

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: McGRAW-EDISON

Report Number: P299236

Luminaire Tested: **GLNA-AF-04-LED-E1-T3-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299236
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24140)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-04-LED-E1-T3-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15766.6 lumens
Efficiency: N/A
Efficacy: 122.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B2 - U0 - G3

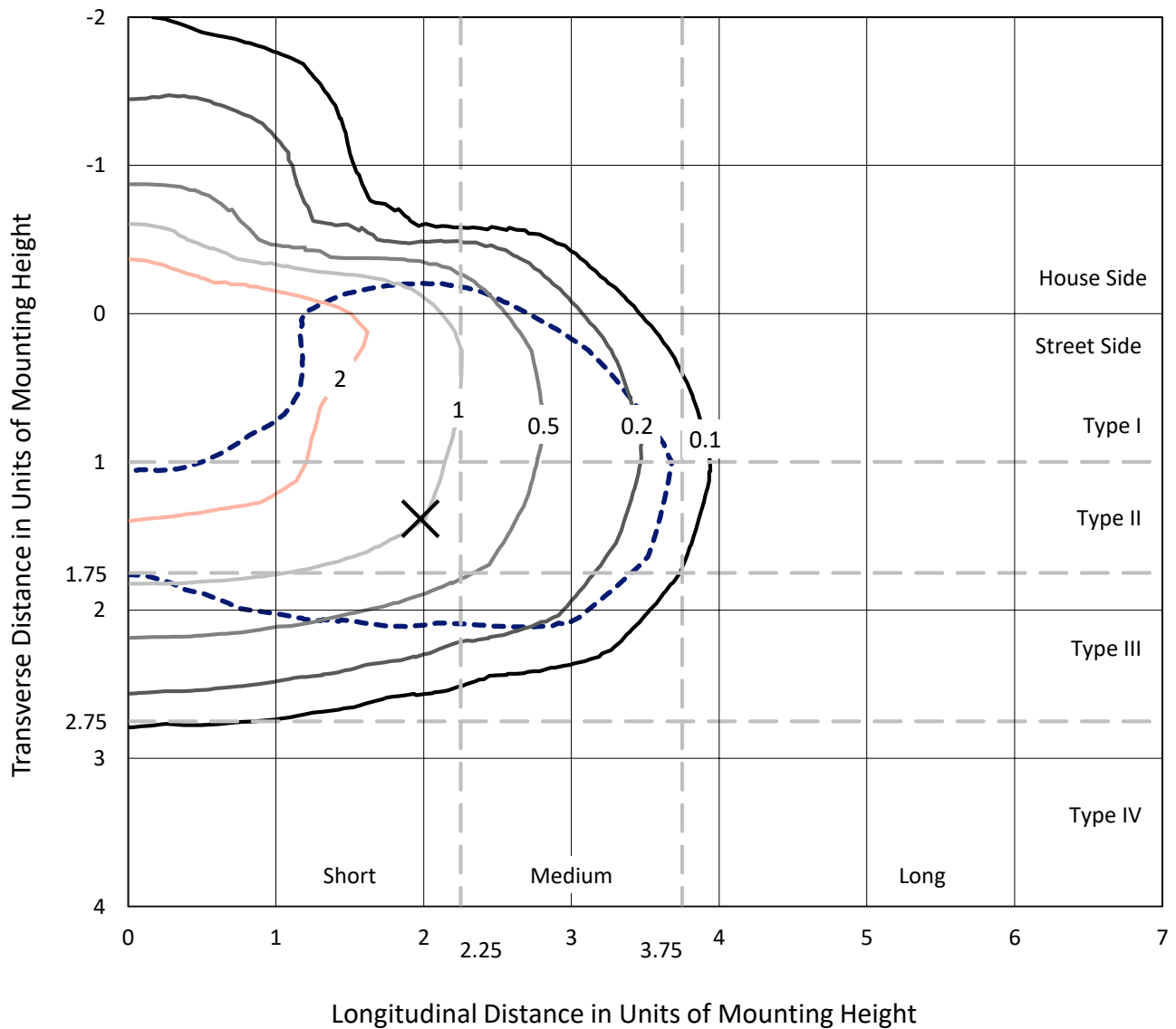
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

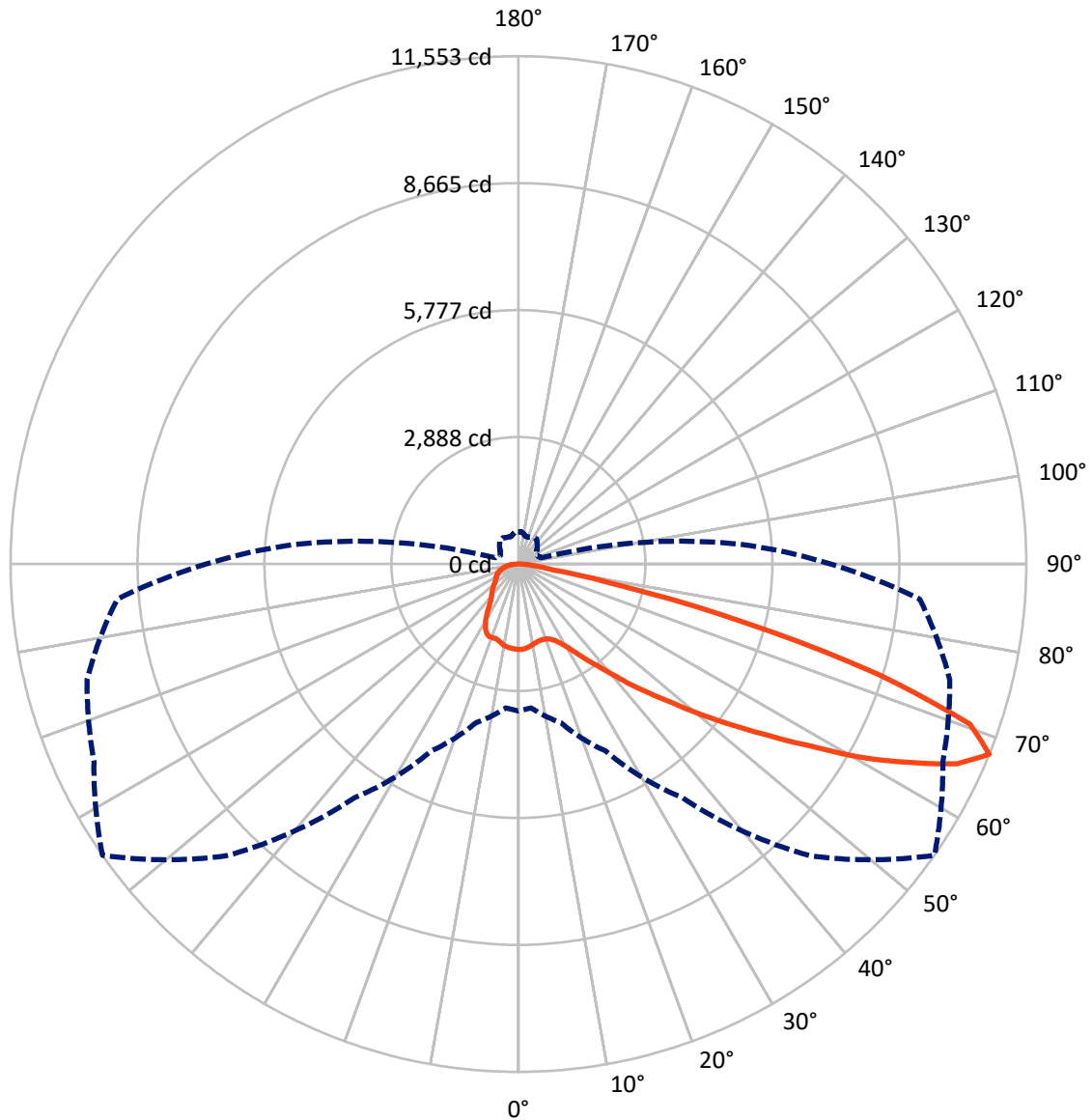
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3405.9	0.0	3405.9
	% Fixture	21.6	0.0	21.6
Street Side	Lumens	12360.7	0.0	12360.7
	% Fixture	78.4	0.0	78.4
Total	Lumens	15766.6	0.0	15766.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.5	1.2
10°-20°	513.9	3.3
20°-30°	860.9	5.5
30°-40°	1415.7	9.0
40°-50°	2383.1	15.1
50°-60°	3750.9	23.8
60°-70°	4476.3	28.4
70°-80°	1922.2	12.2
80°-90°	262.1	1.7
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°	15766.6	100.0
0°-180°	15766.6	100.0



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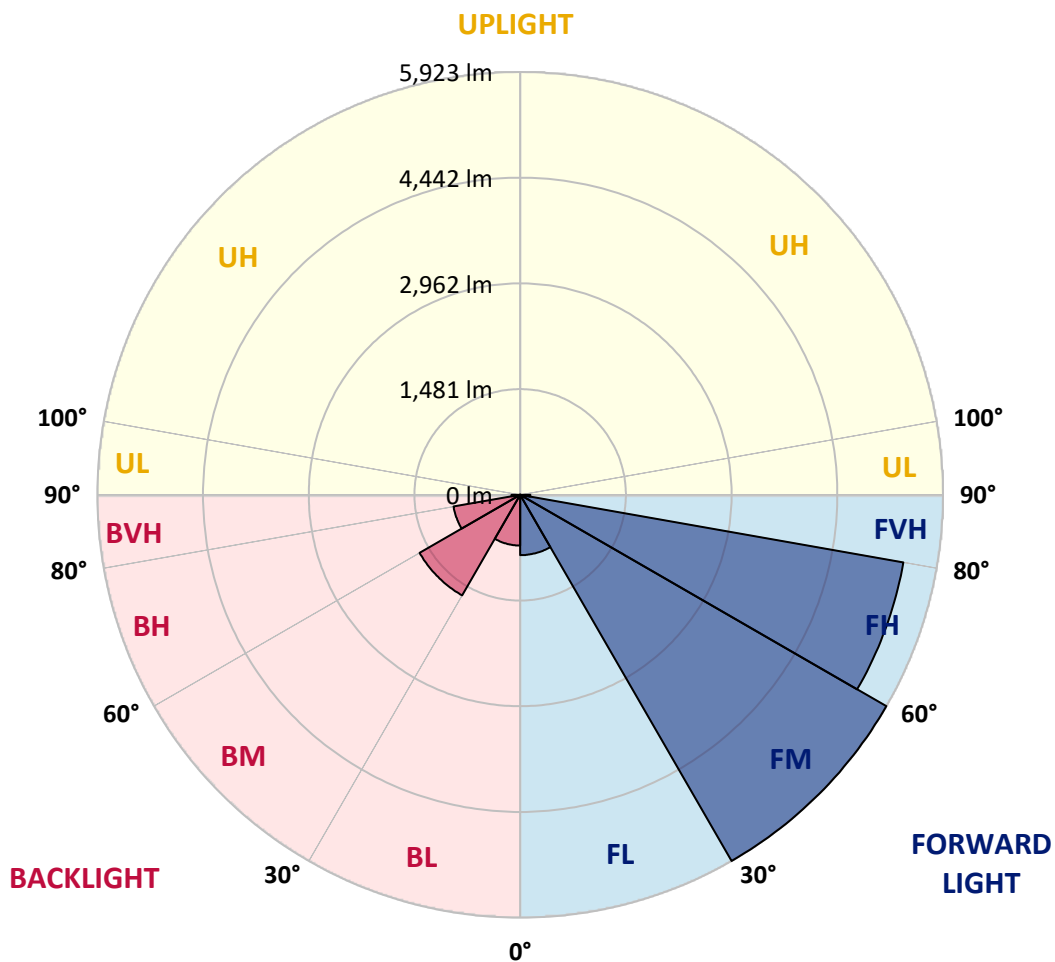
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	845.1	5.4			
FM	(30°-60°)	5923.1	37.6			
FH	(60°-80°)	5450.6	34.6			G3/7500
FVH	(80°-90°)	141.9	0.9			G2/225
BL	(0°-30°)	711.2	4.5	B2/1000		
BM	(30°-60°)	1626.6	10.3	B2/2500		
BH	(60°-80°)	947.9	6.0	B2/1000		G2/1000
BVH	(80°-90°)	120.2	0.8			G2/225
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 Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2
2.5°	1927.4	1928.2	1929.7	1935.8	1941.1	1939.6	1940.4	1937.3	1936.6	1932.0	1936.6
5°	1903.1	1905.4	1906.1	1916.0	1922.1	1923.6	1921.3	1917.5	1913.0	1908.4	1910.7
7.5°	1847.5	1853.6	1854.3	1868.0	1877.9	1890.9	1891.6	1892.4	1890.1	1887.1	1891.6
10°	1812.5	1814.0	1813.2	1823.1	1830.7	1845.2	1853.6	1868.0	1874.1	1875.7	1878.7
12.5°	1810.2	1808.6	1806.4	1806.4	1804.1	1810.2	1825.4	1846.0	1860.4	1865.0	1868.8
15°	1834.5	1833.8	1826.2	1814.7	1800.3	1795.7	1808.6	1831.5	1850.5	1860.4	1864.2
17.5°	1889.4	1884.8	1872.6	1846.7	1815.5	1803.3	1804.8	1823.9	1846.0	1858.9	1862.7
20°	1989.9	1989.9	1964.0	1915.3	1859.7	1830.7	1817.0	1828.4	1849.8	1867.3	1872.6
22.5°	2163.5	2165.0	2121.6	2041.7	1948.0	1886.3	1852.1	1849.8	1874.9	1894.7	1900.8
25°	2409.5	2403.4	2342.5	2228.2	2085.8	1983.8	1924.4	1910.7	1932.0	1954.1	1961.7
27.5°	2695.8	2673.7	2601.4	2463.6	2279.3	2130.0	2038.6	2016.5	2037.1	2062.2	2069.8
30°	2979.1	2956.3	2870.2	2719.4	2514.6	2325.7	2194.7	2158.9	2187.9	2223.7	2228.2
32.5°	3262.4	3262.4	3166.5	2990.5	2767.4	2559.5	2402.6	2360.0	2408.0	2451.4	2461.3
35°	3601.3	3602.8	3509.9	3298.2	3058.3	2838.2	2665.4	2634.1	2706.5	2737.0	2760.6
37.5°	4017.9	4026.2	3906.7	3650.8	3388.1	3156.6	2950.9	2908.3	2980.6	3063.7	3139.8
40°	4467.9	4478.6	4346.8	4031.6	3768.8	3526.7	3304.3	3227.4	3347.7	3506.1	3604.3
42.5°	4897.4	4952.3	4825.1	4500.7	4218.1	3967.6	3742.2	3630.2	3781.0	4020.1	4105.4
45°	5518.1	5557.7	5336.1	5042.1	4776.3	4496.1	4197.6	4079.5	4290.5	4592.0	4609.6
47.5°	5931.6	5901.9	5789.2	5606.4	5438.1	5176.1	4726.8	4597.4	4877.6	5232.5	5134.3
50°	6151.7	6160.8	6145.6	6156.2	6162.3	5997.8	5375.7	5198.2	5532.5	5961.3	5735.1
52.5°	6357.3	6296.4	6346.6	6596.4	6898.0	6837.1	6081.6	5896.6	6234.7	6770.0	6370.2
55°	6352.7	6259.8	6423.5	6864.5	7518.6	7588.7	6874.4	6661.1	6977.2	7637.4	7043.4
57.5°	6128.1	6132.6	6384.7	6961.9	7951.2	8295.4	7794.3	7474.5	7764.6	8516.2	7658.0
60°	5818.9	5860.8	6224.0	6945.9	8297.7	8874.9	8922.9	8351.0	8536.0	9315.1	8166.7
62.5°	5320.1	5364.2	5865.3	6779.9	8245.1	9433.1	9943.3	9345.5	9342.5	9799.4	8315.9
65°	4533.4	4520.5	5046.7	6159.3	7804.2	9845.9	10956.9	10205.3	9950.2	9807.0	8015.9
67.5°	3343.1	3285.3	3736.8	4691.0	6486.7	9383.6	11553.2	10653.1	10157.3	9162.0	7099.0
70°	1734.8	1676.9	2042.4	2739.2	4266.1	7323.7	10893.0	10421.6	9699.7	7680.1	5561.5
72.5°	741.7	731.8	880.3	1201.7	2063.8	4224.2	8541.4	9020.4	8322.8	5722.2	3823.7
75°	498.8	495.8	551.4	654.9	928.3	1714.2	5345.2	6403.0	6089.2	3548.0	2150.6
77.5°	391.4	387.6	420.4	470.6	601.6	676.2	2372.2	3437.6	3181.7	1544.4	941.3
80°	306.1	303.1	323.7	351.1	432.6	426.5	780.6	1367.7	1058.5	591.7	457.7
82.5°	241.4	241.4	258.2	258.9	306.9	290.9	407.4	602.4	528.5	345.0	280.2
85°	220.8	220.8	238.4	193.4	200.3	183.5	252.8	357.2	335.1	141.6	121.8
87.5°	111.2	108.1	200.3	171.3	108.9	97.5	123.4	172.9	185.8	78.4	60.9
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2
2.5°	1935.1	1934.3	1935.8	1936.6	1942.7	1951.0	1954.9	1960.2	1963.2	1961.7
5°	1912.2	1913.7	1919.8	1924.4	1935.1	1948.8	1956.4	1962.5	1967.8	1965.5
7.5°	1893.2	1897.0	1906.1	1909.9	1916.0	1919.8	1919.1	1921.3	1925.9	1920.6
10°	1882.5	1887.1	1893.9	1888.6	1874.1	1853.6	1834.5	1824.6	1827.7	1823.9
12.5°	1871.8	1877.9	1872.6	1847.5	1807.1	1780.5	1766.0	1767.5	1774.4	1775.9
15°	1865.8	1868.0	1845.2	1798.0	1756.9	1753.1	1760.7	1759.1	1759.9	1759.9
17.5°	1865.8	1859.7	1817.0	1769.8	1752.3	1745.4	1721.8	1692.1	1679.2	1674.6
20°	1875.7	1859.7	1807.9	1776.7	1738.6	1679.9	1617.5	1562.7	1538.3	1531.4
22.5°	1905.4	1877.9	1833.8	1779.7	1671.6	1573.3	1474.3	1408.8	1364.7	1357.1
25°	1965.5	1935.1	1884.8	1739.3	1565.0	1424.8	1312.1	1239.0	1194.8	1188.8
27.5°	2070.6	2050.8	1912.2	1650.2	1423.3	1273.3	1169.0	1112.6	1079.9	1077.6
30°	2229.0	2219.1	1898.5	1518.5	1248.9	1126.3	1076.0	1043.3	1018.9	1018.2
32.5°	2481.8	2401.9	1853.6	1357.8	1089.8	1022.0	1001.4	981.6	962.6	962.6
35°	2807.0	2549.6	1768.3	1185.7	993.0	964.1	938.2	907.0	881.9	880.3
37.5°	3189.3	2641.0	1615.2	1047.1	947.3	925.3	887.2	840.7	796.6	788.9
40°	3575.4	2668.4	1399.7	961.8	918.4	886.4	840.0	785.1	742.5	740.2
42.5°	3929.5	2615.9	1171.2	903.2	889.5	846.8	798.1	749.3	715.8	715.1
45°	4226.5	2479.6	979.3	847.6	859.0	811.0	767.6	728.0	702.1	696.8
47.5°	4506.0	2286.9	844.5	788.9	828.5	791.2	754.7	717.4	692.2	688.4
50°	4830.4	2079.0	750.1	731.8	801.9	784.4	765.3	726.5	684.6	680.0
52.5°	5223.4	1899.3	676.2	681.6	781.3	793.5	792.8	752.4	679.3	673.2
55°	5662.0	1699.7	620.7	640.4	773.0	810.3	799.6	776.8	683.9	674.7
57.5°	6093.8	1466.7	581.8	609.2	760.8	808.7	766.9	734.1	694.5	681.6
60°	6417.4	1153.7	552.1	581.8	734.1	783.6	731.1	687.7	692.2	682.3
62.5°	6438.8	891.8	516.3	558.2	693.8	758.5	707.5	667.1	702.1	693.0
65°	6060.3	674.0	482.1	530.0	650.3	742.5	684.6	655.7	722.7	712.8
67.5°	5102.3	542.2	453.1	501.1	606.9	709.0	664.1	645.0	741.0	723.5
70°	3683.5	462.3	424.9	466.1	568.1	670.9	645.8	626.0	691.5	664.1
72.5°	2267.8	400.6	393.0	419.6	538.4	631.3	618.4	590.2	622.9	600.9
75°	1132.4	347.3	357.2	373.9	496.5	586.4	572.7	544.5	549.1	544.5
77.5°	542.2	297.0	315.3	328.2	442.5	535.4	520.9	492.0	486.6	487.4
80°	343.5	248.3	265.8	274.9	395.2	476.0	461.5	432.6	493.5	457.7
82.5°	214.8	201.8	206.4	223.1	344.2	414.3	395.2	369.3	444.7	351.8
85°	118.8	140.9	147.0	161.4	265.0	346.5	327.5	294.7	264.3	259.7
87.5°	70.8	83.8	86.1	96.7	178.2	250.5	221.6	210.2	174.4	173.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)