

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: P197025

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-8030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197025
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
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-SL2-8030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9741 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 124
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

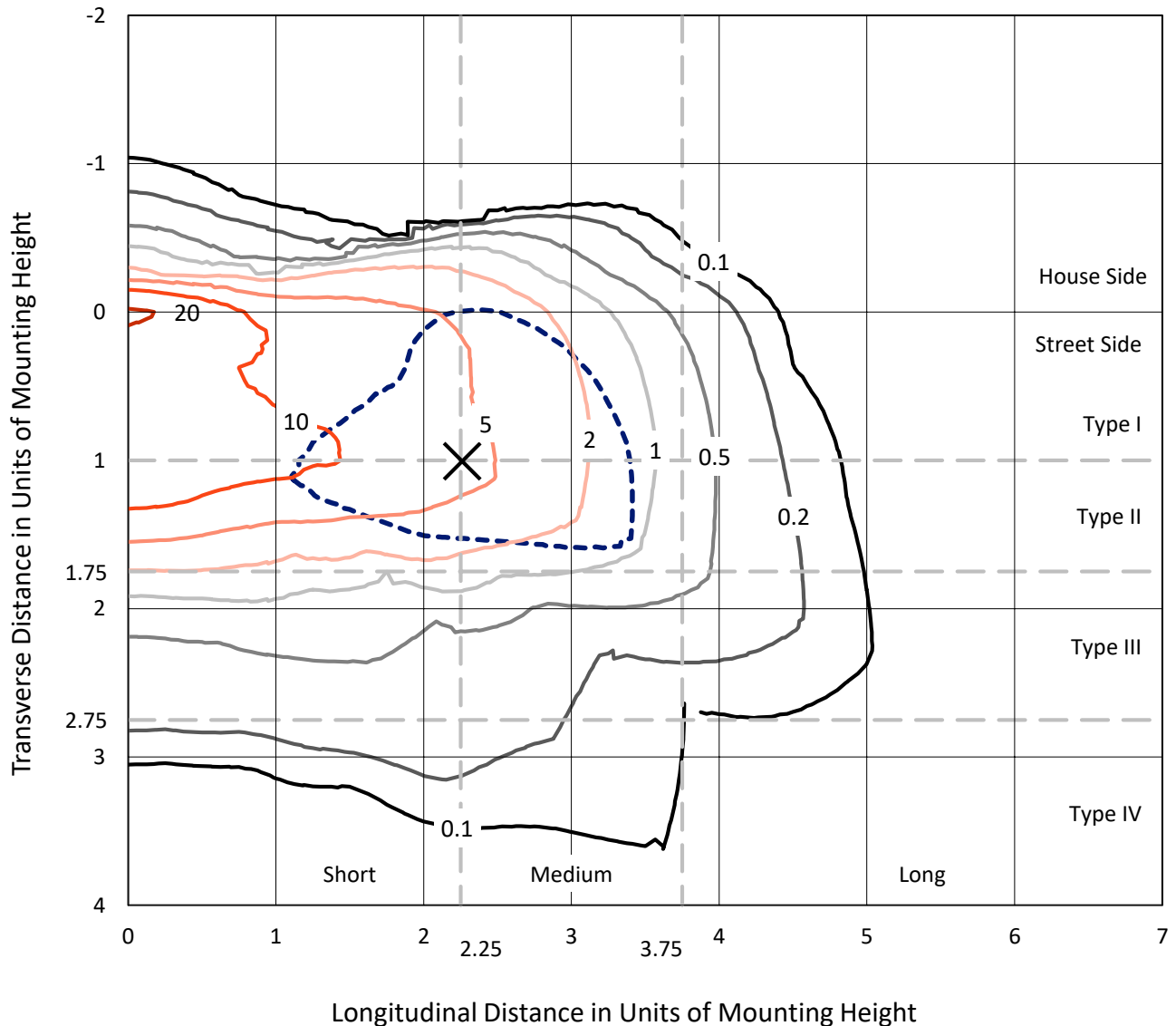


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

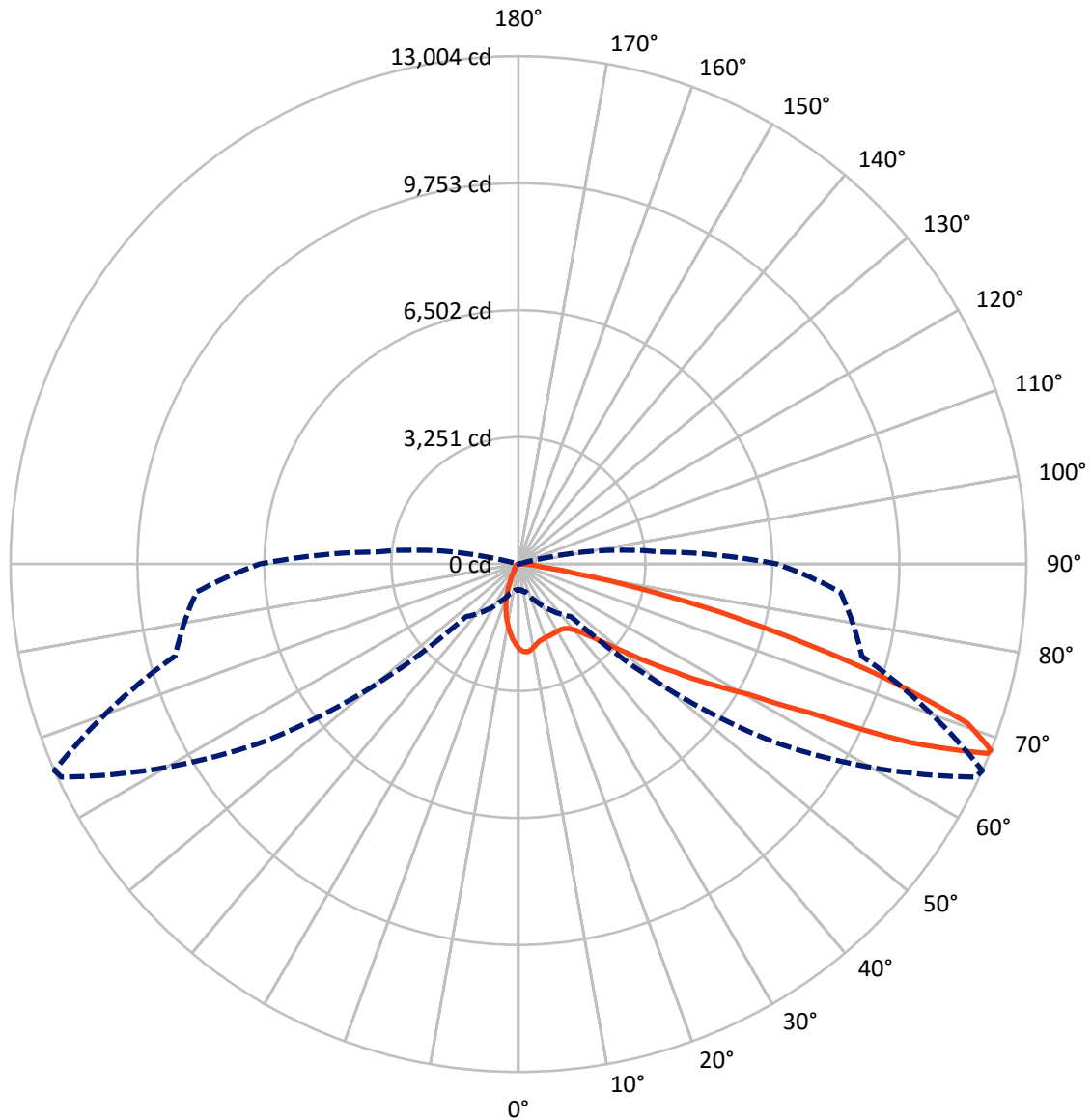


Based on 10 foot mounting height. Maximum calculated value = 21.7 fc
Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	986.7	0.0	986.7
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	8754.3	0.0	8754.3
	% Fixture	89.9	0.0	89.9
Total	Lumens	9741.0	0.0	9741.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.9	1.8
10°-20°	382.8	3.9
20°-30°	554.7	5.7
30°-40°	849.2	8.7
40°-50°	1452.4	14.9
50°-60°	2272.0	23.3
60°-70°	2616.1	26.9
70°-80°	1309.1	13.4
80°-90°	126.8	1.3
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°	9741.0	100.0
0°-180°	9741.0	100.0



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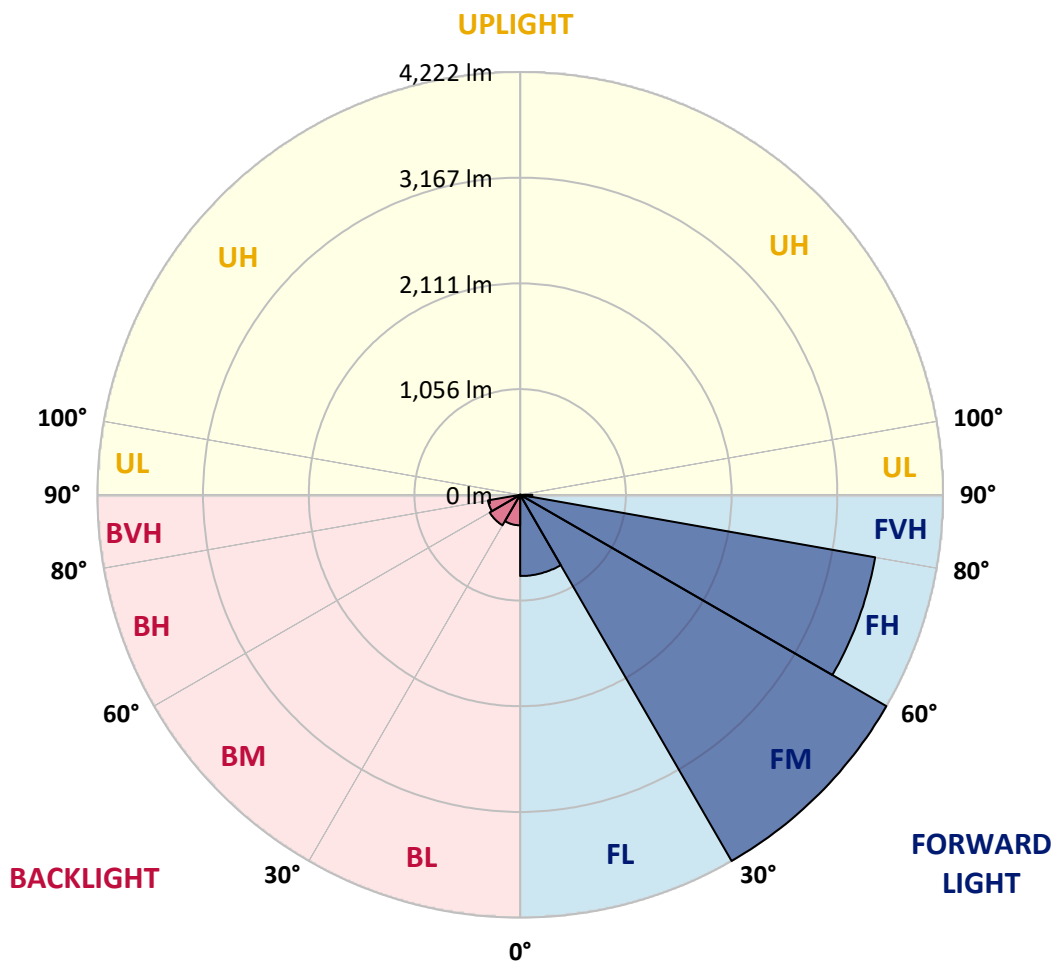
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	810.9	8.3			
FM (30°-60°)	4222.2	43.3			
FH (60°-80°)	3599.3	36.9			G2/5000
FVH (80°-90°)	122.0	1.3			G2/225
BL (0°-30°)	304.5	3.1	B1/500		
BM (30°-60°)	351.3	3.6	B1/1000		
BH (60°-80°)	326.0	3.3	B1/500		G1/500
BVH (80°-90°)	4.8	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-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	2170.2	2170.2	2170.2	2170.2	2170.2	2170.2	2170.2	2170.2	2170.2	2170.2	2170.2
2.5°	2282.6	2284.1	2283.4	2285.7	2284.1	2272.7	2260.4	2234.4	2236.7	2203.1	2165.6
5°	2122.0	2135.0	2148.0	2161.0	2192.4	2219.9	2252.8	2260.4	2260.4	2231.4	2176.3
7.5°	1958.4	1959.1	1973.7	1991.3	2033.3	2083.8	2160.3	2229.1	2230.6	2238.3	2177.8
10°	1835.3	1839.1	1849.0	1868.1	1910.2	1959.9	2045.6	2153.4	2161.8	2218.4	2162.6
12.5°	1739.7	1744.3	1755.0	1777.1	1815.4	1866.6	1956.9	2080.0	2091.4	2199.3	2158.0
15°	1666.3	1672.4	1680.8	1703.0	1744.3	1798.6	1897.2	2031.0	2044.8	2191.6	2172.5
17.5°	1635.7	1635.7	1634.9	1650.2	1691.5	1746.6	1849.8	2005.0	2022.6	2197.7	2197.0
20°	1648.7	1646.4	1630.3	1626.5	1651.7	1706.8	1812.3	1988.2	2008.1	2209.2	2226.8
22.5°	1717.5	1712.9	1677.0	1647.2	1639.5	1676.2	1787.1	1976.7	2000.4	2232.9	2266.6
25°	1863.6	1849.8	1800.1	1732.8	1672.4	1668.6	1769.5	1970.6	1995.9	2260.4	2310.1
27.5°	2053.2	2049.4	1969.9	1879.6	1763.4	1693.8	1764.1	1966.0	1991.3	2280.3	2345.3
30°	2288.7	2290.3	2198.5	2080.7	1904.9	1764.9	1781.0	1963.7	1989.7	2281.8	2360.6
32.5°	2531.9	2533.4	2457.0	2330.8	2098.3	1887.3	1828.4	1974.4	1998.1	2275.7	2359.8
35°	2765.9	2768.2	2722.3	2620.6	2356.8	2057.0	1917.9	2011.1	2028.0	2279.6	2358.3
37.5°	3061.8	3071.0	3014.4	2919.6	2681.0	2306.3	2063.9	2085.3	2099.1	2310.9	2369.8
40°	3566.5	3554.3	3392.2	3231.6	3032.8	2609.9	2275.0	2213.0	2217.6	2392.0	2413.4
42.5°	4154.6	4139.3	3861.7	3584.9	3394.5	2976.2	2544.9	2408.8	2408.0	2528.1	2508.2
45°	4660.8	4651.6	4359.5	3990.2	3795.2	3380.7	2877.5	2691.0	2681.8	2763.6	2681.0
47.5°	5020.2	5012.6	4791.6	4421.5	4258.6	3825.8	3292.8	3075.6	3056.5	3071.8	2961.7
50°	5055.4	5047.0	4969.7	4731.9	4800.0	4478.8	3805.9	3579.5	3555.1	3531.4	3386.1
52.5°	4726.6	4725.8	4766.3	4751.0	5179.3	5319.2	4435.2	4202.8	4173.7	4113.3	3968.8
55°	4054.4	4050.6	4204.3	4427.6	5170.9	6186.4	5394.9	4944.5	4906.3	4785.5	4595.8
57.5°	2962.4	2942.5	3263.7	3737.1	4807.6	6565.7	6919.0	5866.0	5802.5	5419.4	5127.3
60°	1635.7	1643.3	2056.3	2616.8	3947.4	6490.7	8321.4	6940.4	6773.7	5966.1	5671.7
62.5°	916.9	936.0	1243.4	1700.7	2516.6	5882.8	9073.9	8789.4	8387.9	6603.9	6360.0
65°	693.6	705.0	859.5	1312.2	1586.7	4111.0	9193.9	11374.8	11028.4	7570.5	7455.8
67.5°	653.0	662.2	737.9	1088.2	1445.3	2132.0	8290.1	12904.2	12947.8	8888.8	8304.6
68°	657.6	669.1	744.8	1046.9	1443.0	1907.1	7904.6	12911.9	13004.4	9101.4	8275.5
70°	604.1	607.2	787.6	1027.0	1398.6	1502.6	5718.4	12027.1	12193.1	9354.5	7512.4
72.5°	230.9	231.7	353.3	889.3	1465.2	1511.0	2880.6	9505.9	9514.3	8140.9	5856.8
75°	120.1	100.9	110.9	278.3	1399.4	1472.8	1445.3	6490.7	6450.2	5505.8	3588.7
77.5°	82.6	70.4	74.2	96.4	581.9	1472.0	1043.8	3732.5	3724.1	2342.3	1023.9
80°	46.6	40.5	44.4	81.1	204.2	1381.8	972.7	1604.3	1511.8	411.4	165.9
82.5°	23.7	19.9	23.7	68.1	126.9	869.5	945.9	629.3	560.5	97.9	107.8
85°	6.1	6.1	11.5	47.4	78.8	285.2	848.0	454.2	408.3	42.8	76.5
87.5°	1.5	0.8	4.6	17.6	28.3	61.9	470.3	253.1	217.9	22.2	44.4
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°	2170.2	2170.2	2170.2	2170.2	2170.2	2170.2	2170.2	2170.2	2170.2	2170.2	2170.2
2.5°	2150.3	2128.9	2086.9	2039.4	2005.8	1969.1	1947.7	1921.7	1901.8	1884.2	1897.2
5°	2142.7	2101.4	2008.1	1903.3	1815.4	1731.3	1668.6	1608.9	1563.8	1535.5	1547.0
7.5°	2122.8	2061.6	1910.2	1746.6	1602.8	1467.4	1357.3	1258.7	1182.2	1140.9	1153.9
10°	2089.1	2002.7	1799.3	1572.2	1371.1	1179.9	1016.3	869.5	758.6	706.6	718.8
12.5°	2064.7	1950.7	1684.6	1404.0	1139.4	867.9	650.8	482.5	396.1	344.1	348.7
15°	2054.0	1910.2	1577.6	1226.6	886.3	557.5	351.8	254.6	224.8	214.1	214.9
17.5°	2055.5	1878.1	1475.9	1042.3	630.9	320.4	215.6	194.2	189.6	187.4	187.4
20°	2059.3	1846.0	1370.3	850.3	403.8	206.5	179.7	172.8	170.5	167.5	168.2
22.5°	2070.8	1821.5	1264.0	657.6	248.5	168.2	159.1	152.9	149.1	144.5	145.3
25°	2088.4	1803.1	1159.3	473.3	175.1	146.8	138.4	130.0	123.1	117.8	118.5
27.5°	2099.1	1777.1	1047.6	322.7	145.3	128.5	117.0	105.5	97.9	93.3	92.5
30°	2091.4	1735.1	920.7	211.8	128.5	110.9	97.1	84.1	76.5	72.6	72.6
32.5°	2070.8	1680.8	780.8	154.5	113.9	95.6	78.8	67.3	61.9	59.6	60.4
35°	2047.1	1624.2	631.6	130.8	102.5	81.1	64.2	55.1	52.8	52.0	52.0
37.5°	2034.1	1575.3	488.6	118.5	91.8	67.3	52.8	47.4	45.1	45.1	45.1
40°	2048.6	1537.8	361.7	109.4	81.1	55.8	44.4	40.5	39.8	39.8	39.8
42.5°	2110.6	1524.8	264.6	101.7	70.4	46.6	38.2	35.2	34.4	35.2	35.2
45°	2231.4	1553.1	200.3	94.1	60.4	38.2	32.9	30.6	30.6	31.4	31.4
47.5°	2436.3	1625.7	164.4	86.4	50.5	32.1	28.3	26.8	26.8	27.5	27.5
50°	2754.4	1760.3	147.6	78.0	42.1	27.5	23.7	22.9	22.9	23.7	24.5
52.5°	3237.7	2016.5	139.2	69.6	34.4	22.9	19.9	19.1	19.9	20.6	20.6
55°	3775.3	2344.6	129.2	61.2	29.1	19.1	16.1	16.1	16.8	18.4	18.4
57.5°	4276.2	2661.1	120.1	50.5	25.2	15.3	13.0	13.0	14.5	16.1	16.1
60°	4805.3	2971.6	107.8	40.5	21.4	12.2	10.7	10.7	13.0	14.5	15.3
62.5°	5459.2	3332.5	91.8	32.1	16.8	9.2	7.6	9.9	12.2	14.5	14.5
65°	6404.3	3781.4	71.9	25.2	13.0	6.9	6.1	9.2	11.5	13.8	14.5
67.5°	6747.7	3724.1	54.3	20.6	9.9	5.4	5.4	8.4	11.5	13.8	13.8
68°	6622.3	3598.7	52.0	19.9	9.2	5.4	5.4	8.4	11.5	13.8	13.8
70°	5770.4	2941.8	42.8	15.3	7.6	4.6	4.6	7.6	11.5	13.0	13.8
72.5°	4320.5	1954.6	36.7	9.9	6.9	4.6	3.8	7.6	10.7	13.0	13.0
75°	2478.4	811.3	31.4	7.6	6.1	3.8	3.8	6.9	10.7	13.0	13.0
77.5°	700.5	189.6	25.2	6.1	5.4	3.8	3.1	6.9	9.9	12.2	12.2
80°	128.5	56.6	19.9	5.4	4.6	3.8	3.1	6.9	9.9	12.2	12.2
82.5°	84.9	26.8	14.5	5.4	4.6	3.8	3.1	6.1	9.2	11.5	11.5
85°	63.5	19.1	9.2	5.4	4.6	3.8	3.1	6.1	9.2	11.5	11.5
87.5°	35.2	8.4	6.9	6.1	5.4	3.8	3.1	5.4	8.4	10.7	10.7
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)