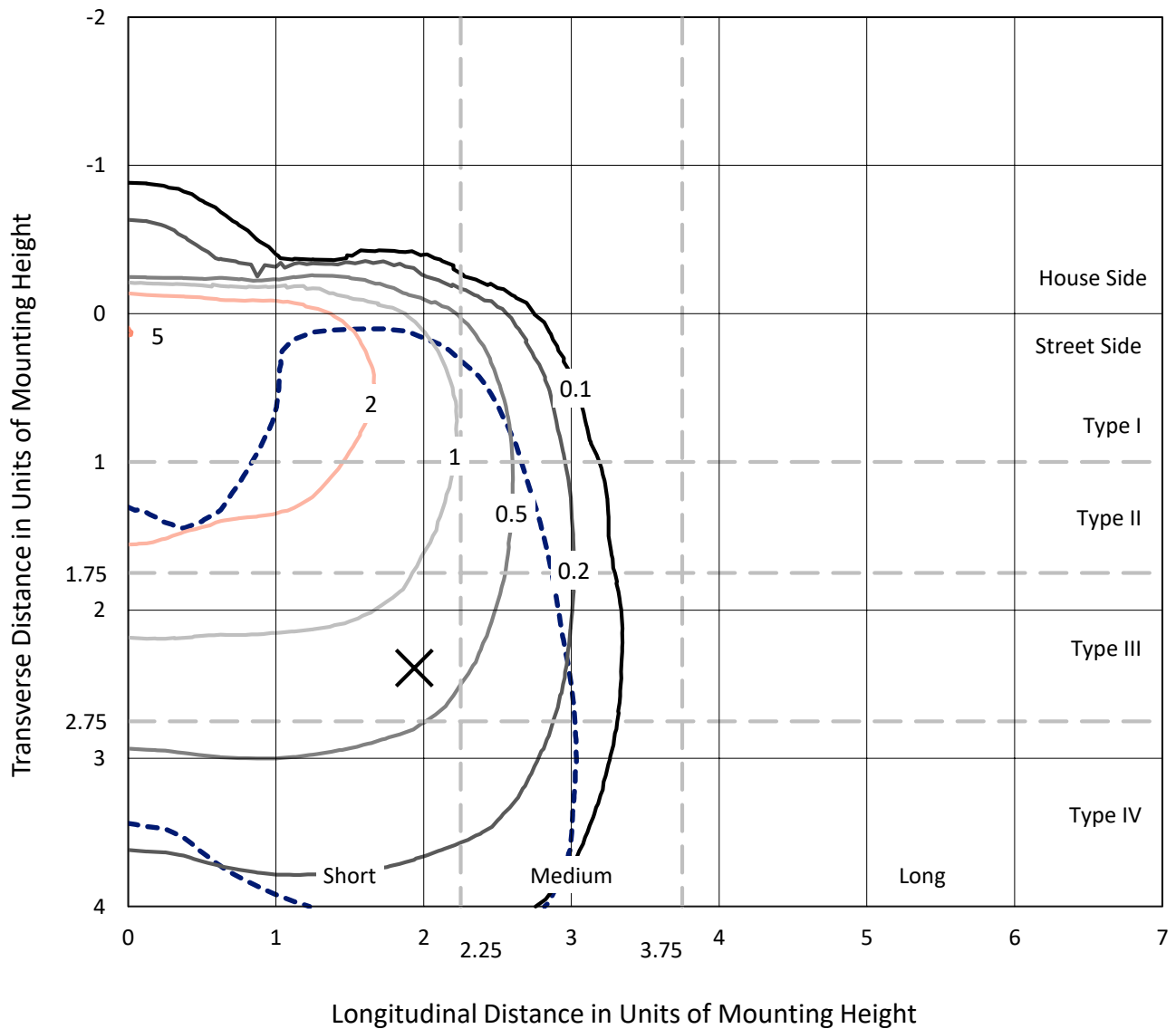
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

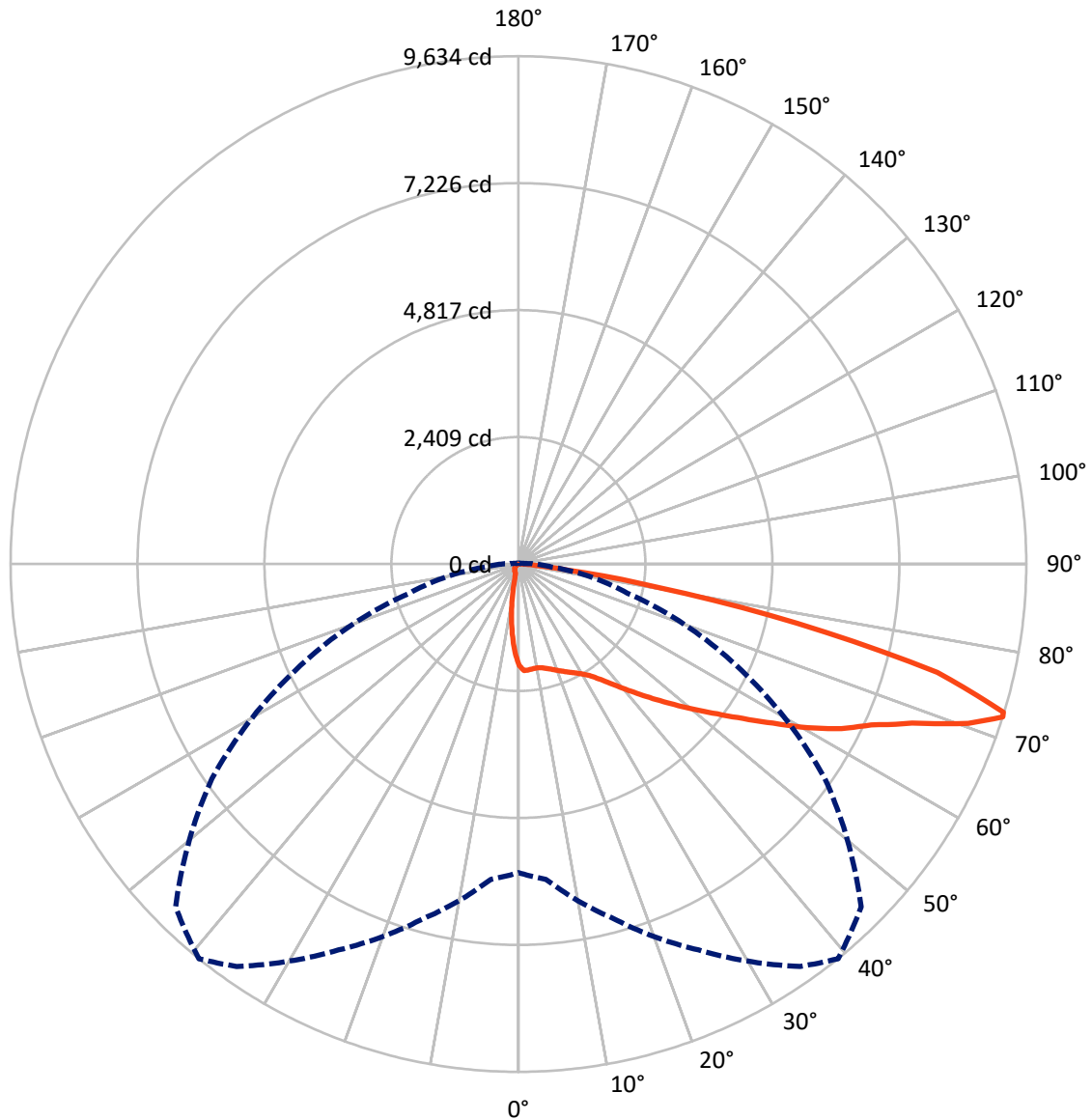


Based on 20 foot mounting height. Maximum calculated value = 5.1 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral    - - - Horizontal Cone Through 72-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	789.1	0.0	789.1
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	11251.9	0.0	11251.9
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	12041.0	0.0	12041.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.8	1.3
10°-20°	379.5	3.2
20°-30°	630.3	5.2
30°-40°	1004.6	8.3
40°-50°	1658.2	13.8
50°-60°	2504.1	20.8
60°-70°	3262.0	27.1
70°-80°	2204.2	18.3
80°-90°	241.4	2.0
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°	12041.0	100.0
0°-180°	12041.0	100.0

**Coefficient of Utilization**



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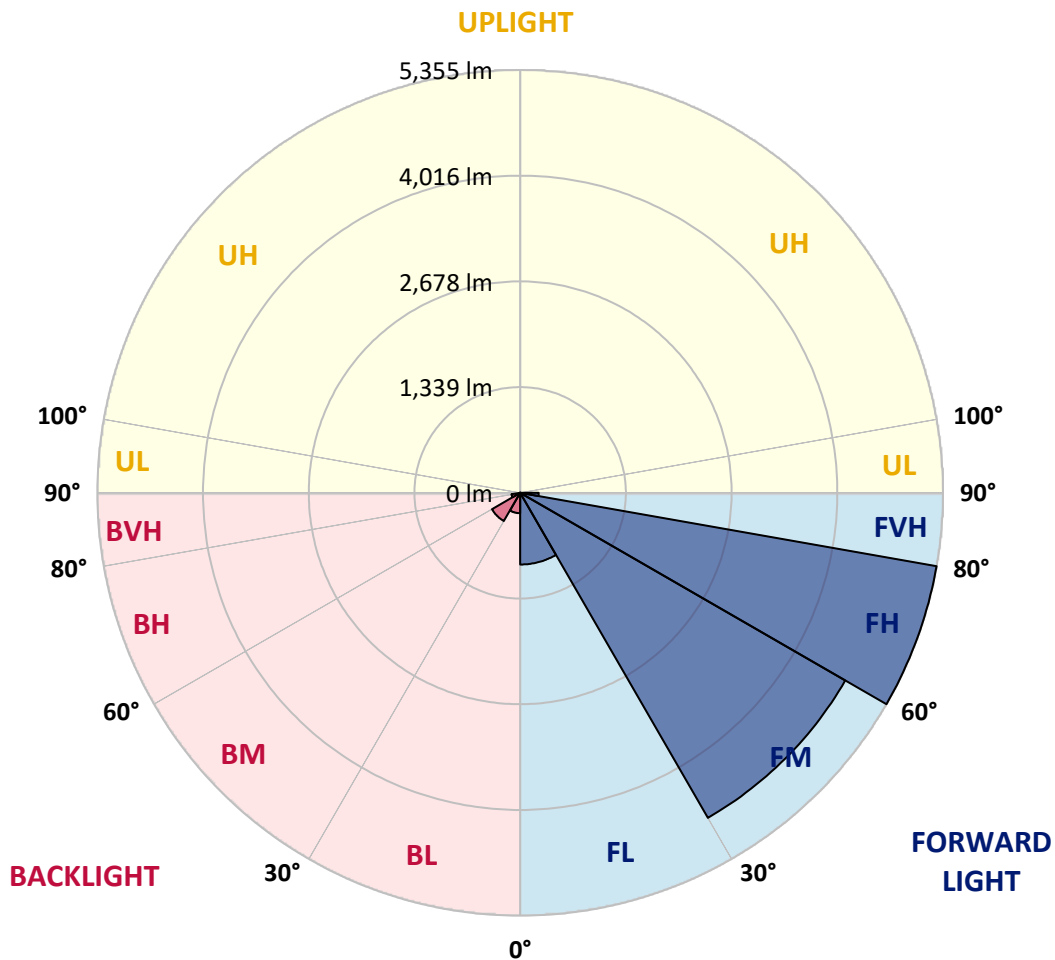
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	908.2	7.5			
FM	(30°-60°)	4753.9	39.5			
FH	(60°-80°)	5355.3	44.5			G3/7500
FVH	(80°-90°)	234.5	1.9			G3/500
BL	(0°-30°)	258.4	2.1	B1/500		
BM	(30°-60°)	412.9	3.4	B1/1000		
BH	(60°-80°)	110.9	0.9	B1/500		G1/500
BVH	(80°-90°)	6.9	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	1927.2	1927.2	1927.2	1927.2	1927.2	1927.2	1927.2	1927.2	1927.2	1927.2	1927.2
2.5°	2052.2	2056.0	2051.2	2042.7	2030.4	2022.8	2012.4	1989.7	1961.3	1936.7	1908.3
5°	2068.3	2070.2	2064.5	2048.4	2029.5	2019.1	2005.8	1981.2	1951.9	1917.8	1866.7
7.5°	2073.0	2072.1	2065.4	2045.6	2016.2	2003.0	1980.2	1950.0	1919.7	1888.4	1830.7
10°	2071.1	2071.1	2066.4	2047.5	2014.3	2002.0	1976.5	1944.3	1906.4	1875.2	1813.7
12.5°	2064.5	2068.3	2065.4	2055.0	2030.4	2021.0	1998.2	1966.0	1930.1	1897.9	1832.6
15°	2073.0	2078.7	2084.4	2080.6	2066.4	2057.9	2037.0	2003.9	1974.6	1940.5	1870.4
17.5°	2107.1	2119.4	2132.6	2133.6	2118.4	2103.3	2079.6	2045.6	2017.2	1985.9	1910.2
20°	2171.5	2180.9	2205.5	2210.3	2180.0	2158.2	2125.1	2085.3	2056.9	2030.4	1947.1
22.5°	2267.1	2277.5	2297.4	2290.7	2239.6	2214.1	2172.4	2127.0	2097.6	2082.5	1989.7
25°	2411.9	2414.7	2419.5	2390.1	2305.9	2277.5	2226.4	2175.2	2151.6	2149.7	2050.3
27.5°	2582.3	2586.1	2565.2	2499.9	2379.7	2342.8	2285.0	2238.7	2227.3	2241.5	2127.0
30°	2777.3	2778.2	2720.5	2614.5	2464.9	2424.2	2364.6	2313.4	2323.9	2358.9	2225.4
32.5°	2977.0	2967.5	2888.0	2749.8	2581.3	2532.1	2481.0	2429.9	2460.2	2531.2	2369.3
35°	3159.7	3155.9	3062.2	2901.3	2732.8	2689.2	2652.3	2598.4	2647.6	2763.1	2565.2
37.5°	3342.4	3339.5	3232.6	3065.0	2919.3	2888.0	2860.6	2818.9	2899.4	3068.8	2827.4
40°	3544.0	3539.3	3407.7	3246.8	3136.0	3119.0	3102.9	3084.9	3222.2	3457.9	3154.0
42.5°	3793.0	3772.1	3593.2	3444.6	3374.6	3379.3	3380.2	3398.2	3613.1	3920.7	3539.3
45°	4078.8	4032.4	3779.7	3656.6	3636.8	3665.2	3693.6	3768.3	4068.4	4453.7	3965.2
47.5°	4356.2	4281.4	3994.6	3884.8	3925.5	3984.2	4052.3	4198.1	4579.6	5011.2	4351.4
50°	4594.7	4518.0	4207.6	4116.7	4246.4	4333.5	4454.6	4675.2	5119.1	5482.6	4594.7
52.5°	4782.1	4721.5	4432.8	4372.3	4602.3	4721.5	4911.8	5201.5	5628.4	5793.1	4765.1
55°	4920.3	4890.0	4648.7	4657.2	4998.0	5170.2	5406.9	5734.4	6058.1	6034.5	4892.9
57.5°	5076.5	5052.9	4874.9	4993.2	5474.1	5696.5	5970.1	6233.2	6370.5	6228.5	5017.8
60°	5236.5	5244.1	5149.4	5400.2	6062.9	6309.0	6547.5	6612.8	6638.4	6425.4	5149.4
62.5°	5357.7	5389.8	5398.4	5839.5	6666.8	6876.9	6980.1	6933.7	6928.0	6689.5	5139.0
65°	5496.8	5581.0	5721.1	6321.3	7215.8	7354.0	7427.8	7495.0	7353.0	6768.1	4633.5
67.5°	5737.2	5869.8	6185.0	6911.9	7850.0	8054.5	8263.7	8192.7	7416.5	5970.1	3529.8
70°	6061.0	6222.8	6779.4	7683.4	8710.4	9053.1	9228.2	8136.8	6296.7	4125.2	1861.9
72°	5856.5	6003.2	6963.1	8077.2	9320.0	9634.3	9196.0	7097.5	4564.4	2138.3	623.8
72.5°	5657.7	5809.2	6904.4	8072.4	9380.6	9621.1	8986.8	6687.6	4039.1	1664.1	429.7
75°	3925.5	4116.7	5919.0	7256.5	8471.0	8206.9	6876.0	4049.5	1463.4	285.9	142.0
77.5°	2029.5	2177.1	3590.4	5127.6	5903.8	5406.9	4063.7	1756.9	405.1	151.5	93.7
80°	1258.0	1330.9	1679.2	2526.4	3066.9	2682.6	1792.8	709.9	259.4	89.9	74.8
82.5°	651.2	707.1	1057.3	1019.5	1133.1	941.8	661.7	594.5	160.0	55.8	76.7
85°	213.9	227.2	649.4	677.8	484.6	325.6	293.4	567.0	46.4	36.0	65.3
87.5°	28.4	33.1	228.1	388.1	238.5	147.7	176.1	199.7	16.1	19.9	18.0
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°	1927.2	1927.2	1927.2	1927.2	1927.2	1927.2	1927.2	1927.2	1927.2	1927.2	1927.2
2.5°	1889.4	1877.1	1838.3	1799.5	1755.0	1714.3	1682.1	1661.3	1670.7	1639.5	1644.2
5°	1835.4	1804.2	1719.0	1627.2	1527.8	1435.0	1361.2	1306.3	1295.9	1248.5	1250.4
7.5°	1783.4	1732.2	1594.0	1442.6	1277.9	1144.4	1023.3	917.2	879.4	840.6	817.8
10°	1755.0	1684.9	1489.0	1268.4	1036.5	840.6	670.2	536.7	480.9	440.2	420.3
12.5°	1763.5	1670.7	1410.4	1110.3	805.5	556.6	378.6	281.1	247.1	228.1	221.5
15°	1791.9	1673.6	1339.4	956.0	585.9	337.0	222.4	190.3	187.4	186.5	185.5
17.5°	1818.4	1676.4	1264.6	795.1	391.9	214.9	178.9	176.1	176.1	176.1	176.1
20°	1845.8	1677.3	1182.3	626.6	257.5	176.1	168.5	166.6	168.5	168.5	168.5
22.5°	1878.0	1684.0	1102.8	462.9	190.3	165.7	160.9	160.0	160.9	160.9	160.0
25°	1917.8	1698.2	1016.6	331.3	172.3	159.0	154.3	153.3	154.3	153.3	153.3
27.5°	1970.8	1717.1	916.3	237.6	164.7	152.4	147.7	147.7	147.7	146.7	146.7
30°	2038.9	1739.8	781.9	187.4	157.1	145.8	142.0	142.0	141.0	140.1	140.1
32.5°	2136.4	1776.7	635.2	169.4	148.6	137.3	133.5	134.4	133.5	132.5	131.6
35°	2274.6	1834.5	490.3	160.0	140.1	128.7	124.9	124.9	124.9	123.1	123.1
37.5°	2470.6	1922.5	367.3	150.5	131.6	120.2	115.5	115.5	114.5	112.6	113.6
40°	2712.9	2033.3	266.0	142.0	123.1	110.8	107.0	105.1	103.2	101.3	101.3
42.5°	3004.4	2141.2	199.7	133.5	114.5	103.2	98.4	96.6	92.8	90.9	89.9
45°	3331.0	2255.7	165.7	123.1	105.1	94.7	90.9	87.1	82.4	79.5	78.6
47.5°	3606.5	2325.8	147.7	112.6	95.6	86.1	82.4	76.7	71.0	69.1	69.1
50°	3772.1	2296.4	132.5	102.2	86.1	77.6	72.9	65.3	61.5	59.6	58.7
52.5°	3864.9	2209.3	120.2	93.7	77.6	68.2	61.5	54.9	53.0	51.1	51.1
55°	3928.3	2083.4	107.0	85.2	70.0	59.6	52.1	47.3	45.4	44.5	43.5
57.5°	3988.9	1930.1	94.7	77.6	62.5	53.0	44.5	42.6	38.8	37.9	37.9
60°	4006.9	1719.0	83.3	69.1	55.8	46.4	38.8	36.0	32.2	31.2	31.2
62.5°	3777.8	1367.8	73.8	58.7	49.2	39.8	34.1	30.3	26.5	26.5	26.5
65°	3156.8	928.6	63.4	51.1	43.5	34.1	29.3	24.6	22.7	22.7	22.7
67.5°	2198.9	517.8	54.0	43.5	36.9	28.4	24.6	20.8	19.9	20.8	20.8
70°	991.1	205.4	45.4	36.0	30.3	23.7	20.8	18.0	19.9	19.9	19.9
72°	297.2	109.8	37.9	29.3	24.6	20.8	18.0	17.0	18.9	19.9	19.9
72.5°	220.6	98.4	36.0	28.4	24.6	19.9	17.0	17.0	18.9	19.9	19.9
75°	113.6	67.2	27.5	20.8	18.0	16.1	14.2	16.1	18.9	18.9	18.9
77.5°	89.0	54.9	22.7	16.1	15.1	14.2	13.3	15.1	17.0	17.0	17.0
80°	83.3	36.0	18.0	15.1	13.3	12.3	12.3	13.3	15.1	16.1	16.1
82.5°	84.2	29.3	16.1	14.2	12.3	11.4	11.4	12.3	14.2	15.1	15.1
85°	54.0	19.9	14.2	12.3	11.4	10.4	10.4	11.4	13.3	14.2	14.2
87.5°	18.0	15.1	12.3	11.4	9.5	9.5	9.5	9.5	11.4	12.3	13.3
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)