

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: P823382

Luminaire Tested: **TTN-D2-735-U-DL**

Issue Date: 4/16/2024

Test Information

Test Method: LM-79-08
Report Number: P823382
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2312-254-11)
Test Lab: INNOVATION CENTER
Issue Date: 4/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: TTN-D2-735-U-DL
Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE
3500K, 70 CRI LEDS AND DRIVE LANE DISTRIBUTION
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4751 lumens
Efficiency: N/A
Efficacy: 111.8 lumens/watt
Luminous Opening: Circular (Dia: 0.71' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

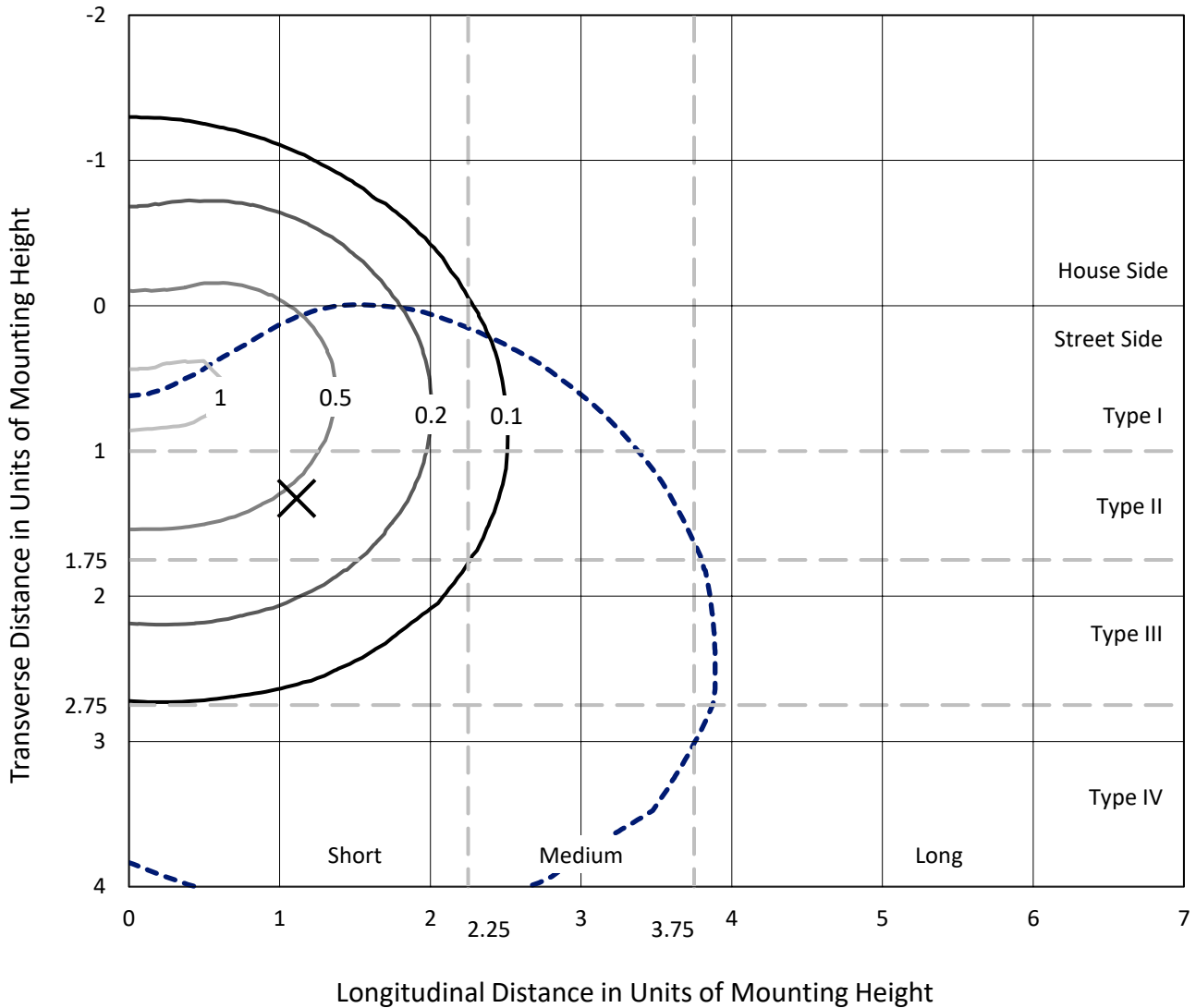
Input Watts (W): 42.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

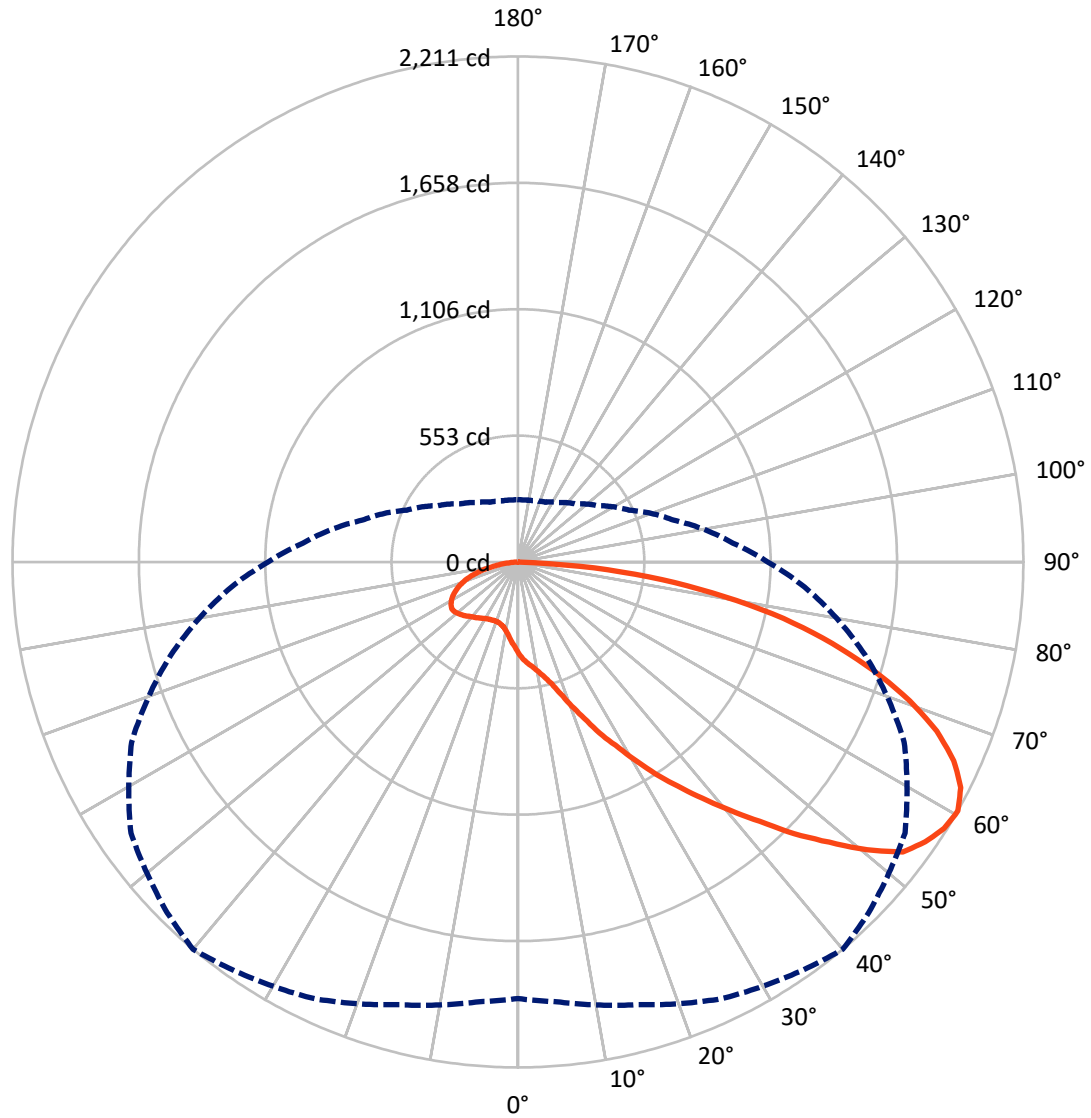
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical



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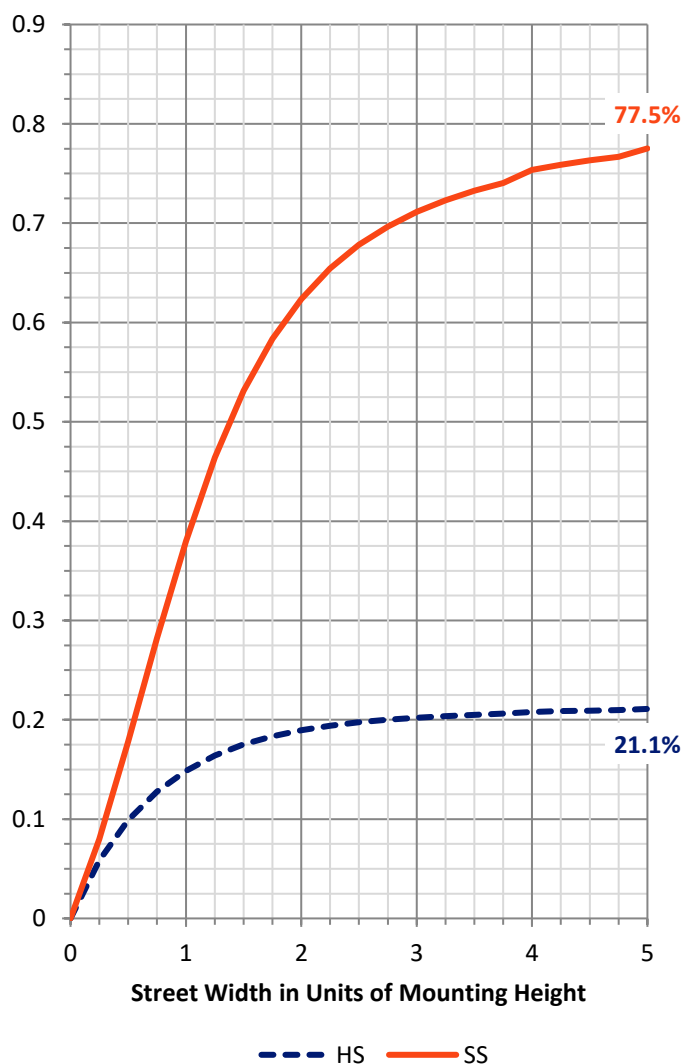
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1011.7	0.0	1011.7
	% Fixture	21.3	0.0	21.3
Street Side	Lumens	3739.3	0.0	3739.3
	% Fixture	78.7	0.0	78.7
Total	Lumens	4751.0	0.0	4751.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.7	0.8
10°-20°	120.4	2.5
20°-30°	254.4	5.4
30°-40°	465.0	9.8
40°-50°	755.6	15.9
50°-60°	1050.2	22.1
60°-70°	1088.7	22.9
70°-80°	780.1	16.4
80°-90°	198.9	4.2
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°	4751.0	100.0
0°-180°	4751.0	100.0

Coefficient of Utilization



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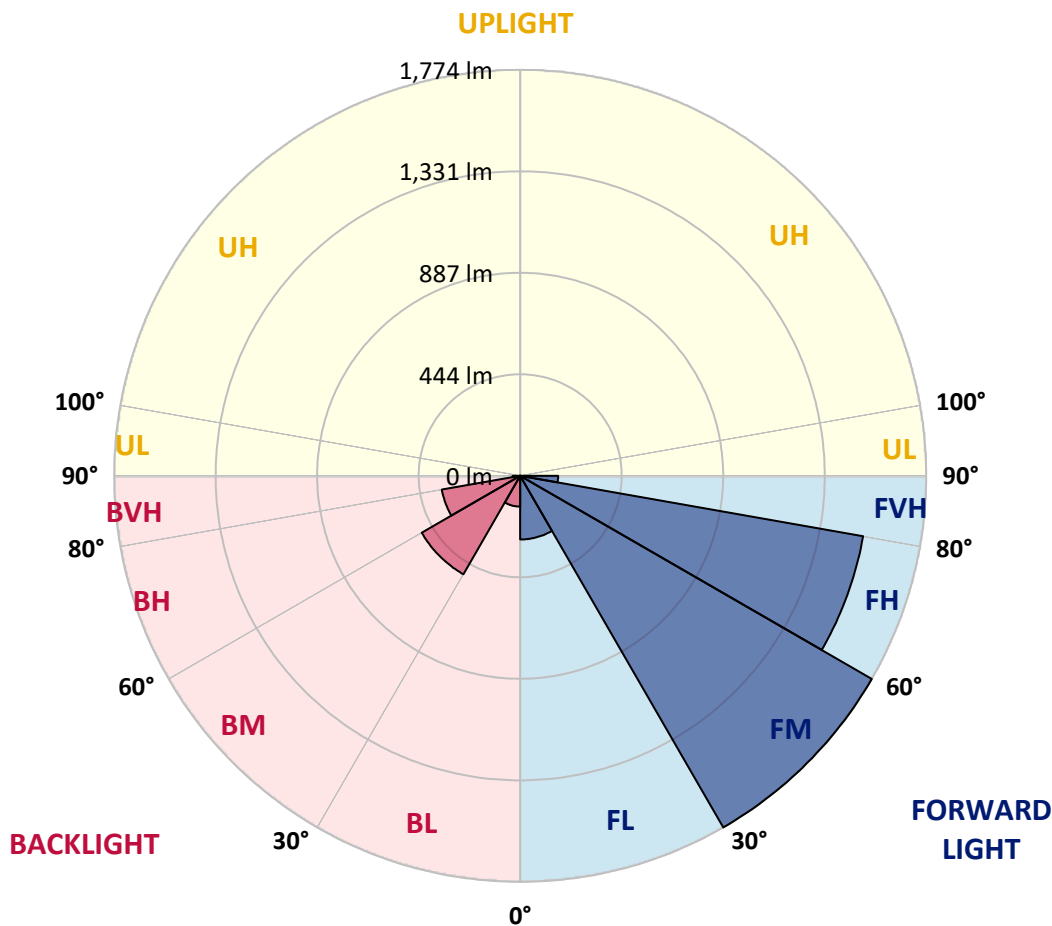
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	278.0	5.9			
FM (30°-60°)	1774.0	37.3			
FH (60°-80°)	1521.5	32.0			G1/1800
FVH (80°-90°)	165.7	3.5			G2/225
BL (0°-30°)	134.6	2.8	B1/500		
BM (30°-60°)	496.7	10.5	B1/1000		
BH (60°-80°)	347.3	7.3	B1/500		G1/500
BVH (80°-90°)	33.2	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	400.1	400.1	400.1	400.1	400.1	400.1	400.1	400.1	400.1	400.1	400.1
2.5°	429.0	429.0	429.0	429.0	424.9	424.9	420.8	416.6	412.5	408.4	400.1
5°	466.1	466.1	462.0	457.9	449.6	445.5	441.4	433.1	424.9	416.6	404.3
7.5°	482.6	482.6	482.6	478.5	466.1	462.0	453.8	441.4	429.0	416.6	400.1
10°	511.5	511.5	507.4	503.3	490.9	486.8	478.5	462.0	441.4	420.8	400.1
12.5°	548.6	544.5	540.4	536.3	523.9	515.6	503.3	486.8	462.0	437.3	412.5
15°	594.0	585.8	585.8	577.5	565.1	552.8	544.5	519.8	495.0	462.0	429.0
17.5°	643.5	639.4	635.3	627.0	614.6	606.4	594.0	565.1	532.1	490.9	453.8
20°	705.4	697.1	701.3	688.9	676.5	672.4	651.8	618.8	577.5	532.1	486.8
22.5°	779.7	771.4	771.4	759.0	750.8	742.5	721.9	684.8	631.1	581.6	523.9
25°	862.2	853.9	853.9	845.7	837.4	829.2	804.4	763.2	701.3	639.4	573.4
27.5°	952.9	944.7	944.7	940.5	919.9	907.5	886.9	841.5	779.7	701.3	622.9
30°	1047.8	1039.5	1047.8	1039.5	1027.2	1002.4	977.7	928.2	858.0	771.4	676.5
32.5°	1122.0	1122.0	1126.2	1134.4	1126.2	1105.5	1076.7	1035.4	940.5	833.3	726.0
35°	1208.7	1208.7	1216.9	1229.3	1225.2	1204.5	1175.7	1130.3	1031.3	903.4	779.7
37.5°	1303.5	1303.5	1311.8	1332.4	1324.2	1311.8	1291.2	1233.4	1122.0	973.5	837.4
40°	1406.7	1402.5	1410.8	1439.7	1443.8	1427.3	1402.5	1344.8	1216.9	1064.3	899.3
42.5°	1509.8	1505.7	1522.2	1551.1	1555.2	1551.1	1526.3	1460.3	1315.9	1155.0	961.2
45°	1612.9	1612.9	1637.7	1683.1	1703.7	1695.4	1674.8	1592.3	1439.7	1249.9	1043.7
47.5°	1720.2	1720.2	1753.2	1810.9	1835.7	1831.6	1823.3	1724.3	1559.3	1348.9	1113.8
50°	1802.7	1802.7	1856.3	1922.3	1963.6	1980.1	1938.8	1848.1	1662.4	1435.6	1171.5
52.5°	1885.2	1885.2	1938.8	2041.9	2083.2	2107.9	2054.3	1959.4	1777.9	1513.9	1225.2
55°	1926.4	1934.7	2008.9	2107.9	2174.0	2161.6	2182.2	2054.3	1852.2	1571.7	1258.2
57.5°	1930.6	1942.9	2025.4	2128.6	2202.8	2198.7	2202.8	2087.3	1881.1	1584.1	1262.3
60°	1909.9	1930.6	2004.8	2107.9	2178.1	2211.1	2169.8	2066.7	1864.6	1571.7	1258.2
62.5°	1860.4	1901.7	1980.1	2058.4	2161.6	2174.0	2140.9	2054.3	1819.2	1559.3	1237.5
65°	1749.1	1794.4	1905.8	1996.6	2079.1	2095.6	2058.4	1984.2	1773.8	1501.6	1171.5
67.5°	1637.7	1666.6	1761.4	1901.7	1959.4	1975.9	1963.6	1876.9	1695.4	1386.0	1093.2
70°	1509.8	1546.9	1621.2	1765.6	1823.3	1819.2	1856.3	1757.3	1575.8	1287.0	1010.7
72.5°	1336.5	1390.2	1464.4	1584.1	1654.2	1629.4	1687.2	1604.7	1419.0	1163.3	899.3
75°	1134.4	1179.8	1274.7	1369.5	1447.9	1419.0	1464.4	1406.7	1237.5	1014.8	771.4
77.5°	907.5	961.2	1047.8	1134.4	1188.0	1188.0	1208.7	1159.2	1027.2	833.3	631.1
80°	672.4	721.9	800.3	862.2	911.7	915.8	936.4	911.7	792.0	647.6	482.6
82.5°	445.5	470.3	540.4	589.9	639.4	635.3	668.3	651.8	552.8	445.5	321.8
85°	189.8	206.3	264.0	305.3	350.6	334.1	379.5	375.4	297.0	214.5	144.4
87.5°	8.3	12.4	12.4	8.3	12.4	4.1	12.4	16.5	12.4	8.3	8.3
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°	400.1	400.1	400.1	400.1	400.1	400.1	400.1	400.1	400.1	400.1	400.1
2.5°	400.1	396.0	387.8	383.6	379.5	371.3	371.3	367.1	367.1	367.1	363.0
5°	400.1	391.9	383.6	371.3	363.0	354.8	346.5	338.3	334.1	334.1	330.0
7.5°	391.9	383.6	371.3	358.9	346.5	330.0	321.8	305.3	301.1	297.0	297.0
10°	391.9	383.6	363.0	346.5	330.0	313.5	301.1	284.6	272.3	268.1	268.1
12.5°	396.0	383.6	363.0	342.4	321.8	301.1	284.6	268.1	255.8	247.5	247.5
15°	412.5	396.0	371.3	342.4	317.6	292.9	276.4	255.8	243.4	235.1	235.1
17.5°	433.1	416.6	379.5	346.5	317.6	288.8	268.1	247.5	235.1	226.9	222.8
20°	462.0	437.3	396.0	350.6	317.6	288.8	264.0	243.4	226.9	218.6	218.6
22.5°	495.0	466.1	412.5	358.9	321.8	288.8	264.0	239.3	222.8	214.5	214.5
25°	536.3	499.1	437.3	375.4	330.0	292.9	264.0	239.3	222.8	214.5	214.5
27.5°	581.6	540.4	462.0	391.9	338.3	297.0	264.0	239.3	222.8	214.5	214.5
30°	622.9	577.5	486.8	408.4	350.6	301.1	268.1	243.4	226.9	218.6	214.5
32.5°	668.3	610.5	511.5	424.9	358.9	309.4	272.3	247.5	226.9	218.6	218.6
35°	713.6	651.8	536.3	445.5	371.3	317.6	276.4	251.6	231.0	222.8	222.8
37.5°	763.2	697.1	565.1	462.0	383.6	325.9	284.6	255.8	235.1	226.9	226.9
40°	820.9	742.5	594.0	482.6	396.0	334.1	288.8	264.0	243.4	235.1	235.1
42.5°	874.5	783.8	622.9	499.1	408.4	342.4	297.0	268.1	251.6	243.4	243.4
45°	928.2	833.3	651.8	519.8	420.8	354.8	305.3	280.5	259.9	251.6	251.6
47.5°	990.0	878.7	684.8	536.3	433.1	363.0	313.5	288.8	268.1	264.0	259.9
50°	1039.5	911.7	705.4	552.8	441.4	371.3	321.8	292.9	276.4	268.1	268.1
52.5°	1084.9	944.7	721.9	561.0	445.5	375.4	330.0	301.1	284.6	276.4	276.4
55°	1109.7	957.0	734.3	561.0	449.6	379.5	330.0	301.1	284.6	280.5	276.4
57.5°	1109.7	957.0	726.0	552.8	441.4	371.3	325.9	297.0	284.6	276.4	276.4
60°	1093.2	944.7	705.4	536.3	429.0	358.9	317.6	288.8	276.4	272.3	272.3
62.5°	1068.4	924.0	688.9	515.6	412.5	342.4	305.3	276.4	268.1	268.1	264.0
65°	1002.4	862.2	651.8	486.8	387.8	321.8	288.8	264.0	255.8	251.6	247.5
67.5°	932.3	804.4	594.0	453.8	354.8	301.1	268.1	247.5	235.1	235.1	231.0
70°	862.2	742.5	540.4	408.4	317.6	276.4	243.4	222.8	214.5	214.5	214.5
72.5°	767.3	664.1	478.5	358.9	280.5	243.4	218.6	198.0	193.9	193.9	189.8
75°	655.9	565.1	404.3	305.3	235.1	206.3	185.6	165.0	165.0	165.0	165.0
77.5°	536.3	457.9	321.8	243.4	185.6	165.0	152.6	136.1	136.1	136.1	136.1
80°	404.3	338.3	235.1	177.4	136.1	119.6	111.4	103.1	107.3	107.3	103.1
82.5°	264.0	222.8	148.5	111.4	86.6	78.4	78.4	70.1	74.3	74.3	74.3
85°	115.5	99.0	61.9	49.5	41.3	41.3	41.3	37.1	41.3	41.3	41.3
87.5°	8.3	8.3	8.3	8.3	8.3	8.3	8.3	0.0	4.1	8.3	4.1
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)