

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: P195632

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-7050-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195632
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
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-SL3-7050-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8354 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 85
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

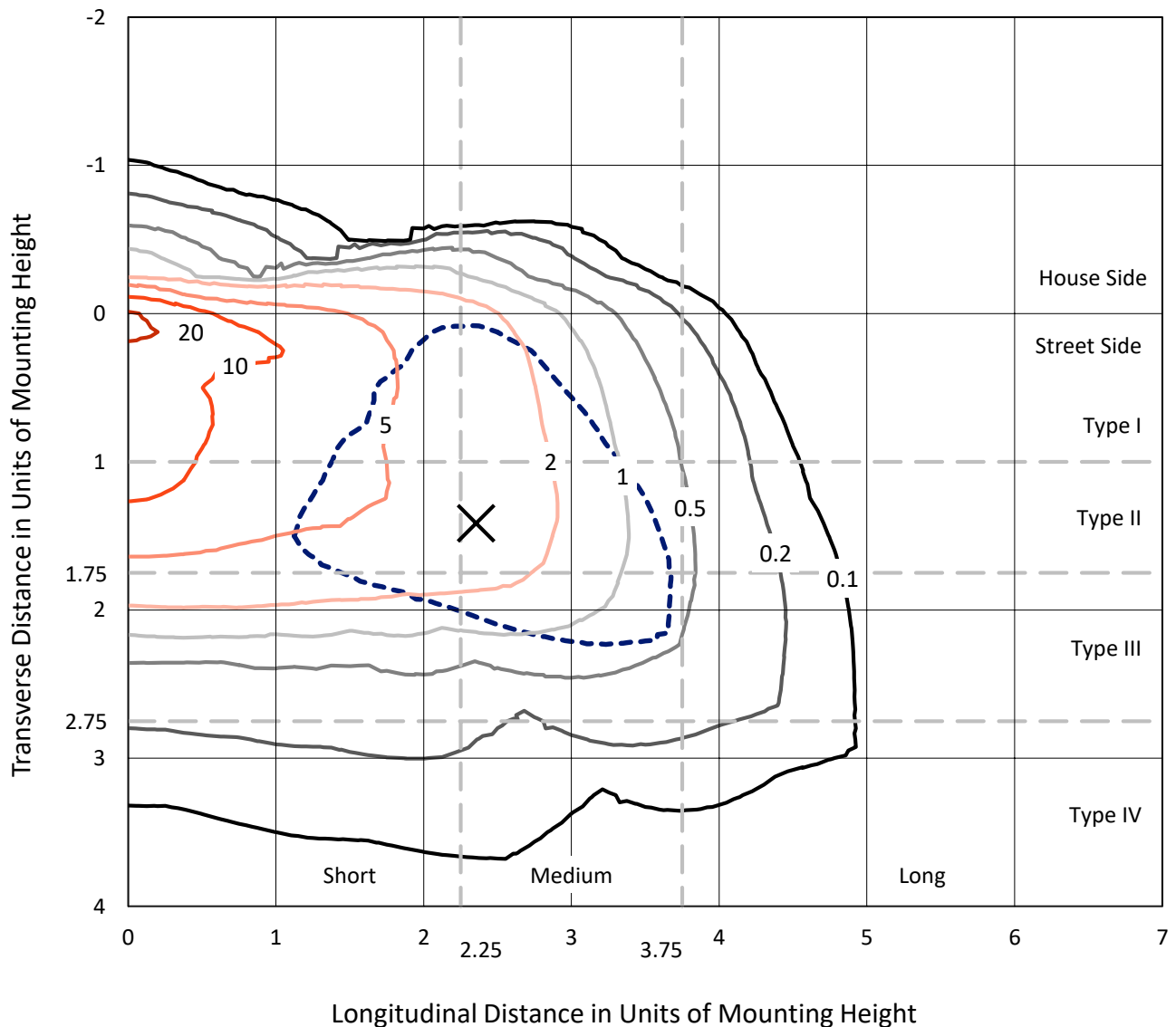


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

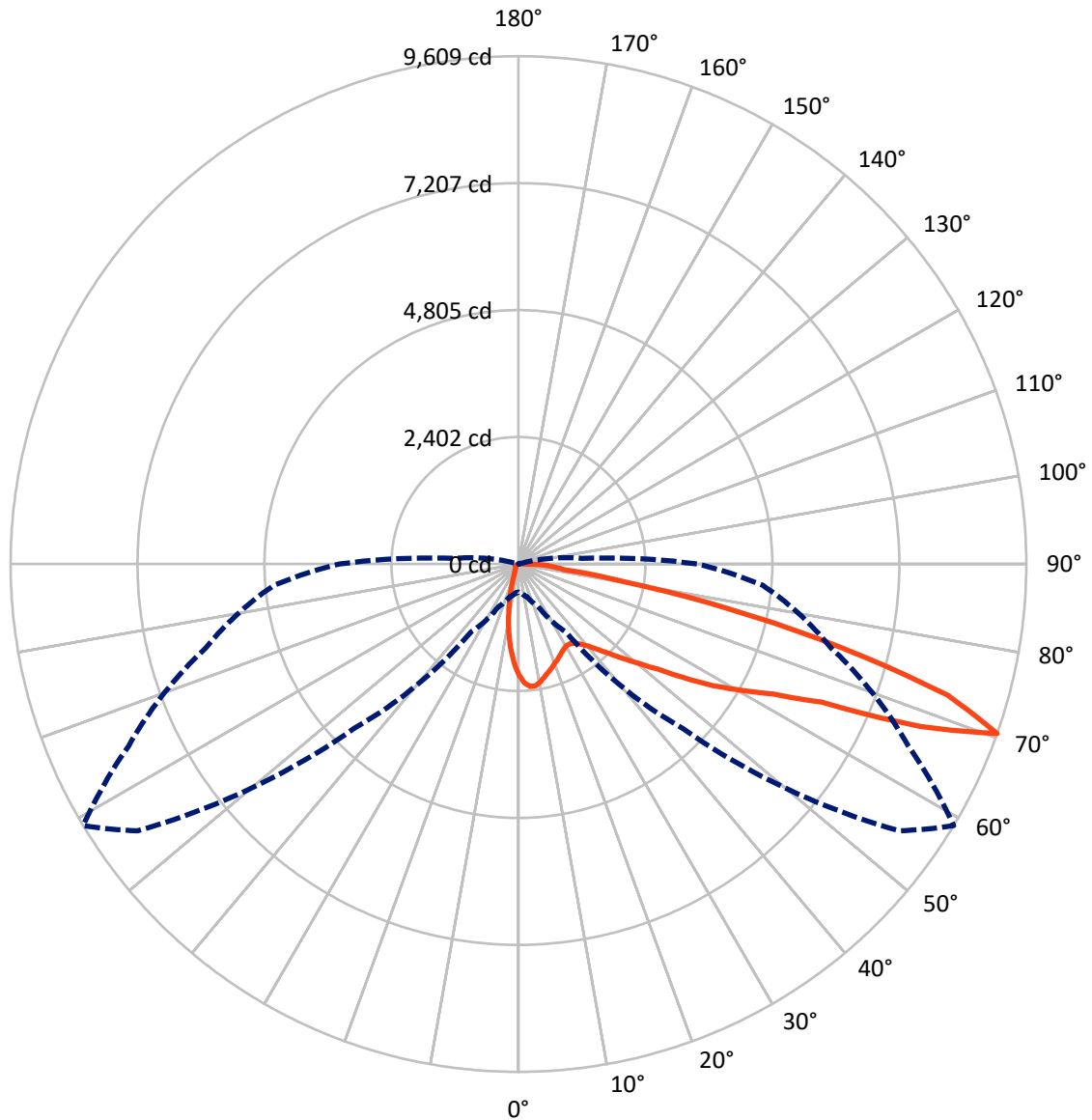


Based on 10 foot mounting height. Maximum calculated value = 22.5 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	642.2	0.0	642.2
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	7711.8	0.0	7711.8
	% Fixture	92.3	0.0	92.3
Total	Lumens	8354.0	0.0	8354.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.7	2.1
10°-20°	364.3	4.4
20°-30°	493.2	5.9
30°-40°	711.8	8.5
40°-50°	1182.1	14.1
50°-60°	1808.1	21.6
60°-70°	2248.8	26.9
70°-80°	1243.1	14.9
80°-90°	128.9	1.5
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°	8354.0	100.0
0°-180°	8354.0	100.0

Coefficient of Utilization



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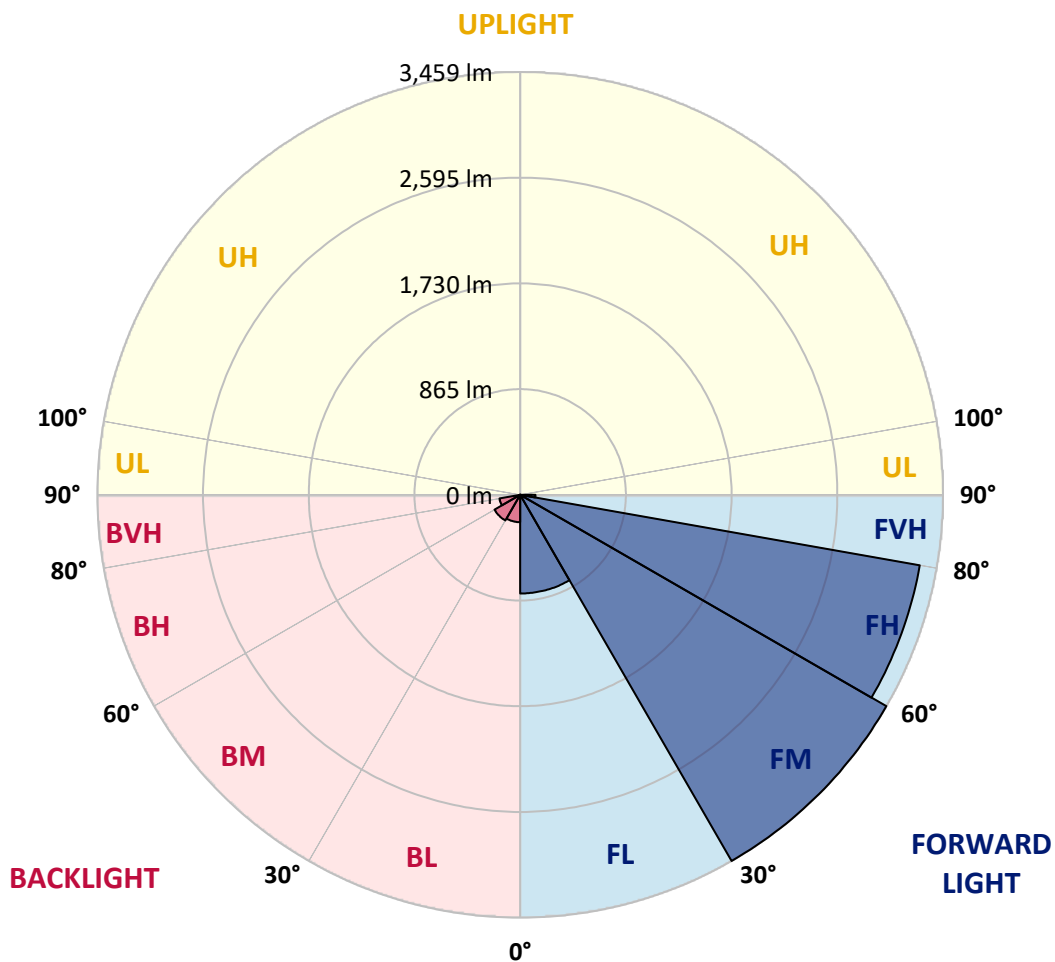
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	807.4	9.7			
FM	(30°-60°)	3459.5	41.4			
FH	(60°-80°)	3319.7	39.7			G2/5000
FVH	(80°-90°)	125.2	1.5			G2/225
BL	(0°-30°)	223.8	2.7	B1/500		
BM	(30°-60°)	242.4	2.9	B1/1000		
BH	(60°-80°)	172.3	2.1	B1/500		G1/500
BVH	(80°-90°)	3.7	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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	2112.4	2112.4	2112.4	2112.4	2112.4	2112.4	2112.4	2112.4	2112.4	2112.4	2112.4
2.5°	2387.8	2384.0	2368.3	2365.1	2347.5	2312.2	2271.2	2254.9	2221.5	2168.5	2109.9
5°	2427.5	2429.4	2430.7	2423.7	2421.2	2392.2	2346.9	2327.3	2282.6	2195.6	2088.5
7.5°	2278.8	2283.8	2299.6	2306.5	2336.8	2348.1	2338.7	2326.1	2290.8	2188.0	2037.4
10°	2121.9	2131.3	2148.3	2159.7	2196.9	2227.1	2265.6	2268.7	2261.2	2162.8	1980.1
12.5°	1987.0	1995.8	2014.7	2037.4	2075.2	2114.3	2171.7	2191.8	2217.0	2146.5	1939.1
15°	1871.1	1873.6	1891.9	1920.2	1970.0	2023.6	2091.6	2121.2	2170.4	2140.2	1907.6
17.5°	1769.6	1770.2	1782.2	1808.0	1868.5	1939.1	2018.5	2057.6	2120.0	2131.3	1879.9
20°	1702.8	1702.2	1702.8	1716.7	1770.2	1854.0	1950.5	1991.4	2071.5	2120.6	1851.5
22.5°	1680.1	1677.0	1662.5	1657.4	1691.5	1765.2	1880.5	1934.1	2028.0	2117.5	1830.7
25°	1707.8	1705.9	1675.1	1646.1	1649.2	1695.2	1809.3	1874.8	1993.9	2128.8	1825.7
27.5°	1797.3	1793.5	1746.3	1689.6	1653.6	1661.8	1756.4	1825.1	1966.9	2156.5	1832.6
30°	1914.5	1915.2	1864.8	1796.1	1711.6	1665.0	1728.0	1792.9	1948.6	2198.1	1847.7
32.5°	2045.0	2044.4	2008.4	1929.0	1821.3	1723.0	1740.6	1795.4	1951.1	2259.3	1876.7
35°	2179.9	2172.9	2161.0	2091.0	1965.0	1824.4	1798.0	1838.3	1977.6	2339.9	1925.9
37.5°	2335.5	2333.0	2345.0	2271.2	2142.7	1973.8	1898.8	1925.9	2044.4	2459.0	2005.3
40°	2583.2	2569.3	2575.0	2474.8	2343.1	2174.8	2040.0	2046.9	2150.9	2616.6	2130.7
42.5°	3055.2	2999.1	2893.9	2706.1	2563.6	2397.9	2224.6	2212.6	2301.5	2807.5	2295.8
45°	3619.2	3555.0	3289.6	2961.3	2784.2	2637.4	2452.7	2420.6	2486.8	3035.0	2508.8
47.5°	4090.0	4020.7	3669.0	3227.9	3008.6	2884.4	2705.4	2667.6	2708.6	3299.1	2764.7
50°	4250.7	4212.2	3903.5	3449.7	3234.8	3161.7	3022.4	2959.4	2969.5	3583.9	3063.4
52.5°	4177.0	4163.7	3957.0	3601.6	3444.0	3468.0	3369.7	3303.5	3292.2	3895.3	3393.6
55°	4021.3	4015.0	3914.2	3686.0	3628.7	3748.4	3856.8	3799.5	3692.3	4226.1	3666.5
57.5°	3798.8	3822.8	3895.3	3848.6	3855.6	4044.6	4309.3	4338.9	4178.8	4489.5	3868.8
60°	3204.6	3268.8	3601.0	4023.2	4346.5	4537.4	4793.9	4849.4	4591.0	4669.8	4102.6
62.5°	2368.9	2460.9	2934.2	3710.0	4616.8	5474.5	5438.6	5414.0	4984.2	4911.1	4528.0
65°	1391.5	1499.2	1899.4	2898.9	4209.1	6077.0	6642.3	6302.0	5583.6	5412.8	5205.4
67.5°	693.2	693.8	874.7	1530.1	3110.7	5656.7	8399.3	8202.7	6857.8	6152.0	5472.6
70°	533.1	547.6	647.2	889.2	1573.0	4405.7	8802.0	9609.3	8138.4	6119.2	4643.3
72.5°	451.9	461.3	576.0	773.9	1176.0	2418.7	7619.7	8493.8	7765.9	5170.1	3422.6
75°	325.2	332.7	509.8	702.0	1082.7	1199.9	5226.9	6299.5	5826.8	3636.9	1883.7
77.5°	80.7	80.0	177.7	569.7	968.6	999.5	2999.1	4039.6	3343.2	1489.2	484.0
80°	35.9	34.7	40.3	119.7	901.2	943.4	1319.0	2040.0	1282.5	241.4	148.1
82.5°	25.2	23.9	25.2	44.1	301.2	875.3	797.2	884.2	469.5	82.6	63.0
85°	8.2	7.6	13.9	37.2	84.4	504.8	777.7	660.4	349.1	35.3	42.2
87.5°	1.3	1.3	5.0	20.2	24.6	168.3	456.3	457.5	156.9	20.8	18.9
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°	2112.4	2112.4	2112.4	2112.4	2112.4	2112.4	2112.4	2112.4	2112.4	2112.4	2112.4
2.5°	2080.3	2043.1	1990.8	1938.5	1891.2	1842.7	1803.6	1785.4	1777.2	1765.8	1741.2
5°	2032.4	1965.0	1850.3	1737.5	1632.2	1531.4	1445.0	1395.9	1343.0	1340.4	1314.6
7.5°	1955.5	1859.7	1678.8	1503.7	1343.0	1189.2	1056.8	971.1	912.5	876.0	850.8
10°	1869.8	1746.9	1507.4	1261.0	1042.3	836.9	666.8	555.8	488.4	454.4	434.8
12.5°	1801.7	1647.3	1338.5	1028.5	754.3	518.7	360.5	279.8	243.9	230.0	223.7
15°	1743.1	1556.0	1180.4	820.5	503.5	298.1	208.6	182.1	176.5	176.5	175.8
17.5°	1683.9	1467.7	1026.6	616.3	317.0	195.4	164.5	160.7	161.3	163.2	163.2
20°	1627.8	1383.9	878.5	439.2	208.0	156.3	149.4	148.1	150.0	152.5	151.9
22.5°	1582.4	1310.2	739.9	301.9	160.1	141.8	137.4	135.5	136.8	138.6	138.0
25°	1550.3	1247.2	612.6	210.5	139.3	129.2	124.1	121.6	120.4	121.6	121.0
27.5°	1530.8	1194.2	492.8	158.2	124.8	116.6	110.3	105.2	102.1	102.1	100.8
30°	1518.1	1144.4	386.3	131.1	112.8	104.0	95.2	88.2	83.2	81.9	81.3
32.5°	1517.5	1101.6	288.6	116.0	101.5	91.4	80.7	71.8	66.2	64.9	64.3
35°	1533.3	1066.9	212.4	104.6	91.4	79.4	67.4	58.0	52.9	52.9	52.3
37.5°	1574.2	1046.8	160.7	95.8	83.2	69.3	56.7	47.9	43.5	44.7	44.7
40°	1650.5	1043.0	131.1	88.9	76.3	60.5	46.0	39.1	37.2	39.1	39.1
42.5°	1767.1	1063.1	116.6	83.8	70.0	51.7	38.4	33.4	32.8	34.7	34.7
45°	1919.0	1102.8	108.4	79.4	63.0	42.9	32.1	29.0	28.4	30.9	30.9
47.5°	2103.0	1156.4	100.8	74.4	56.1	35.3	27.1	24.6	24.6	27.1	27.7
50°	2321.0	1228.9	93.3	69.3	50.4	29.6	22.7	20.8	21.4	23.9	24.6
52.5°	2571.8	1317.7	86.3	64.9	44.1	23.9	18.9	17.6	18.3	20.8	21.4
55°	2788.0	1395.3	78.1	60.5	35.9	19.5	15.8	15.1	15.8	18.9	18.9
57.5°	2976.4	1469.6	70.6	53.6	28.4	15.8	12.6	12.6	13.9	17.0	17.6
60°	3226.6	1586.8	64.3	45.4	21.4	12.0	10.1	10.7	12.6	15.1	15.8
62.5°	3669.6	1786.0	56.1	37.8	15.8	9.5	8.2	8.8	11.3	14.5	15.1
65°	4224.2	1974.4	46.6	31.5	12.0	6.9	6.3	8.2	11.3	14.5	15.1
67.5°	4167.5	1717.3	36.6	25.2	8.8	5.7	5.0	7.6	10.7	14.5	15.1
70°	3379.8	1203.7	27.1	17.0	6.9	5.0	5.0	7.6	10.7	13.9	14.5
72.5°	2344.3	669.9	20.8	11.3	6.3	5.0	4.4	6.9	10.1	13.9	14.5
75°	1115.5	205.4	16.4	8.2	5.7	4.4	3.8	6.9	10.1	13.9	14.5
77.5°	214.3	52.3	13.2	6.9	5.0	4.4	3.8	6.3	10.1	13.2	13.9
80°	72.5	23.3	10.7	6.3	5.0	4.4	3.8	6.3	9.5	12.6	13.2
82.5°	39.7	13.2	9.5	5.7	5.0	3.8	3.2	5.7	8.8	12.6	13.2
85°	30.9	9.5	7.6	5.7	5.0	3.8	3.2	5.7	8.8	12.0	12.6
87.5°	15.8	6.9	6.3	5.7	5.0	3.8	3.2	5.0	8.2	11.3	12.6
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)