

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: P302777

Luminaire Tested: **GLNA-AF-03-LED-E1-T4W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P302777
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P191569)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-03-LED-E1-T4W
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(3) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
Wide OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17984 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

Input Watts (W): 166
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

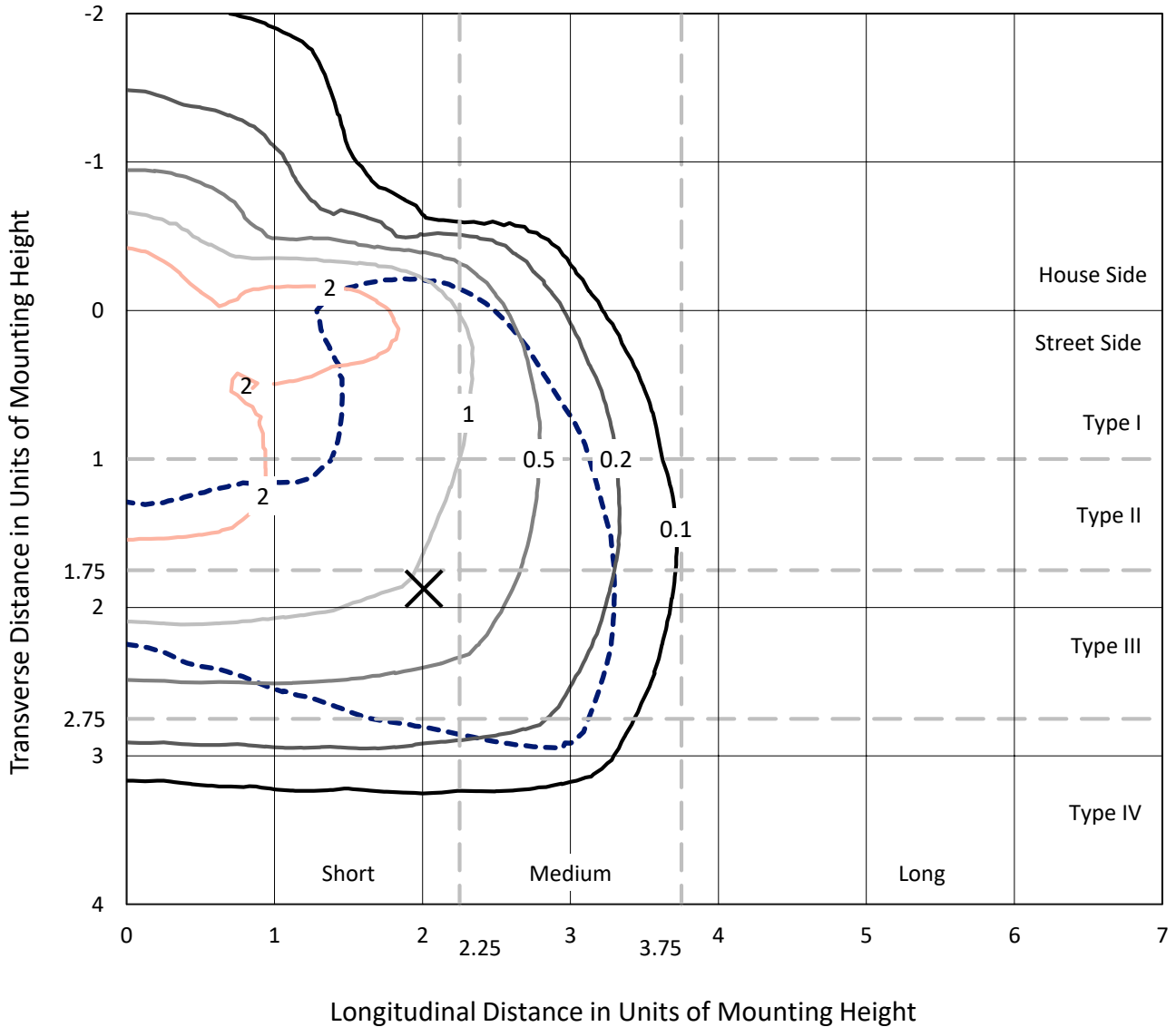


REPORT NUMBER: P302777

CATALOG NUMBER: GLNA-AF-03-LED-E1-T4W

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

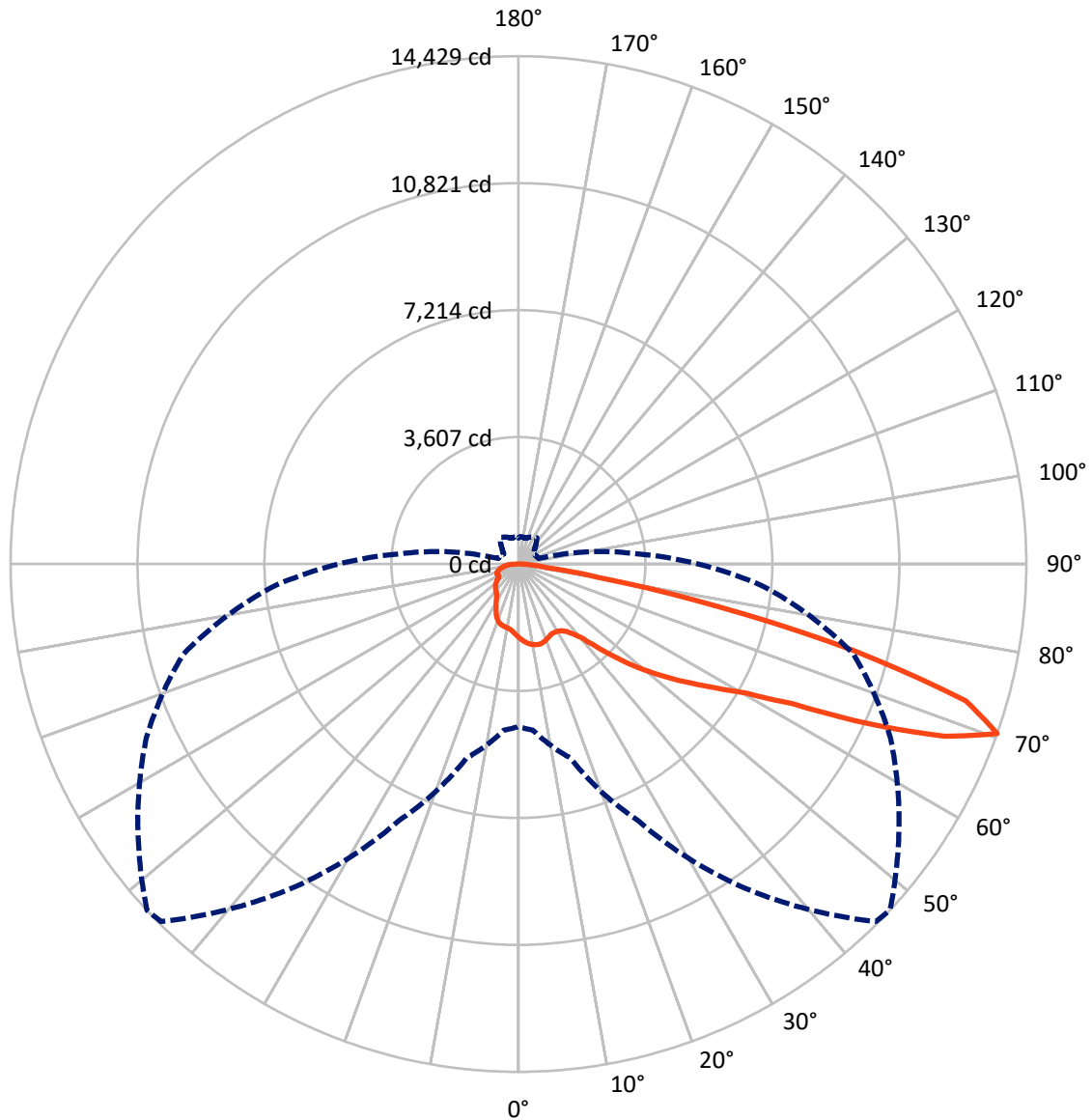


Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P302777

CATALOG NUMBER: GLNA-AF-03-LED-E1-T4W

Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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CATALOG NUMBER: GLNA-AF-03-LED-E1-T4W

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3751.8	0.0	3751.8
	% Fixture	20.9	0.0	20.9
Street Side	Lumens	14232.2	0.0	14232.2
	% Fixture	79.1	0.0	79.1
Total	Lumens	17984.0	0.0	17984.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.9	1.1
10°-20°	586.6	3.3
20°-30°	866.2	4.8
30°-40°	1259.0	7.0
40°-50°	2265.8	12.6
50°-60°	3925.3	21.8
60°-70°	5602.5	31.2
70°-80°	2876.0	16.0
80°-90°	402.6	2.2
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°	17984.0	100.0
0°-180°	17984.0	100.0



REPORT NUMBER: P302777

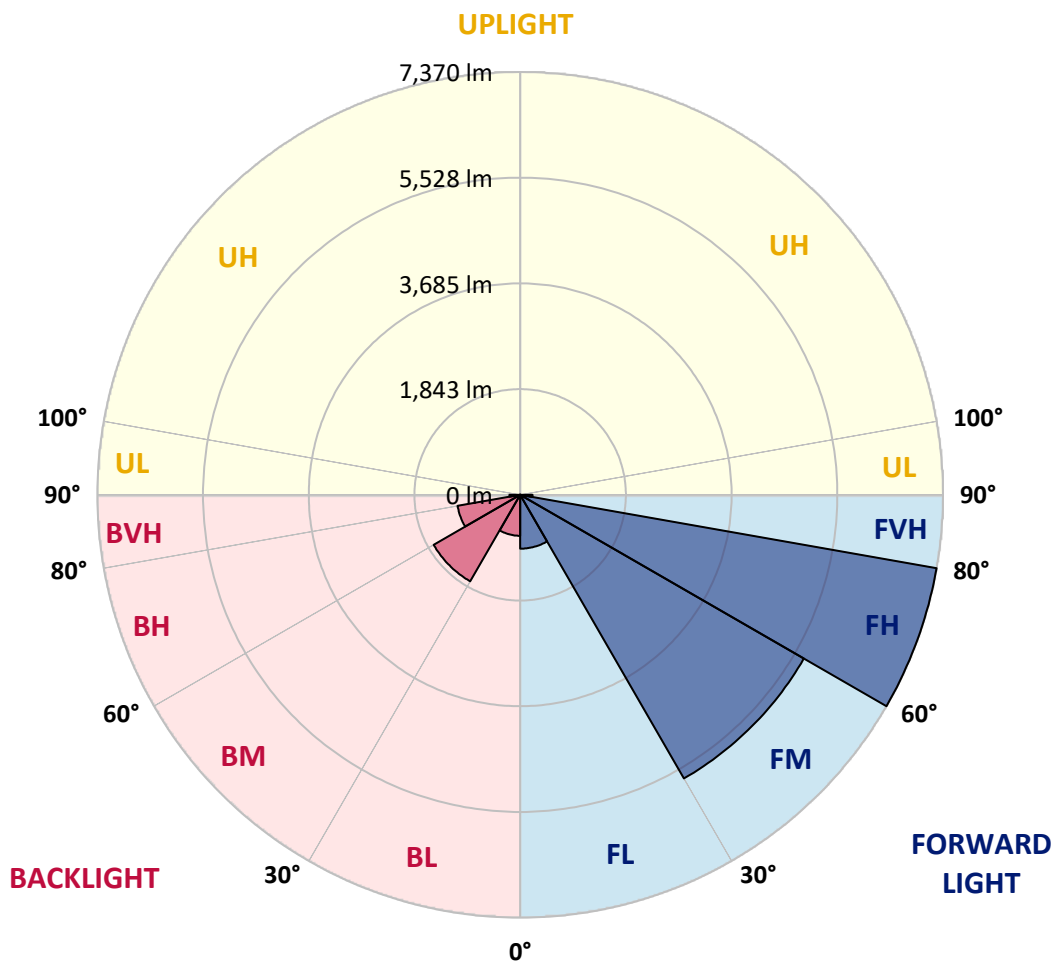
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	938.4	5.2			
FM	(30°-60°)	5708.6	31.7			
FH	(60°-80°)	7370.3	41.0			G3/7500
FVH	(80°-90°)	214.9	1.2			G2/225
BL	(0°-30°)	714.4	4.0	B2/1000		
BM	(30°-60°)	1741.5	9.7	B2/2500		
BH	(60°-80°)	1108.2	6.2	B3/2500		G3/2500
BVH	(80°-90°)	187.8	1.0			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type IV Short





REPORT NUMBER: P302777

CATALOG NUMBER: GLNA-AF-03-LED-E1-T4W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	2086.7	2086.7	2086.7	2086.7	2086.7	2086.7	2086.7	2086.7	2086.7	2086.7	2086.7
2.5°	2209.3	2204.9	2203.2	2199.7	2195.3	2173.3	2168.9	2153.2	2131.4	2108.5	2084.9
5°	2354.6	2353.7	2343.8	2326.4	2298.5	2250.3	2238.9	2200.6	2148.8	2098.9	2049.2
7.5°	2482.1	2474.3	2456.0	2420.8	2372.0	2306.3	2290.6	2237.2	2166.3	2098.0	2030.6
10°	2575.7	2571.3	2531.2	2483.0	2419.1	2346.4	2328.1	2268.6	2190.7	2104.1	2020.1
12.5°	2629.2	2620.5	2574.0	2516.4	2440.3	2369.4	2350.8	2290.6	2203.2	2104.1	2005.3
15°	2625.7	2619.6	2573.1	2510.0	2433.3	2371.1	2354.6	2294.1	2200.6	2095.4	1986.1
17.5°	2555.7	2558.3	2519.0	2456.9	2393.8	2346.4	2331.6	2275.8	2182.8	2077.9	1963.5
20°	2433.3	2445.5	2419.1	2364.2	2329.0	2296.8	2287.2	2239.8	2155.8	2052.7	1938.8
22.5°	2310.7	2322.0	2311.6	2265.1	2259.8	2240.7	2235.4	2201.4	2132.3	2037.0	1923.9
25°	2220.6	2231.1	2229.3	2188.9	2204.9	2204.1	2199.7	2182.8	2127.1	2037.0	1926.6
27.5°	2196.2	2199.7	2196.2	2159.3	2181.1	2198.8	2195.3	2192.4	2142.7	2062.3	1960.0
30°	2280.2	2275.0	2247.6	2173.3	2193.6	2218.0	2214.5	2216.3	2189.8	2128.8	2034.4
32.5°	2615.2	2591.4	2505.7	2296.8	2243.3	2256.4	2258.1	2287.2	2291.5	2231.1	2149.7
35°	3116.5	3090.3	2979.0	2627.4	2398.2	2352.8	2352.8	2396.4	2422.6	2378.1	2329.0
37.5°	3647.7	3618.6	3559.3	3086.0	2723.6	2519.9	2515.6	2546.1	2583.6	2594.3	2606.5
40°	4251.2	4220.7	4237.2	3600.3	3177.8	2809.3	2747.2	2725.4	2826.8	2894.2	2992.4
42.5°	4912.0	4897.7	4903.8	4173.3	3694.7	3242.6	3154.3	3041.2	3163.8	3283.6	3489.3
45°	5523.4	5535.6	5529.5	4786.7	4270.7	3770.9	3677.3	3458.5	3578.5	3783.9	4119.3
47.5°	6058.9	6008.0	6086.8	5456.8	4915.5	4362.5	4246.8	3953.9	4075.4	4329.1	4896.0
50°	6708.9	6702.0	6586.6	6351.2	5694.8	4956.4	4805.0	4465.6	4654.5	5007.3	5875.3
52.5°	7392.4	7265.4	7159.6	7046.6	6521.8	5565.5	5379.8	4975.6	5335.4	5778.8	7068.7
55°	7532.1	7475.5	7606.5	7796.6	7318.9	6198.1	5981.9	5615.2	6101.9	6661.0	8444.9
57.5°	7831.4	7830.6	8102.0	8440.5	8139.5	6869.0	6651.1	6387.8	6963.5	7671.3	9905.9
60°	8033.7	8090.3	8594.5	9251.5	8945.2	7644.3	7443.8	7279.3	7943.6	8800.8	11267.3
62.5°	8139.5	8216.5	8904.3	9580.4	10084.3	8934.8	8734.6	8497.5	9240.2	10039.9	12063.5
65°	7699.5	7850.6	8856.0	9864.9	11081.9	11026.7	10936.6	10520.2	10861.3	11018.8	11775.8
67.5°	6481.4	6636.3	7807.0	9599.6	11794.1	13044.5	13063.6	12352.3	11858.9	11102.8	9900.7
70°	4617.9	4739.4	5708.2	8048.5	11251.6	14362.8	14428.5	13196.4	11660.1	9846.3	6917.3
72.5°	2192.4	2266.8	3183.9	5238.3	8928.7	13159.8	13286.8	12118.7	9914.6	7289.8	3773.5
75°	805.8	828.4	1076.0	2228.5	5178.7	9704.8	9854.5	8687.2	6572.4	3629.4	1437.5
77.5°	482.9	497.8	603.8	940.6	2037.0	5547.2	5768.3	4724.6	2872.4	1350.9	707.0
80°	337.7	348.1	433.0	585.2	962.4	2114.0	2310.7	1928.3	1144.3	854.9	514.3
82.5°	228.4	233.6	304.5	395.5	639.6	754.9	814.5	857.5	771.8	636.1	326.3
85°	149.6	154.9	206.6	260.7	406.8	390.2	399.0	504.7	563.4	432.1	181.0
87.5°	85.7	89.2	124.4	139.2	199.6	165.3	167.1	265.9	360.6	291.5	110.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P302777

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2086.7	2086.7	2086.7	2086.7	2086.7	2086.7	2086.7	2086.7	2086.7	2086.7	2086.7
2.5°	2078.8	2067.5	2042.2	2026.2	2011.4	2007.9	2001.8	2000.9	2000.1	2000.1	1997.5
5°	2032.3	2013.1	1973.9	1951.8	1933.5	1931.8	1930.9	1935.3	1937.0	1938.8	1936.1
7.5°	2002.7	1976.5	1927.4	1896.0	1874.2	1868.7	1877.7	1897.8	1910.9	1916.1	1913.5
10°	1984.4	1951.8	1895.2	1860.9	1842.6	1840.0	1851.3	1875.1	1902.1	1912.6	1911.7
12.5°	1963.5	1926.6	1866.1	1830.4	1819.9	1825.1	1840.0	1861.8	1889.9	1906.5	1907.4
15°	1942.2	1899.5	1837.3	1806.0	1801.6	1808.6	1822.5	1839.1	1860.9	1877.7	1879.5
17.5°	1917.0	1872.2	1810.3	1777.8	1774.3	1777.8	1778.6	1787.4	1801.6	1817.3	1821.7
20°	1889.9	1844.3	1779.5	1747.3	1731.6	1717.6	1701.6	1703.4	1707.7	1723.7	1727.2
22.5°	1870.5	1825.1	1756.0	1711.2	1669.4	1627.3	1595.9	1591.5	1593.3	1606.3	1610.7
25°	1872.2	1824.3	1749.9	1672.9	1581.0	1513.6	1471.5	1464.5	1463.7	1473.2	1479.6
27.5°	1906.5	1858.3	1772.5	1633.4	1484.9	1384.9	1340.4	1335.2	1328.2	1330.9	1337.8
30°	1982.6	1937.9	1827.8	1593.3	1380.5	1259.1	1212.6	1207.4	1197.8	1193.4	1198.6
32.5°	2106.7	2070.1	1908.2	1554.6	1276.5	1151.3	1104.2	1092.9	1086.8	1081.5	1085.9
35°	2313.3	2297.6	2015.8	1512.8	1184.7	1068.2	1025.5	1008.0	999.3	1008.9	1015.9
37.5°	2637.0	2645.7	2156.7	1447.1	1113.8	1013.3	977.2	957.2	944.1	951.9	959.8
40°	3095.6	3101.7	2312.4	1354.4	1052.5	980.7	942.4	924.0	905.4	891.5	890.6
42.5°	3697.3	3635.5	2465.6	1253.9	981.6	960.7	917.9	895.0	867.1	828.4	820.6
45°	4411.3	4193.7	2581.8	1138.2	902.0	936.3	890.6	859.2	815.4	773.5	769.2
47.5°	5233.9	4792.8	2638.8	1018.5	827.6	900.2	857.5	807.5	752.3	731.4	728.8
50°	6238.2	5504.2	2665.8	902.0	763.1	853.1	809.3	750.6	704.4	700.0	697.4
52.5°	7381.9	6359.9	2674.8	806.7	709.6	791.8	770.0	713.1	676.2	680.0	680.0
55°	8578.8	7243.6	2555.7	737.5	660.5	728.8	743.6	698.3	667.5	681.7	686.9
57.5°	9677.5	8026.7	2181.1	684.3	614.3	680.8	734.0	712.2	691.3	748.0	751.4
60°	10521.1	8489.3	1629.0	636.1	580.0	664.0	759.6	765.7	770.9	906.3	924.9
62.5°	10697.7	8335.6	1119.9	598.6	564.3	678.2	805.8	806.7	800.5	895.0	906.3
65°	9886.7	7361.6	814.5	577.4	551.2	703.5	845.3	826.7	786.6	858.4	837.2
67.5°	7851.5	5546.3	678.2	561.7	532.1	701.8	887.1	845.3	778.8	840.9	806.7
70°	5096.5	3353.6	603.8	548.6	509.1	668.3	911.6	843.6	755.8	782.2	741.9
72.5°	2486.5	1499.7	553.8	529.4	485.6	622.1	910.7	827.6	732.3	730.5	708.7
75°	972.9	686.9	508.2	500.4	445.5	569.5	886.3	804.9	704.4	676.2	668.3
77.5°	569.5	489.9	450.7	457.7	397.2	516.9	850.5	765.7	665.7	632.6	623.9
80°	414.7	366.7	384.1	395.5	339.4	464.6	802.3	717.4	623.0	639.6	627.4
82.5°	265.9	236.2	311.5	322.8	282.7	411.2	749.7	666.6	562.6	510.8	498.6
85°	135.7	149.6	231.9	245.8	217.9	337.7	686.1	599.5	494.3	425.1	432.1
87.5°	76.1	102.3	147.9	165.3	154.0	259.8	556.5	494.3	403.3	328.1	288.8
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)