

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: P195849

Luminaire Tested: **NAV-AF-03-D-UNV-T3R-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195849
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
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-T3R-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14886 lumens
Efficiency: N/A
Efficacy: 120.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B2 - U0 - G3

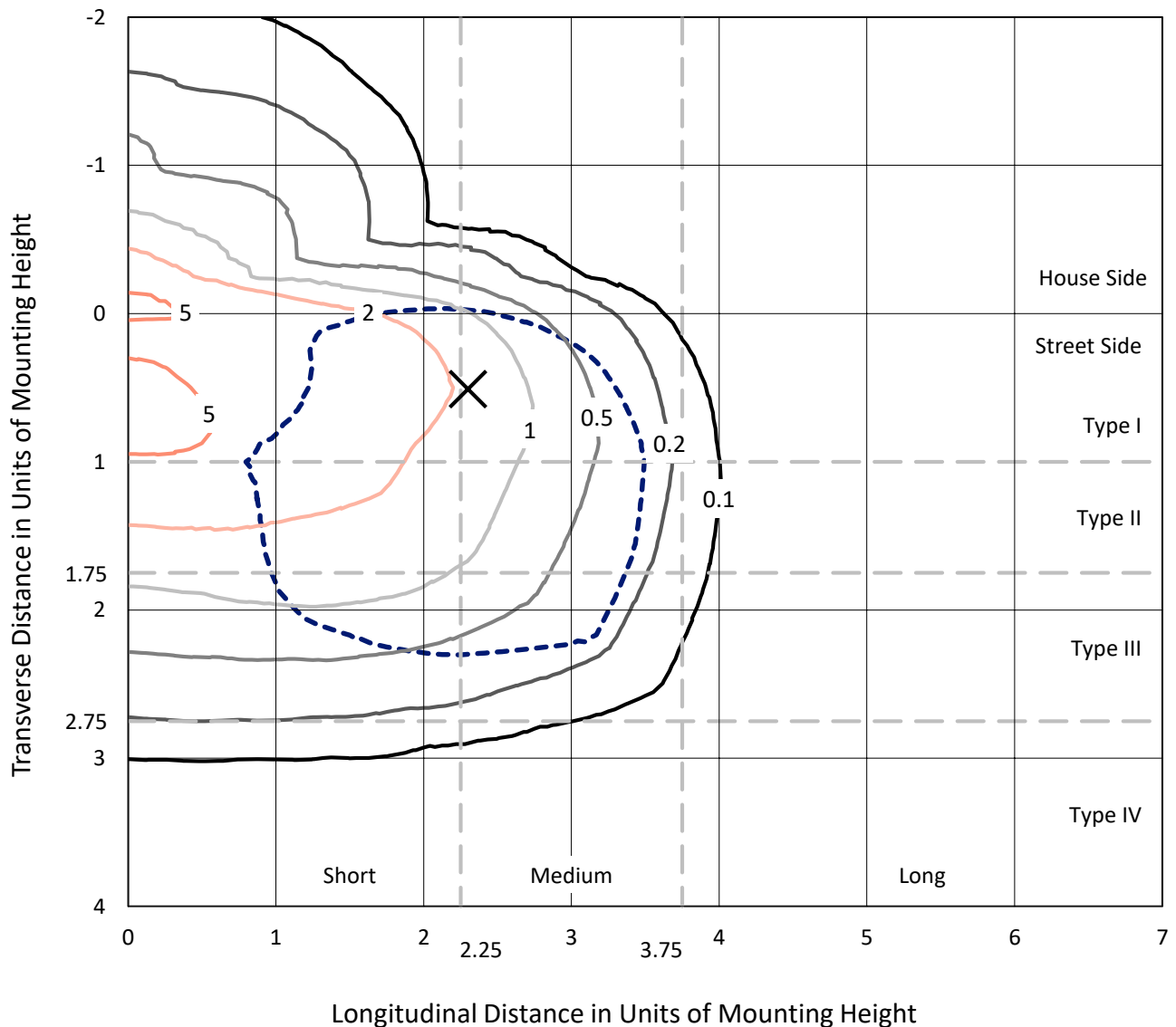
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

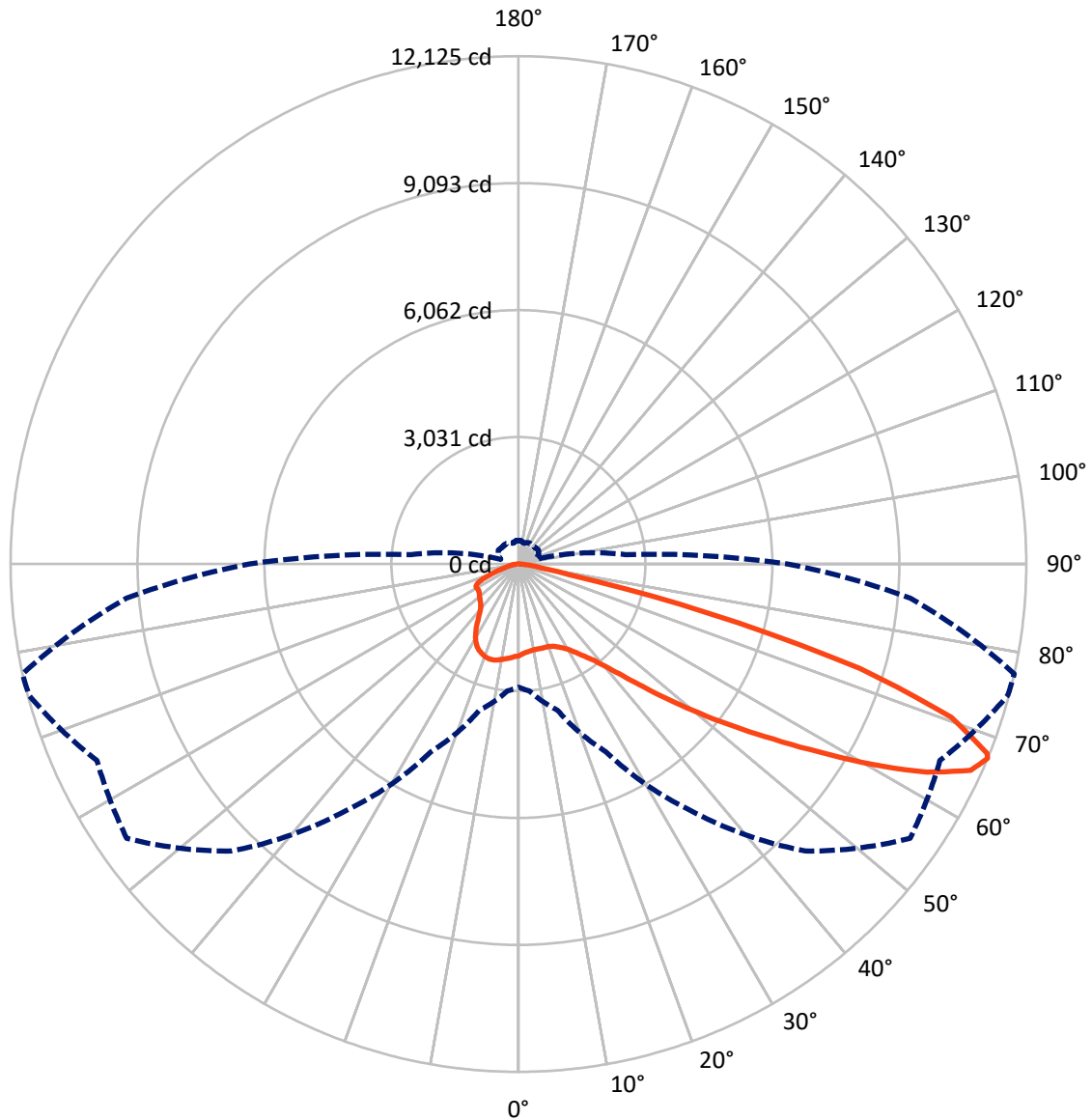


Based on 20 foot mounting height. Maximum calculated value = 6.6 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2558.2	0.0	2558.2
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	12327.8	0.0	12327.8
	% Fixture	82.8	0.0	82.8
Total	Lumens	14886.0	0.0	14886.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.1	1.3
10°-20°	540.4	3.6
20°-30°	918.1	6.2
30°-40°	1468.8	9.9
40°-50°	2261.2	15.2
50°-60°	3137.3	21.1
60°-70°	4184.9	28.1
70°-80°	1991.6	13.4
80°-90°	188.6	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°	14886.0	100.0
0°-180°	14886.0	100.0



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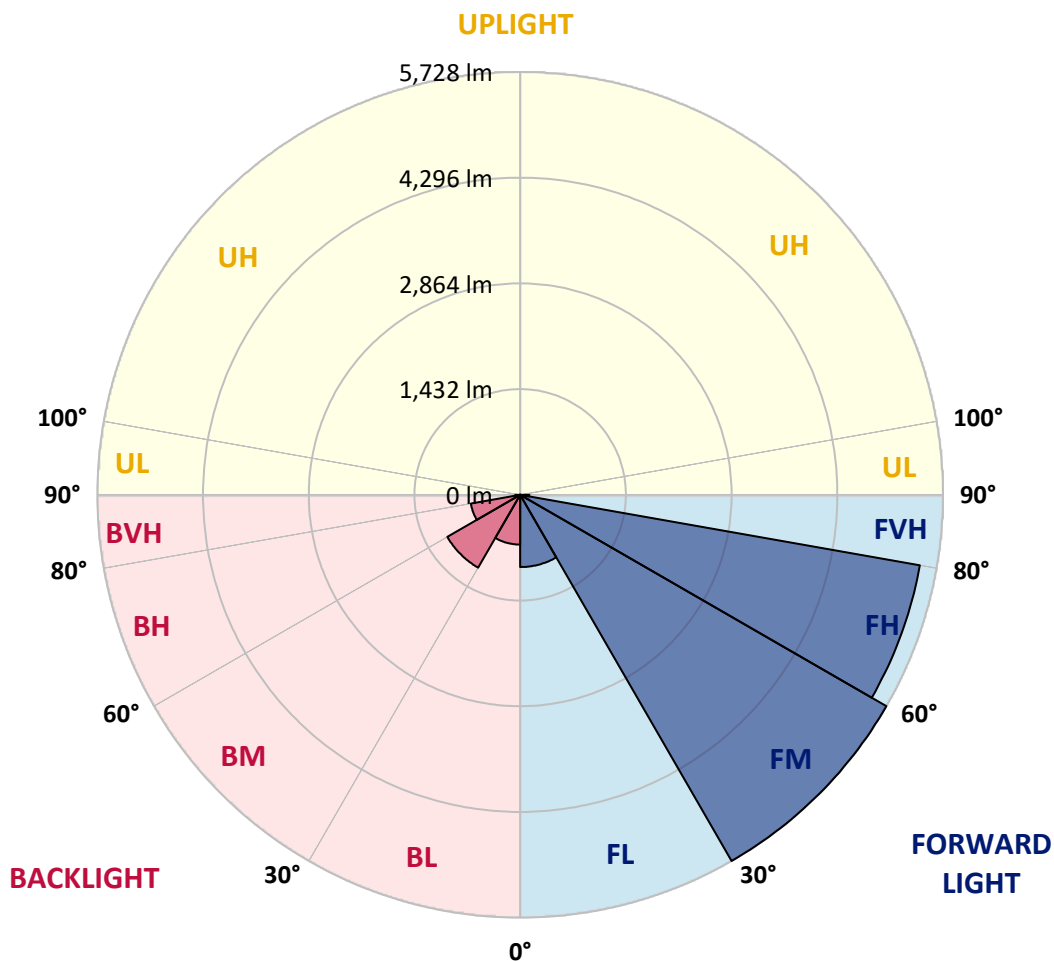
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	978.9	6.6			
FM	(30°-60°)	5728.3	38.5			
FH	(60°-80°)	5498.2	36.9			G3/7500
FVH	(80°-90°)	122.5	0.8			G2/225
BL	(0°-30°)	674.7	4.5	B2/1000		
BM	(30°-60°)	1139.0	7.7	B2/2500		
BH	(60°-80°)	678.3	4.6	B2/1000		G2/1000
BVH	(80°-90°)	66.1	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	2190.8	2190.8	2190.8	2190.8	2190.8	2190.8	2190.8	2190.8	2190.8	2190.8	2190.8
2.5°	1964.5	1973.7	1974.6	2001.3	2013.2	2043.6	2076.7	2106.2	2131.9	2141.1	2157.7
5°	1767.6	1767.6	1770.3	1787.8	1821.9	1870.6	1939.6	2015.1	2094.2	2113.5	2162.3
7.5°	1664.5	1666.4	1668.2	1685.7	1712.4	1755.6	1824.6	1927.7	2059.2	2091.5	2177.0
10°	1673.7	1671.0	1661.8	1658.1	1669.1	1696.7	1756.5	1862.3	2029.8	2079.5	2203.7
12.5°	1818.2	1812.7	1782.3	1738.1	1697.6	1687.5	1728.9	1829.2	2016.0	2079.5	2248.8
15°	2065.7	2069.4	2009.6	1917.5	1811.7	1740.0	1734.4	1817.3	2011.4	2085.0	2301.2
17.5°	2387.7	2389.6	2306.8	2173.3	1997.6	1849.5	1772.2	1817.3	2011.4	2090.5	2351.9
20°	2730.0	2717.1	2623.3	2455.8	2227.6	2001.3	1841.2	1828.3	2016.9	2098.8	2399.7
22.5°	3023.5	3011.6	2913.1	2737.4	2476.1	2180.7	1934.1	1865.1	2047.3	2132.9	2466.9
25°	3280.3	3287.6	3191.9	2994.1	2723.6	2383.1	2073.1	1949.8	2110.8	2194.5	2549.7
27.5°	3592.2	3578.4	3468.0	3279.3	2978.5	2592.9	2247.0	2056.5	2186.2	2269.0	2650.9
30°	3952.9	3946.4	3797.4	3603.2	3259.1	2827.6	2419.0	2171.5	2284.7	2371.2	2777.9
32.5°	4390.9	4389.9	4229.8	3991.5	3574.7	3092.6	2622.4	2328.8	2428.2	2515.6	2946.3
35°	4886.8	4885.9	4720.3	4405.6	3938.2	3386.1	2861.6	2520.2	2605.8	2697.8	3146.8
37.5°	5230.9	5225.4	5138.9	4833.4	4340.3	3727.4	3160.6	2777.9	2807.3	2910.4	3388.8
40°	5297.2	5330.3	5404.8	5224.5	4779.2	4106.5	3460.6	3054.8	3082.4	3214.9	3693.4
42.5°	5225.4	5268.7	5516.2	5566.8	5218.1	4565.7	3836.0	3438.5	3473.5	3638.2	4051.3
45°	5162.8	5200.6	5510.7	5756.3	5651.4	5066.2	4304.4	3906.9	3973.1	4177.4	4459.9
47.5°	5056.1	5091.1	5402.1	5790.4	5898.9	5548.4	4868.4	4470.0	4584.1	4831.6	4925.5
50°	5050.6	5066.2	5253.9	5676.3	5984.5	5914.6	5493.2	5128.8	5303.6	5588.9	5440.7
52.5°	4910.7	5020.2	5190.4	5494.1	5986.4	6128.1	6108.7	5851.1	6120.7	6436.3	6005.7
55°	4055.0	4181.1	4978.8	5404.8	5975.3	6311.2	6670.9	6619.4	7040.8	7373.0	6638.7
57.5°	3786.3	3839.7	4367.9	5431.5	6067.3	6613.9	7233.1	7444.8	8093.5	8456.0	7397.8
60°	3712.7	3768.8	4245.5	5444.4	6316.7	7165.0	7995.9	8376.9	9331.0	9715.6	8260.0
62.5°	3630.8	3703.5	4254.7	5456.4	6754.7	7980.3	9008.1	9388.1	10601.7	10944.9	9067.9
65°	3391.6	3488.2	4084.5	5380.9	7234.1	9003.5	10345.9	10442.5	11651.6	11869.7	9555.5
67°	2938.0	3043.8	3617.0	4944.8	7189.9	9692.6	11416.0	11102.3	12097.9	12124.5	9397.3
67.5°	2794.4	2903.9	3458.8	4763.5	7063.8	9782.8	11605.6	11193.4	12094.2	12064.7	9250.1
70°	1881.7	2005.0	2449.4	3497.4	5666.2	9104.7	11559.6	10912.7	11301.0	10963.3	7947.2
72.5°	933.9	937.6	1221.9	1915.7	3433.0	6530.2	9643.0	9335.6	9160.8	8523.2	5831.8
75°	449.9	458.2	576.9	846.5	1447.4	3371.4	6576.2	6299.2	5363.4	4643.9	2918.7
77.5°	343.2	351.5	448.1	551.2	603.6	1099.6	3257.3	2632.5	1554.1	1241.3	822.6
80°	265.0	280.6	378.2	423.3	399.3	440.7	1024.1	806.0	604.5	554.8	407.6
82.5°	207.0	216.2	321.1	321.1	276.0	295.4	476.6	465.6	375.4	338.6	219.0
85°	146.3	164.7	258.6	239.2	181.3	183.1	285.2	273.3	193.2	155.5	85.6
87.5°	65.3	83.7	184.0	156.4	96.6	74.5	116.9	100.3	76.4	58.9	39.6
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°	2190.8	2190.8	2190.8	2190.8	2190.8	2190.8	2190.8	2190.8	2190.8	2190.8	2190.8
2.5°	2176.1	2190.8	2213.8	2227.6	2246.0	2253.4	2260.8	2273.6	2283.8	2281.0	2276.4
5°	2196.3	2221.2	2249.7	2258.9	2258.9	2249.7	2244.2	2245.1	2242.4	2240.5	2235.0
7.5°	2225.8	2259.8	2280.1	2270.9	2242.4	2206.5	2172.4	2152.2	2132.9	2120.9	2124.6
10°	2267.2	2304.9	2305.8	2265.4	2197.3	2119.1	2051.9	2008.6	1967.2	1948.8	1954.4
12.5°	2327.0	2364.7	2332.5	2245.1	2125.5	2003.1	1879.8	1790.6	1710.5	1691.2	1685.7
15°	2391.4	2420.9	2349.1	2201.9	2022.4	1820.9	1613.9	1480.5	1391.2	1375.6	1370.1
17.5°	2447.5	2464.1	2340.8	2124.6	1859.6	1542.1	1301.1	1210.9	1192.5	1201.7	1201.7
20°	2497.2	2491.7	2304.9	2005.0	1602.9	1233.0	1093.1	1092.2	1117.0	1140.0	1141.9
22.5°	2559.8	2516.6	2247.9	1827.4	1296.5	1028.7	1004.8	1028.7	1056.3	1082.1	1084.8
25°	2634.3	2544.2	2171.5	1574.3	1042.5	933.9	944.1	964.3	981.8	1002.0	1002.9
27.5°	2708.9	2565.3	2063.9	1277.1	904.5	873.2	884.2	892.5	897.1	910.0	910.0
30°	2795.4	2581.9	1908.3	1023.2	841.0	819.8	813.4	809.7	813.4	830.9	831.8
32.5°	2903.9	2611.3	1695.8	877.8	811.6	782.1	749.0	730.6	743.5	774.7	780.3
35°	3027.2	2646.3	1440.9	819.8	801.4	763.7	703.0	674.5	679.1	707.6	712.2
37.5°	3181.8	2691.4	1189.7	806.0	811.6	761.9	681.8	641.3	621.1	622.0	621.1
40°	3379.6	2736.5	991.0	809.7	833.6	766.5	671.7	608.2	565.9	567.7	571.4
42.5°	3586.7	2765.9	864.9	820.8	860.3	772.9	668.0	576.0	539.2	570.5	599.0
45°	3828.7	2757.6	799.6	830.9	880.6	775.7	654.2	572.3	542.0	635.8	689.2
47.5°	4106.5	2721.7	762.8	835.5	886.1	774.7	644.1	584.3	565.0	727.8	788.6
50°	4408.3	2665.6	733.3	828.1	883.3	771.1	655.1	599.0	574.2	748.1	795.0
52.5°	4738.7	2614.1	703.0	811.6	869.5	760.0	668.9	592.6	548.4	689.2	725.1
55°	5129.7	2602.1	668.9	783.0	846.5	748.1	661.6	572.3	519.9	611.0	633.0
57.5°	5576.9	2676.7	624.8	748.1	815.2	724.1	644.1	561.3	509.8	555.8	567.7
60°	6144.6	2841.4	577.8	711.3	776.6	776.6	628.4	564.0	512.5	547.5	550.2
62.5°	6588.1	2989.5	535.5	666.2	725.1	645.0	611.9	566.8	520.8	558.5	553.9
65°	6749.1	2916.8	483.1	599.0	652.4	597.2	588.9	568.6	520.8	565.0	554.8
67°	6418.8	2569.9	433.4	531.8	583.4	554.8	566.8	561.3	511.6	564.0	546.6
67.5°	6261.5	2447.5	420.5	520.8	565.0	542.0	561.3	557.6	508.8	562.2	542.0
70°	5163.8	1755.6	355.2	437.1	472.9	477.5	527.2	533.7	486.7	528.2	491.3
72.5°	3674.1	1098.6	306.4	338.6	381.9	408.5	481.2	501.5	457.3	459.1	428.8
75°	1818.2	589.8	273.3	261.3	297.2	340.4	419.6	457.3	414.1	382.8	372.7
77.5°	613.7	334.0	231.0	210.7	231.0	273.3	347.8	399.3	365.3	323.9	317.4
80°	317.4	242.9	180.3	169.3	182.2	211.6	272.4	332.2	311.9	313.8	258.6
82.5°	197.8	148.1	129.7	128.8	138.0	161.9	200.6	269.6	267.8	229.1	166.5
85°	92.0	85.6	82.8	85.6	88.3	92.0	130.7	192.3	203.3	123.3	109.5
87.5°	38.6	37.7	33.1	35.9	39.6	38.6	52.4	81.9	114.1	77.3	70.8
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)