

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: P195302

Luminaire Tested: **NAV-AF-02-D-UNV-T2-7060**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195302  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)  
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-T2-7060  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 5700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11922 lumens  
Efficiency: N/A  
Efficacy: 105.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B2 - U0 - G2

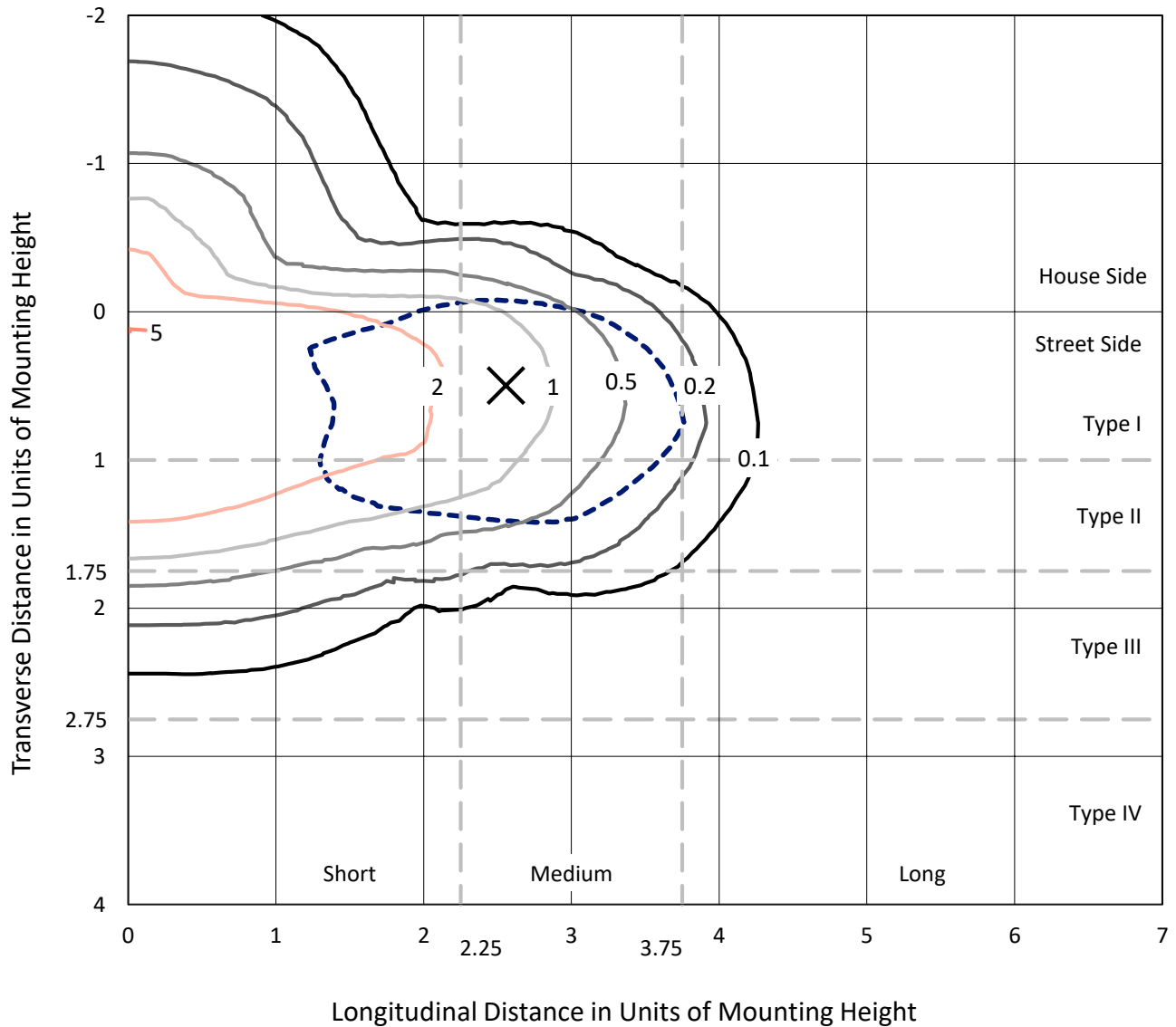
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

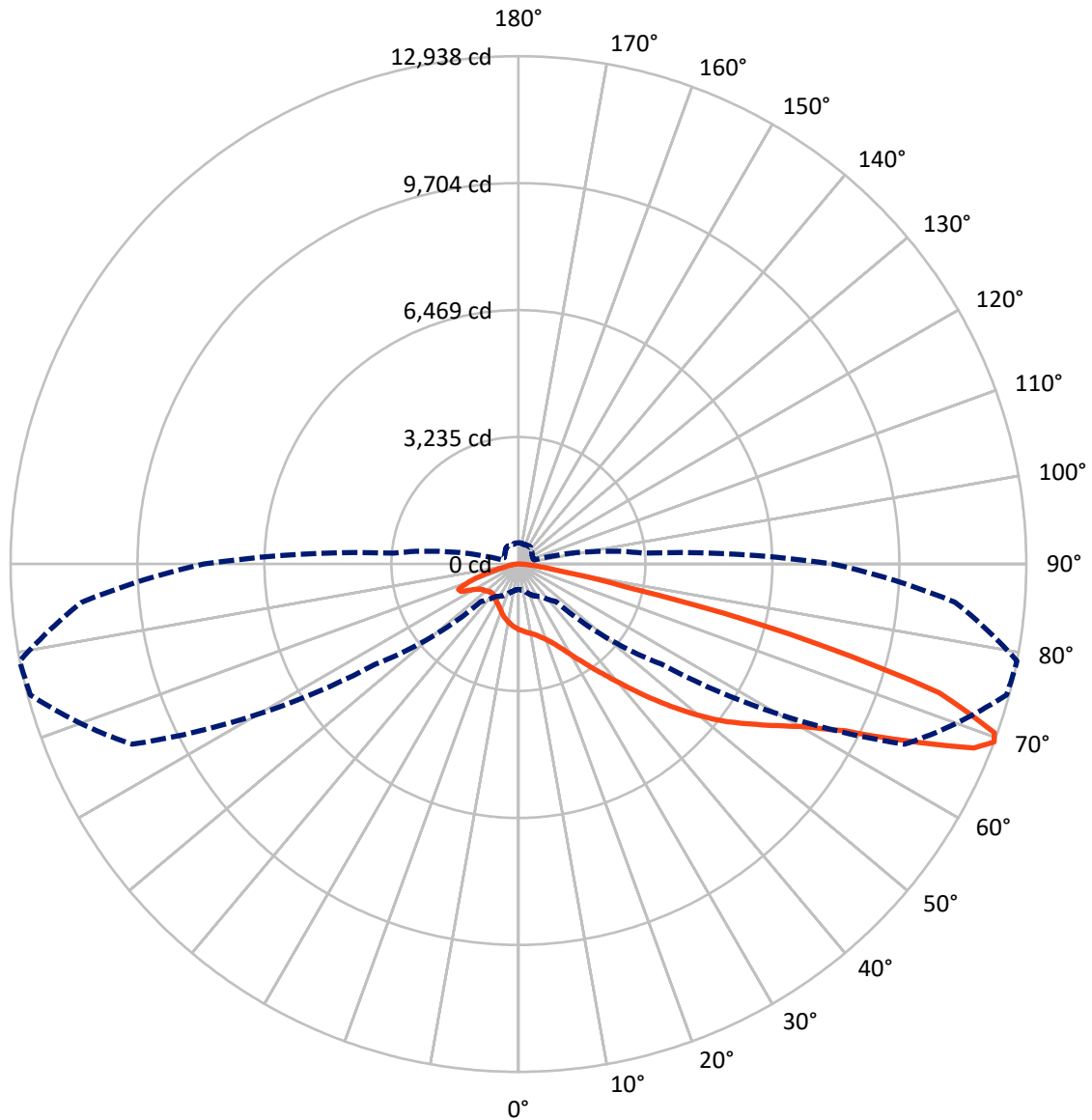
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.1 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2242.8	0.0	2242.8
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	9679.3	0.0	9679.3
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	11922.0	0.0	11922.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.1	1.3
10°-20°	444.7	3.7
20°-30°	734.8	6.2
30°-40°	1189.8	10.0
40°-50°	1900.7	15.9
50°-60°	2722.0	22.8
60°-70°	3032.7	25.4
70°-80°	1517.2	12.7
80°-90°	225.2	1.9
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°	11922.0	100.0
0°-180°	11922.0	100.0



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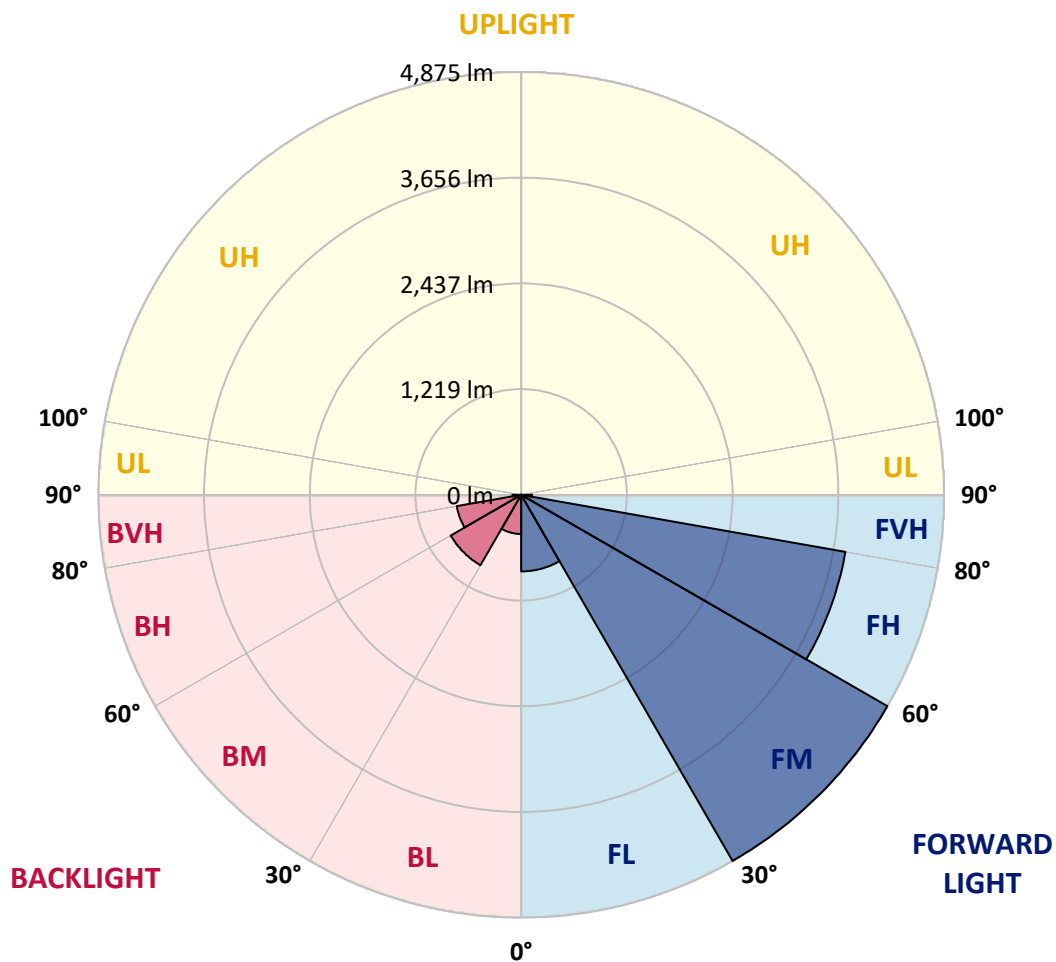
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	882.7	7.4			
FM (30°-60°)	4874.9	40.9			
FH (60°-80°)	3795.8	31.8			G2/5000
FVH (80°-90°)	125.8	1.1			G2/225
BL (0°-30°)	451.8	3.8	B1/500		
BM (30°-60°)	937.5	7.9	B1/1000		
BH (60°-80°)	754.1	6.3	B2/1000		G2/1000
BVH (80°-90°)	99.3	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	1673.0	1673.0	1673.0	1673.0	1673.0	1673.0	1673.0	1673.0	1673.0	1673.0	1673.0
2.5°	1836.8	1832.9	1832.1	1820.4	1814.2	1800.9	1769.7	1737.8	1708.1	1692.5	1676.2
5°	1990.5	1982.7	1978.8	1959.3	1942.1	1912.5	1863.3	1812.6	1759.6	1732.3	1699.6
7.5°	2083.3	2084.1	2084.1	2068.5	2051.3	2015.4	1953.0	1883.6	1804.8	1769.0	1717.5
10°	2091.1	2091.9	2103.6	2107.5	2111.4	2092.7	2034.9	1947.6	1846.2	1799.4	1732.3
12.5°	2013.9	2019.3	2038.8	2066.9	2106.7	2127.0	2102.0	2016.2	1899.2	1842.3	1760.4
15°	1910.1	1915.6	1940.6	1983.5	2047.4	2115.3	2150.4	2095.0	1968.6	1901.6	1801.7
17.5°	1859.4	1865.7	1882.8	1917.2	1979.6	2070.8	2176.1	2179.2	2050.5	1973.3	1850.9
20°	1835.3	1839.9	1861.8	1889.9	1937.4	2024.8	2178.5	2268.1	2148.0	2058.3	1910.9
22.5°	1890.6	1892.2	1903.1	1918.7	1950.7	2017.8	2176.9	2360.2	2269.7	2165.2	1988.1
25°	2052.9	2042.7	2034.9	2015.4	2023.2	2070.8	2201.9	2458.5	2425.7	2305.6	2091.1
27.5°	2244.8	2243.2	2222.9	2177.7	2148.8	2179.2	2272.8	2568.4	2616.8	2484.2	2226.0
30°	2458.5	2459.2	2438.2	2382.8	2324.3	2327.4	2385.9	2695.6	2845.3	2699.5	2392.2
32.5°	2682.3	2696.4	2657.4	2602.0	2531.0	2508.4	2548.2	2849.2	3109.7	2953.7	2584.8
35°	2949.8	2952.2	2909.3	2828.2	2757.2	2721.3	2758.0	3041.1	3414.7	3252.5	2819.6
37.5°	3227.5	3229.1	3184.6	3080.9	2991.2	2967.8	3008.3	3274.3	3737.6	3592.5	3095.7
40°	3454.5	3470.9	3435.8	3338.3	3247.8	3233.8	3292.2	3553.5	4150.2	3995.0	3424.1
42.5°	3711.9	3730.6	3688.5	3587.1	3515.3	3510.6	3601.9	3871.8	4560.5	4460.6	3796.1
45°	4002.0	4028.5	3970.0	3856.2	3795.3	3898.3	3903.7	4224.3	5033.1	4981.7	4215.0
47.5°	4318.7	4340.5	4292.9	4170.5	4104.2	4253.2	4199.4	4605.7	5544.0	5540.1	4668.1
50°	4562.8	4587.0	4591.7	4537.9	4468.4	4487.2	4523.8	5006.6	6053.3	6114.2	5136.9
52.5°	4518.4	4541.8	4647.1	4788.2	4899.8	4851.4	4895.9	5432.5	6545.5	6674.2	5582.2
55°	4159.6	4172.1	4369.4	4704.8	5179.8	5410.6	5413.8	5895.8	7013.5	7193.7	6005.0
57.5°	3513.0	3514.5	3771.1	4265.7	5016.8	5773.3	6231.2	6477.6	7501.7	7767.7	6529.1
60°	2485.8	2492.0	2790.7	3437.3	4432.6	5729.7	7110.2	7518.9	8067.2	8412.7	7204.6
62.5°	1475.7	1489.7	1715.2	2233.8	3292.2	5168.1	7629.7	9371.3	8900.2	9358.8	8285.6
65°	960.1	971.8	1106.8	1367.3	1945.2	3760.2	7458.8	11165.3	10476.5	10847.0	9839.3
67.5°	739.4	748.8	854.8	1012.4	1193.4	2032.6	5963.6	11541.2	12395.3	12510.7	11150.4
69°	649.7	657.5	735.5	886.8	1004.6	1345.4	4444.3	10858.7	12874.9	12938.1	11166.8
70°	602.1	608.4	681.7	812.7	922.7	1074.0	3401.4	10066.3	12699.5	12860.9	10844.7
72.5°	496.1	501.5	553.8	654.4	754.2	765.1	1506.9	7350.4	10693.4	11209.7	9177.1
75°	414.2	417.3	451.6	524.9	610.7	609.2	769.8	4163.5	6525.2	7140.6	5666.5
77.5°	345.5	347.9	370.5	415.7	482.0	479.7	542.1	1797.0	2881.2	2779.8	1950.7
80°	305.0	306.5	318.2	329.9	372.0	369.7	401.7	825.2	1172.3	1083.4	737.9
82.5°	231.7	234.8	294.0	299.5	288.6	278.4	280.0	480.5	600.6	546.8	396.2
85°	131.0	131.8	188.8	220.7	251.1	188.8	181.7	248.0	296.4	259.7	173.2
87.5°	58.5	60.8	90.5	104.5	135.7	110.8	103.7	105.3	127.9	106.1	68.6
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°	1673.0	1673.0	1673.0	1673.0	1673.0	1673.0	1673.0	1673.0	1673.0	1673.0	1673.0
2.5°	1660.6	1647.3	1616.1	1584.1	1552.1	1531.9	1510.8	1491.3	1483.5	1482.7	1467.9
5°	1667.6	1636.4	1565.4	1487.4	1413.3	1355.6	1307.2	1276.0	1245.6	1240.2	1226.9
7.5°	1669.9	1619.2	1503.8	1379.0	1265.9	1186.3	1138.0	1116.9	1102.1	1098.2	1093.5
10°	1669.1	1597.4	1435.1	1264.3	1135.6	1075.6	1057.6	1062.3	1068.6	1071.7	1071.7
12.5°	1681.6	1587.2	1366.5	1156.7	1051.4	1022.5	1036.6	1060.8	1079.5	1087.3	1088.8
15°	1704.2	1581.0	1290.8	1063.1	992.1	999.1	1033.5	1068.6	1095.1	1106.8	1109.9
17.5°	1732.3	1572.4	1203.5	985.9	957.8	982.0	1026.4	1070.9	1102.9	1117.7	1120.0
20°	1763.5	1559.9	1113.0	928.2	927.4	957.8	1002.3	1052.2	1086.5	1102.9	1102.1
22.5°	1805.6	1548.2	1028.8	886.0	893.8	921.9	958.6	1003.8	1035.8	1050.6	1047.5
25°	1861.8	1537.3	953.1	848.6	855.6	874.3	900.1	934.4	957.0	964.8	959.4
27.5°	1937.4	1528.7	893.8	814.3	813.5	822.1	837.7	856.4	867.3	865.0	856.4
30°	2030.3	1520.2	850.2	783.9	772.9	772.2	779.2	790.1	797.1	783.1	776.1
32.5°	2134.0	1505.3	811.2	757.3	737.9	730.8	734.0	748.8	777.6	763.6	758.1
35°	2256.5	1488.2	772.2	728.5	713.7	700.4	702.8	734.7	822.1	811.9	806.5
37.5°	2403.9	1472.6	736.3	697.3	696.5	680.1	678.6	716.8	833.8	811.9	807.3
40°	2580.9	1469.5	704.3	663.0	675.5	669.2	663.8	687.2	769.0	724.6	716.0
42.5°	2794.6	1483.5	680.9	630.2	651.3	666.1	656.0	661.4	695.0	655.2	648.2
45°	3044.2	1521.7	663.8	601.4	625.5	663.8	652.1	647.4	652.8	631.0	626.3
47.5°	3335.1	1589.6	652.1	577.2	601.4	657.5	650.5	641.1	638.8	626.3	623.2
50°	3646.4	1680.8	644.3	555.3	579.5	646.6	649.7	636.5	632.6	627.1	625.5
52.5°	3955.2	1779.9	634.9	536.6	561.6	633.3	650.5	631.8	626.3	623.2	621.6
55°	4262.5	1882.8	617.7	520.2	548.3	617.7	649.7	625.5	619.3	619.3	619.3
57.5°	4661.1	2039.6	595.1	507.0	531.2	597.5	639.6	618.5	609.9	610.7	611.5
60°	5236.7	2302.5	570.2	492.2	508.5	574.1	624.0	606.0	595.9	599.0	599.8
62.5°	6198.4	2761.9	535.8	471.1	485.1	549.1	603.7	588.9	579.5	585.0	585.8
65°	7480.7	3318.0	490.6	444.6	461.0	521.0	578.0	568.6	558.5	571.7	570.9
67.5°	8263.0	3481.0	443.0	416.5	437.6	491.4	546.0	542.1	535.1	558.5	556.9
69°	8006.4	3186.2	415.7	398.6	421.2	471.1	525.7	524.1	518.7	541.3	539.7
70°	7607.8	2910.8	398.6	386.9	412.6	458.6	512.4	512.4	507.0	526.5	522.6
72.5°	6111.1	2159.0	358.8	357.2	383.0	424.3	476.6	480.5	477.3	484.4	480.5
75°	3587.9	1301.0	319.8	324.5	347.1	387.6	436.8	439.9	436.8	436.0	436.8
77.5°	1244.1	583.4	282.3	289.4	308.9	350.2	393.1	399.3	394.7	389.2	390.8
80°	486.7	339.3	241.8	251.9	268.3	308.1	349.4	353.3	346.3	345.5	339.3
82.5°	292.5	206.7	188.0	204.4	224.6	267.5	301.8	300.3	294.8	326.8	286.2
85°	127.1	114.7	137.3	153.7	163.8	200.5	255.0	248.0	234.8	206.7	202.0
87.5°	51.5	59.3	75.7	91.3	98.3	129.5	174.7	168.5	170.8	140.4	139.6
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)