

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: P302909

Luminaire Tested: **GLNA-AF-05-LED-E1-T4W-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P302909
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-05-LED-E1-T4W-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
Wide OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19395.5 lumens
Efficiency: N/A
Efficacy: 119.7 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

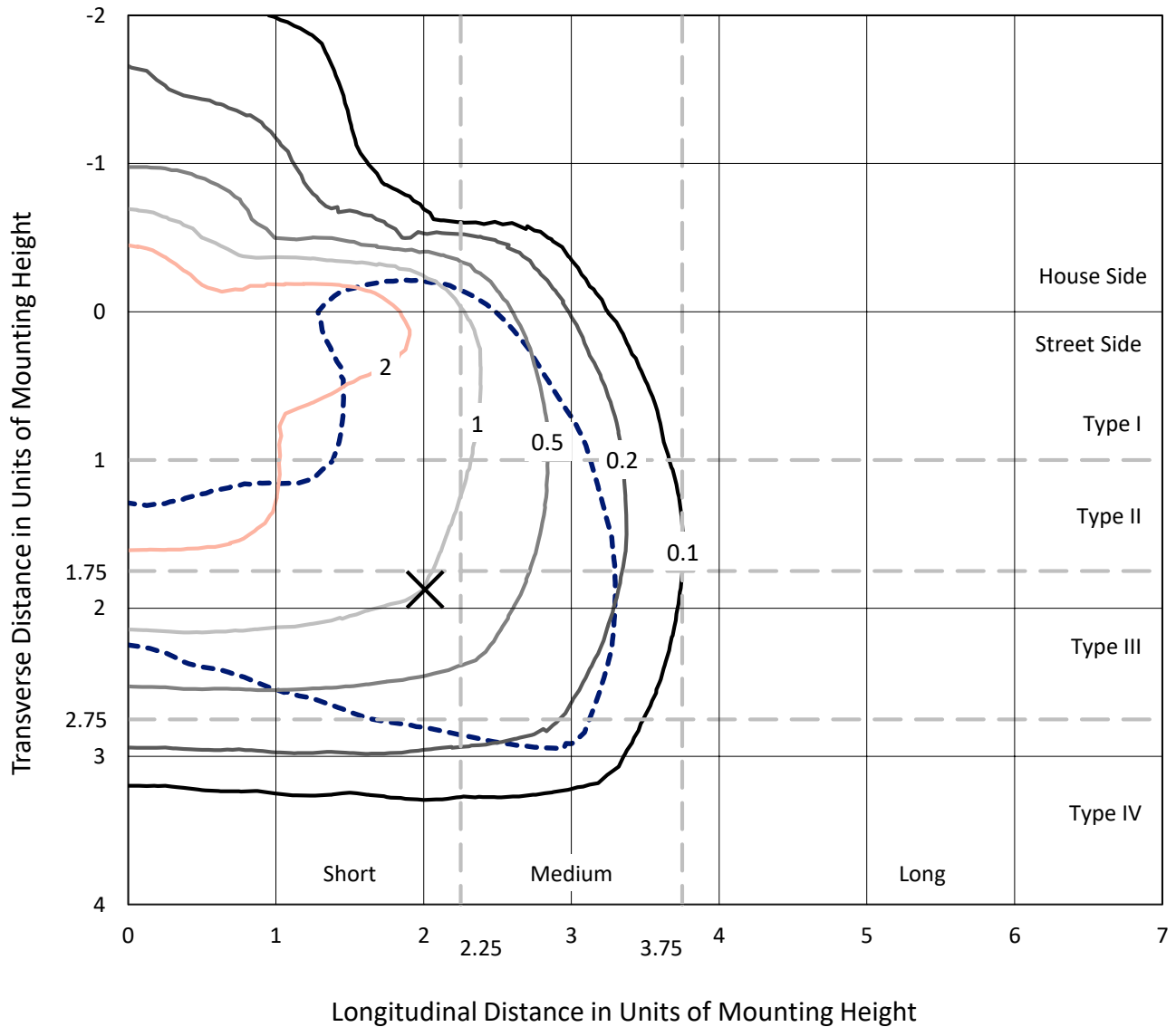
Input Watts (W): 162
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

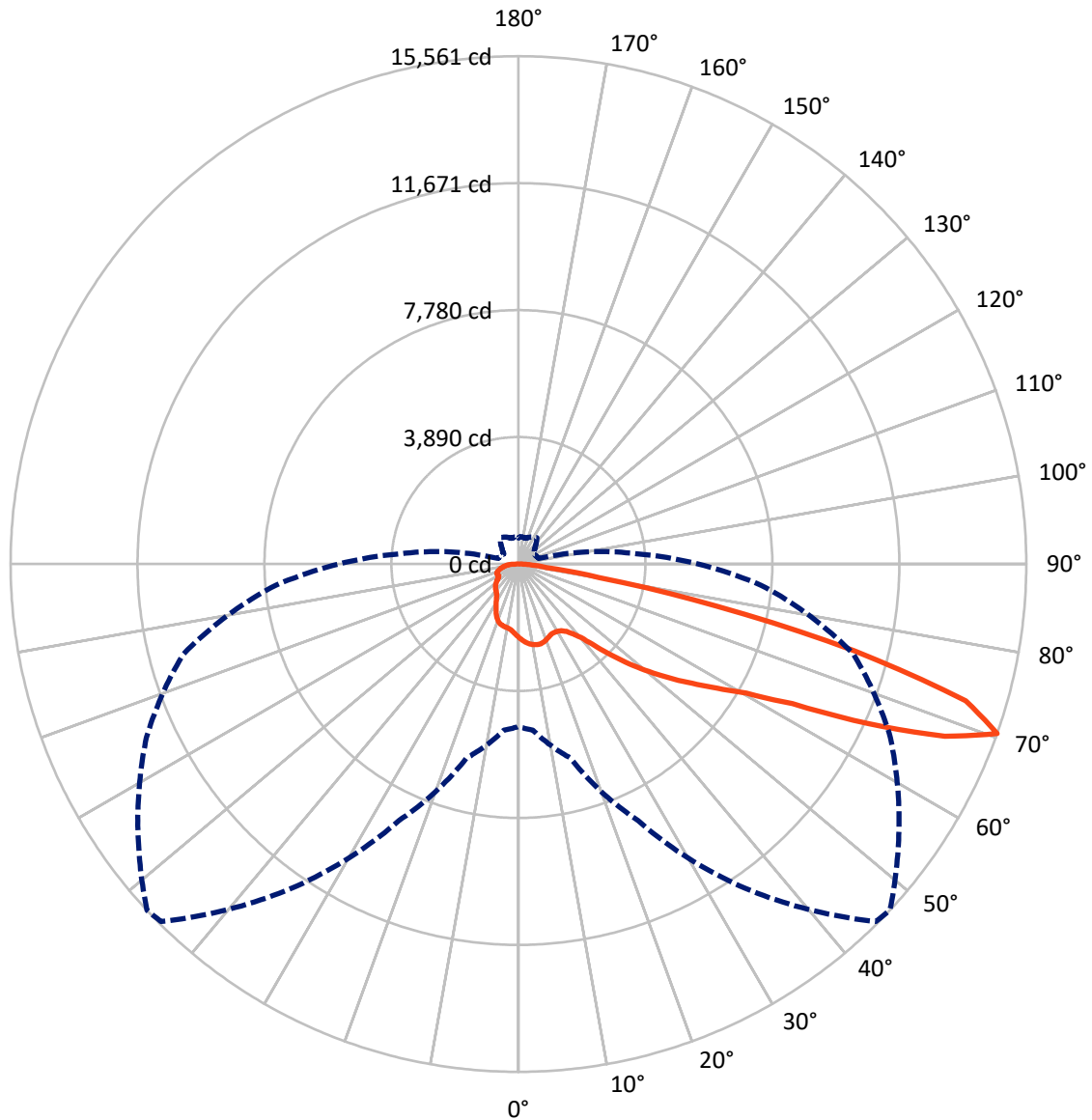
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4046.3	0.0	4046.3
	% Fixture	20.9	0.0	20.9
Street Side	Lumens	15349.2	0.0	15349.2
	% Fixture	79.1	0.0	79.1
Total	Lumens	19395.5	0.0	19395.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.6	1.1
10°-20°	632.6	3.3
20°-30°	934.2	4.8
30°-40°	1357.8	7.0
40°-50°	2443.6	12.6
50°-60°	4233.4	21.8
60°-70°	6042.2	31.2
70°-80°	3101.7	16.0
80°-90°	434.2	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°	19395.5	100.0
0°-180°	19395.5	100.0



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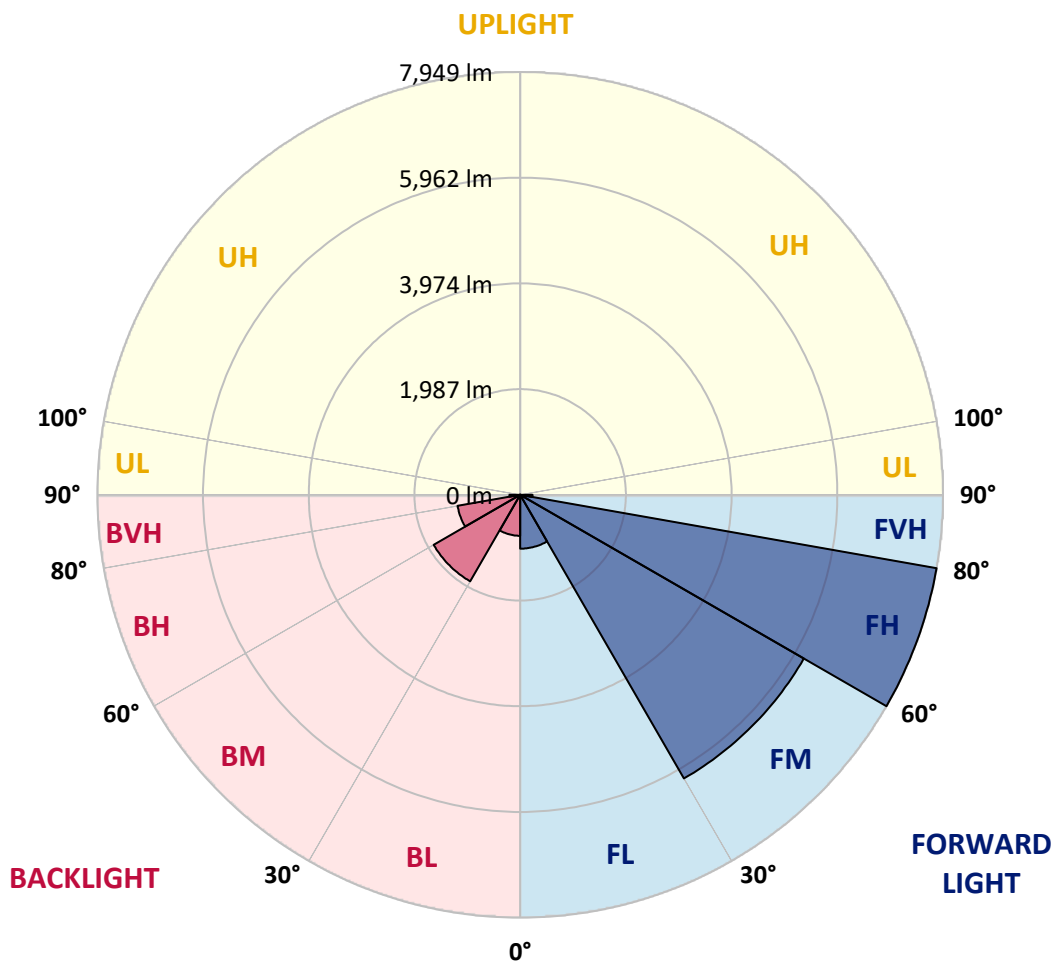
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1012.0	5.2			
FM	(30°-60°)	6156.7	31.7			
FH	(60°-80°)	7948.8	41.0			G4/12000
FVH	(80°-90°)	231.7	1.2			G3/500
BL	(0°-30°)	770.4	4.0	B2/1000		
BM	(30°-60°)	1878.2	9.7	B2/2500		
BH	(60°-80°)	1195.2	6.2	B3/2500		G3/2500
BVH	(80°-90°)	202.5	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-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	2250.4	2250.4	2250.4	2250.4	2250.4	2250.4	2250.4	2250.4	2250.4	2250.4	2250.4
2.5°	2382.7	2378.0	2376.1	2372.3	2367.6	2343.8	2339.1	2322.2	2298.7	2273.9	2248.6
5°	2539.4	2538.4	2527.8	2509.0	2478.9	2426.9	2414.6	2373.3	2317.5	2263.6	2210.0
7.5°	2676.9	2668.5	2648.7	2610.8	2558.2	2487.4	2470.4	2412.8	2336.3	2262.7	2189.9
10°	2777.9	2773.2	2729.9	2677.9	2608.9	2530.6	2510.9	2446.6	2362.6	2269.2	2178.7
12.5°	2835.5	2826.1	2776.0	2713.9	2631.8	2555.4	2535.3	2470.4	2376.1	2269.2	2162.7
15°	2831.8	2825.2	2775.0	2707.0	2624.3	2557.2	2539.4	2474.2	2373.3	2259.8	2142.0
17.5°	2756.2	2759.1	2716.8	2649.7	2581.7	2530.6	2514.6	2454.4	2354.2	2241.0	2117.6
20°	2624.3	2637.5	2608.9	2549.7	2511.8	2477.0	2466.7	2415.6	2325.0	2213.8	2090.9
22.5°	2492.1	2504.3	2493.0	2442.8	2437.2	2416.5	2410.9	2374.2	2299.6	2196.8	2074.9
25°	2394.9	2406.2	2404.3	2360.7	2378.0	2377.0	2372.3	2354.2	2294.0	2196.8	2077.8
27.5°	2368.6	2372.3	2368.6	2328.8	2352.3	2371.4	2367.6	2364.5	2310.9	2224.1	2113.8
30°	2459.1	2453.5	2424.0	2343.8	2365.8	2392.1	2388.3	2390.2	2361.7	2295.9	2194.0
32.5°	2820.5	2794.8	2702.3	2477.0	2419.3	2433.4	2435.3	2466.7	2471.4	2406.2	2318.4
35°	3361.1	3332.9	3212.8	2833.6	2586.4	2537.5	2537.5	2584.5	2612.7	2564.8	2511.8
37.5°	3933.9	3902.6	3838.7	3328.2	2937.4	2717.7	2713.0	2745.9	2786.3	2797.9	2811.1
40°	4584.8	4551.9	4569.8	3882.9	3427.2	3029.8	2962.8	2939.3	3048.6	3121.3	3227.3
42.5°	5297.5	5282.1	5288.7	4500.9	3984.7	3497.1	3401.8	3279.9	3412.2	3541.3	3763.1
45°	5956.9	5970.0	5963.4	5162.4	4605.8	4066.8	3965.9	3729.9	3859.4	4080.9	4442.6
47.5°	6534.4	6479.6	6564.5	5885.1	5301.3	4704.9	4580.1	4264.3	4395.2	4668.8	5280.3
50°	7235.5	7228.0	7103.5	6849.7	6141.8	5345.4	5182.2	4816.1	5019.8	5400.3	6336.4
52.5°	7972.6	7835.6	7721.5	7599.6	7033.7	6002.3	5802.0	5366.1	5754.1	6232.3	7623.4
55°	8123.3	8062.2	8203.5	8408.5	7893.3	6684.5	6451.4	6055.9	6580.8	7183.8	9107.6
57.5°	8446.1	8445.1	8737.9	9102.9	8778.3	7408.2	7173.1	6889.2	7510.0	8273.4	10683.4
60°	8664.2	8725.3	9269.0	9977.6	9647.3	8244.3	8028.0	7850.7	8567.1	9491.5	12151.6
62.5°	8778.3	8861.3	9603.1	10332.4	10875.8	9636.0	9420.1	9164.4	9965.4	10827.8	13010.3
65°	8303.8	8466.8	9551.1	10639.2	11951.6	11892.1	11794.9	11345.9	11713.8	11883.6	12700.0
67.5°	6990.1	7157.1	8419.8	10353.0	12719.7	14068.2	14088.9	13321.8	12789.6	11974.2	10677.7
70°	4980.3	5111.3	6156.2	8680.2	12134.6	15490.1	15560.9	14232.1	12575.3	10619.1	7460.2
72.5°	2364.5	2444.7	3433.8	5649.4	9629.4	14192.7	14329.6	13069.8	10692.8	7861.9	4069.6
75°	869.0	893.5	1160.5	2403.4	5585.2	10466.5	10627.9	9369.0	7088.2	3914.2	1550.3
77.5°	520.8	536.8	651.2	1014.4	2196.8	5982.6	6221.0	5095.4	3097.8	1456.9	762.5
80°	364.2	375.4	466.9	631.2	1037.9	2279.9	2492.1	2079.6	1234.1	922.0	554.7
82.5°	246.3	252.0	328.4	426.5	689.8	814.2	878.4	924.8	832.4	686.0	351.9
85°	161.4	167.0	222.8	281.1	438.7	420.9	430.3	544.4	607.7	466.0	195.2
87.5°	92.4	96.2	134.1	150.1	215.3	178.3	180.2	286.7	388.9	314.3	118.8
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°	2250.4	2250.4	2250.4	2250.4	2250.4	2250.4	2250.4	2250.4	2250.4	2250.4	2250.4
2.5°	2242.0	2229.7	2202.5	2185.2	2169.3	2165.5	2158.9	2158.0	2157.0	2157.0	2154.2
5°	2191.8	2171.1	2128.8	2105.0	2085.3	2083.4	2082.5	2087.2	2089.0	2090.9	2088.1
7.5°	2159.9	2131.7	2078.7	2044.8	2021.3	2015.4	2025.1	2046.7	2060.8	2066.5	2063.7
10°	2140.1	2105.0	2043.9	2006.9	1987.2	1984.4	1996.6	2022.3	2051.4	2062.7	2061.8
12.5°	2117.6	2077.8	2012.6	1974.0	1962.7	1968.4	1984.4	2007.9	2038.3	2056.1	2057.1
15°	2094.7	2048.6	1981.5	1947.7	1943.0	1950.5	1965.6	1983.4	2006.9	2025.1	2027.0
17.5°	2067.4	2019.2	1952.4	1917.3	1913.5	1917.3	1918.2	1927.6	1943.0	1959.9	1964.6
20°	2038.3	1989.1	1919.2	1884.4	1867.5	1852.4	1835.2	1837.1	1841.8	1859.0	1862.8
22.5°	2017.3	1968.4	1893.8	1845.5	1800.4	1755.0	1721.1	1716.4	1718.3	1732.4	1737.1
25°	2019.2	1967.4	1887.2	1804.2	1705.1	1632.4	1587.0	1579.5	1578.5	1588.9	1595.8
27.5°	2056.1	2004.1	1911.7	1761.5	1601.4	1493.6	1445.7	1440.0	1432.5	1435.3	1442.8
30°	2138.2	2090.0	1971.2	1718.3	1488.9	1357.9	1307.8	1302.1	1291.8	1287.1	1292.7
32.5°	2272.1	2232.6	2058.0	1676.6	1376.7	1241.6	1190.9	1178.6	1172.1	1166.4	1171.1
35°	2494.9	2477.9	2174.0	1631.5	1277.7	1152.0	1105.9	1087.1	1077.7	1088.1	1095.6
37.5°	2844.0	2853.4	2326.0	1560.7	1201.2	1092.8	1053.9	1032.3	1018.2	1026.7	1035.1
40°	3338.5	3345.1	2493.9	1460.7	1135.1	1057.7	1016.3	996.6	976.5	961.5	960.5
42.5°	3987.5	3920.8	2659.1	1352.3	1058.6	1036.1	990.0	965.2	935.1	893.5	885.0
45°	4757.5	4522.8	2784.4	1227.5	972.8	1009.7	960.5	926.7	879.4	834.2	829.5
47.5°	5644.7	5169.0	2845.9	1098.4	892.5	970.9	924.8	870.9	811.4	788.8	786.0
50°	6727.8	5936.2	2875.0	972.8	823.0	920.1	872.8	809.5	759.6	754.9	752.1
52.5°	7961.3	6859.1	2884.7	870.0	765.3	854.0	830.5	769.1	729.3	733.3	733.3
55°	9252.1	7812.1	2756.2	795.4	712.3	786.0	802.0	753.1	719.8	735.2	740.8
57.5°	10437.0	8656.7	2352.3	738.0	662.5	734.3	791.6	768.1	745.5	806.7	810.4
60°	11346.8	9155.6	1756.8	686.0	625.5	716.1	819.2	825.8	831.4	977.5	997.5
62.5°	11537.3	8989.8	1207.8	645.6	608.6	731.4	869.0	870.0	863.4	965.2	977.5
65°	10662.7	7939.3	878.4	622.7	594.5	758.7	911.6	891.6	848.3	925.7	902.9
67.5°	8467.7	5981.6	731.4	605.8	573.8	756.8	956.8	911.6	839.9	906.9	870.0
70°	5496.5	3616.8	651.2	591.7	549.1	720.8	983.1	909.8	815.1	843.6	800.1
72.5°	2681.7	1617.4	597.3	571.0	523.7	671.0	982.2	892.5	789.7	787.9	764.4
75°	1049.2	740.8	548.1	539.7	480.4	614.2	955.8	868.1	759.6	729.3	720.8
77.5°	614.2	528.4	486.1	493.6	428.4	557.5	917.3	825.8	718.0	682.2	672.8
80°	447.2	395.5	414.3	426.5	366.0	501.1	865.3	773.8	671.9	689.8	676.6
82.5°	286.7	254.8	336.0	348.2	304.9	443.4	808.5	718.9	606.7	550.9	537.8
85°	146.4	161.4	250.1	265.1	235.0	364.2	739.9	646.5	533.1	458.5	466.0
87.5°	82.1	110.3	159.5	178.3	166.1	280.2	600.1	533.1	435.0	353.8	311.5
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)