

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: P232795

Luminaire Tested: **CTN-10-4-D-E1-T2**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232795  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-7)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: CTN-10-4-D-E1-T2  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 4000K LEDS AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 42925 lumens  
Efficiency: N/A  
Efficacy: 139.4 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type II - Short - Non-Cutoff  
BUG Rating: B4 - U0 - G4

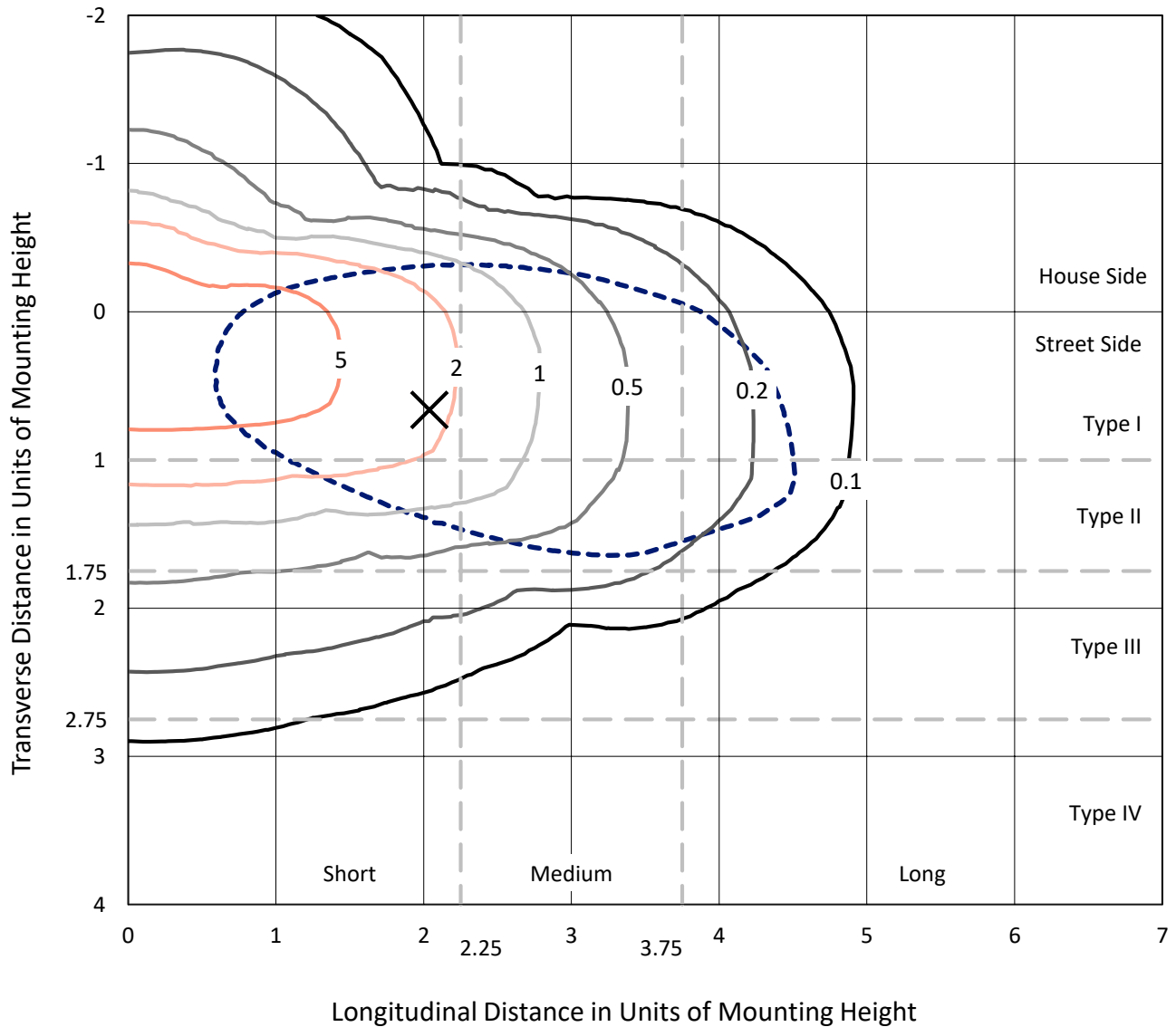
Input Watts (W): 308  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

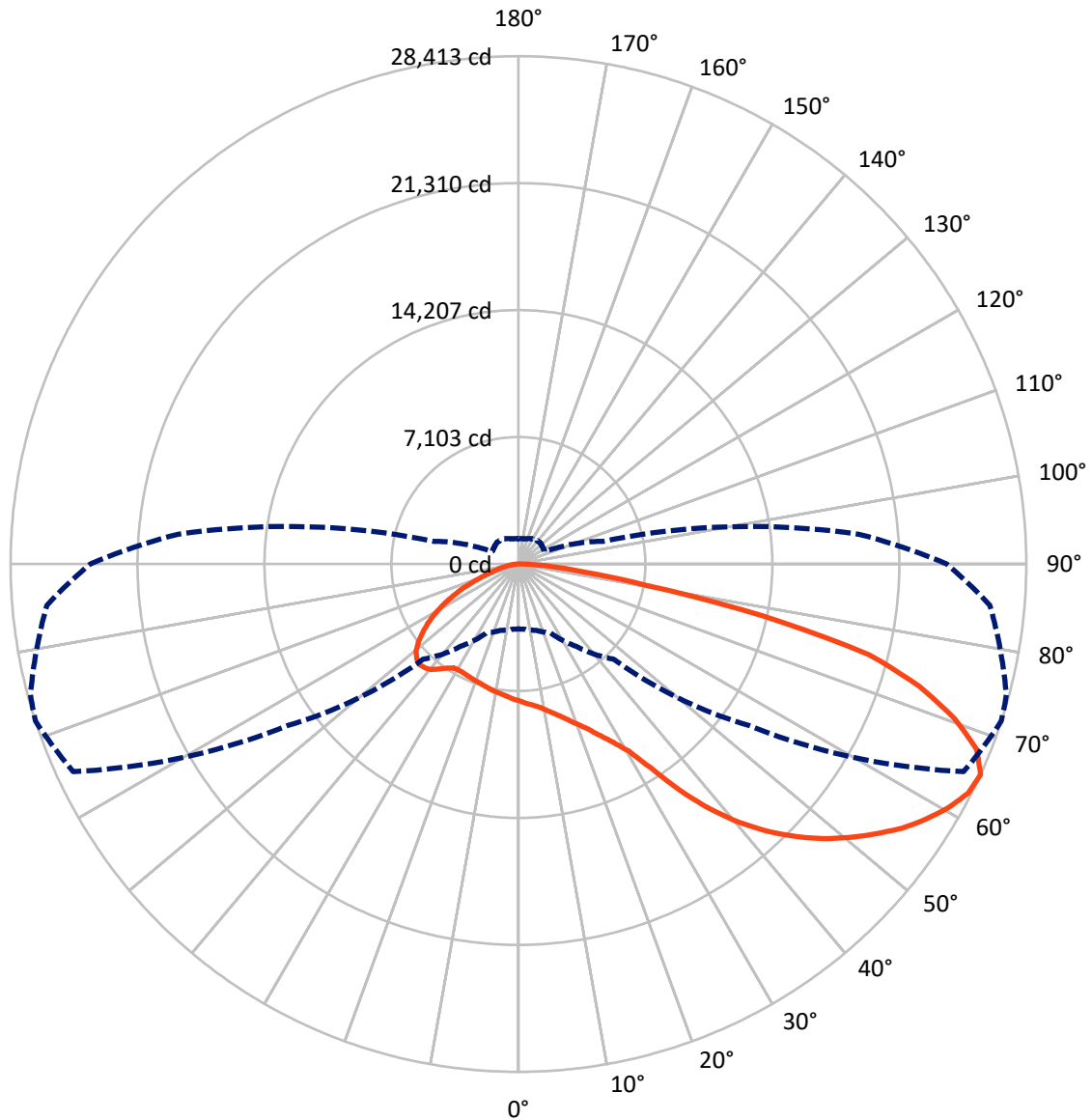
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 10 fc  
 Type II - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 72-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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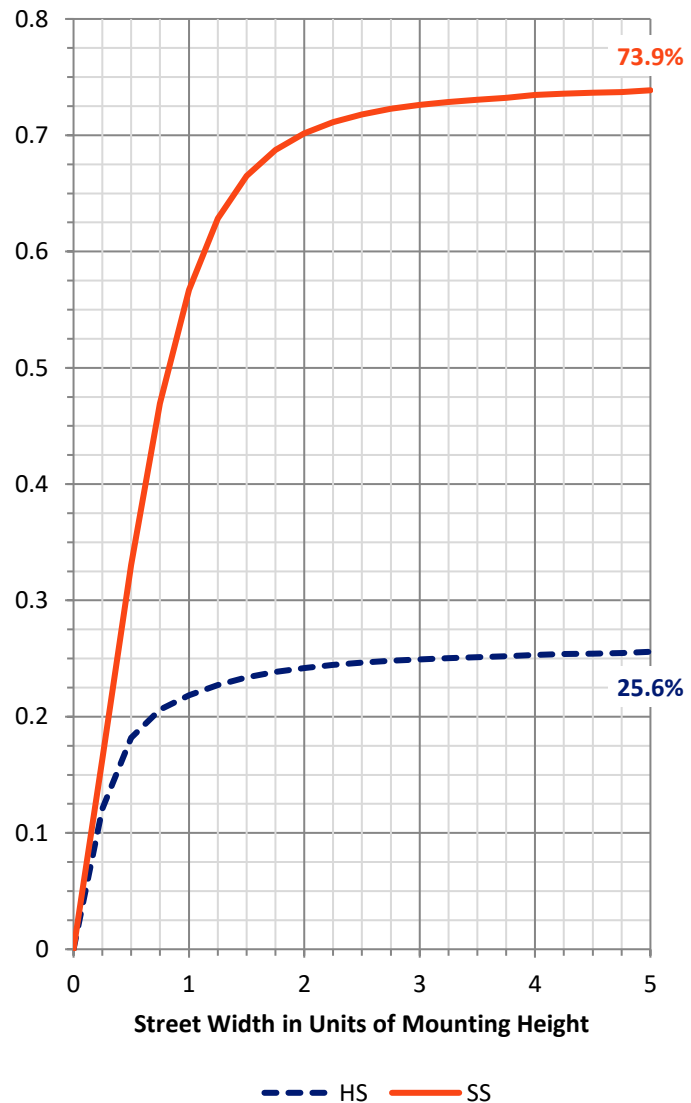
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	11181.6	0.0	11181.6
	% Fixture	26.0	0.0	26.0
<b>Street Side</b>	Lumens	31743.4	0.0	31743.4
	% Fixture	74.0	0.0	74.0
<b>Total</b>	Lumens	42925.0	0.0	42925.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	736.7	1.7
10°-20°	2245.5	5.2
20°-30°	3761.3	8.8
30°-40°	5459.6	12.7
40°-50°	7382.5	17.2
50°-60°	8617.3	20.1
60°-70°	8580.0	20.0
70°-80°	5202.9	12.1
80°-90°	939.2	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°	42925.0	100.0
0°-180°	42925.0	100.0



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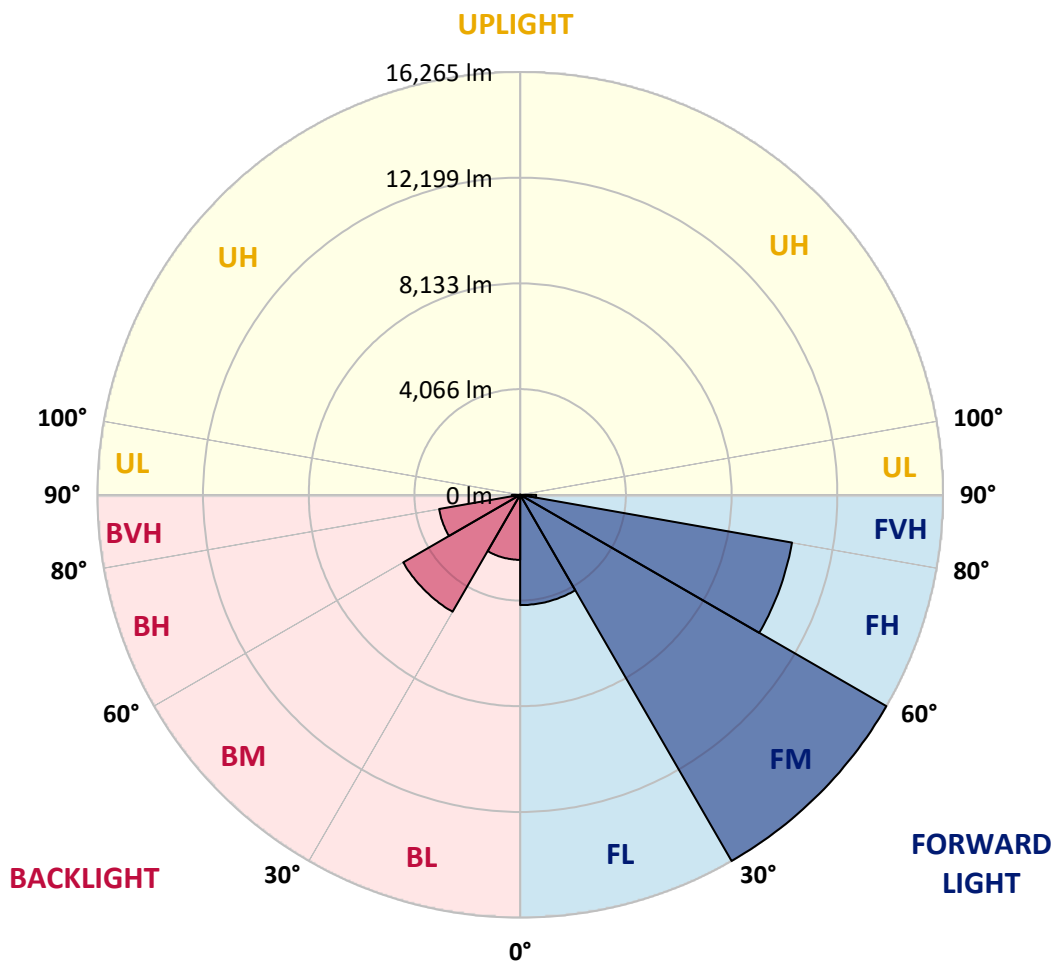
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4242.5	9.9			
FM	(30°-60°)	16265.2	37.9			
FH	(60°-80°)	10617.9	24.7			G4/12000
FVH	(80°-90°)	617.8	1.4			G4/750
BL	(0°-30°)	2501.1	5.8	B4/5000		
BM	(30°-60°)	5194.1	12.1	B4/8500		
BH	(60°-80°)	3165.0	7.4	B4/5000		G4/5000
BVH	(80°-90°)	321.4	0.7			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G4**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	72°	75°	85°
0°	7661.8	7661.8	7661.8	7661.8	7661.8	7661.8	7661.8	7661.8	7661.8	7661.8	7661.8
2.5°	8060.4	8045.1	8050.2	8057.6	7966.1	7950.8	7875.0	7836.5	7794.2	7764.5	7697.6
5°	8475.3	8473.9	8440.9	8441.4	8297.8	8242.5	8102.7	7999.6	7909.9	7863.4	7724.1
7.5°	8851.6	8812.6	8809.3	8800.0	8637.9	8549.6	8364.2	8207.7	8070.6	7999.1	7783.1
10°	9205.1	9177.7	9178.2	9167.0	9000.7	8890.6	8667.6	8470.6	8287.6	8195.1	7880.6
12.5°	9582.4	9551.2	9546.1	9507.1	9354.3	9248.3	9004.4	8762.4	8540.8	8436.3	8028.4
15°	9969.4	9939.6	9924.8	9879.7	9709.2	9596.3	9391.9	9092.7	8840.4	8710.4	8222.5
17.5°	10326.2	10308.0	10282.9	10248.1	10099.0	9975.4	9771.0	9486.7	9185.2	9018.8	8446.0
20°	10546.4	10530.6	10547.3	10547.3	10461.3	10371.7	10165.9	9922.0	9596.3	9390.5	8702.9
22.5°	10715.0	10698.7	10773.1	10810.7	10819.5	10799.6	10597.5	10384.7	10045.5	9833.2	9020.7
25°	10756.4	10758.2	10884.1	11053.2	11178.7	11237.2	11081.6	10925.0	10632.3	10366.6	9455.1
27.5°	10744.3	10756.4	10917.6	11219.5	11520.1	11662.3	11606.1	11515.0	11283.2	11056.9	10035.3
30°	10726.6	10758.2	10971.0	11342.2	11777.0	12058.6	12114.8	12252.8	12138.9	11984.7	10955.7
32.5°	10507.3	10535.7	10840.4	11387.7	11995.8	12506.9	12809.3	13394.2	13579.6	13549.4	12380.0
35°	9994.0	10049.7	10501.8	11268.3	12164.5	12963.6	13681.3	14906.0	15547.5	15496.0	14023.3
37.5°	9470.9	9539.2	10081.3	11045.8	12240.7	13449.5	14635.6	16596.1	17371.5	17296.2	15602.4
40°	8996.5	9075.0	9622.3	10712.2	12220.2	13903.9	15638.1	18184.5	18995.6	18861.8	17010.5
42.5°	8448.3	8562.2	9060.6	10267.6	12060.9	14224.0	16630.0	19702.2	20436.7	20232.3	18291.8
45°	7937.8	8029.3	8508.3	9658.6	11817.9	14459.5	17537.3	21108.5	21747.3	21509.0	19472.3
47.5°	7384.5	7500.6	7981.9	9031.8	11335.2	14512.5	18368.0	22357.8	22958.9	22710.8	20573.3
50°	5924.8	6112.0	7199.1	8418.6	10585.9	14320.1	19105.7	23529.4	24047.9	23851.8	21712.5
52.5°	5165.6	5202.3	5752.4	7714.8	9673.4	13817.0	19638.1	24678.8	25071.8	24872.1	22720.6
55°	4826.0	4836.2	5082.5	6529.6	8788.4	12858.6	19896.0	25779.4	26074.9	25798.0	23674.8
57.5°	4477.1	4534.3	4781.9	5510.3	7956.3	11475.5	19717.1	26742.0	26918.1	26606.3	24551.0
60°	4188.6	4235.1	4482.2	4977.0	7043.5	9867.6	18883.7	27509.0	27664.2	27345.9	25373.3
62.5°	3927.1	3961.0	4152.4	4616.0	6218.8	8441.8	17328.3	27714.3	28235.1	27981.9	26133.4
65°	3630.2	3661.3	3838.8	4252.3	5615.3	7529.4	15763.6	27483.4	28413.1	28259.8	26475.3
67.5°	3277.6	3319.4	3479.7	3836.0	4993.7	6743.8	13916.4	26897.6	27653.9	27418.4	25738.0
70°	2814.4	2882.7	3064.4	3373.3	4267.6	5731.5	11101.5	24971.9	25870.4	25601.4	23769.2
72.5°	2218.8	2233.7	2365.2	2622.1	3379.8	4559.4	7492.2	21130.4	23476.9	23400.7	21025.8
75°	1654.4	1705.0	1915.9	2113.8	2469.2	3271.1	4554.2	15400.7	20269.0	20269.0	17719.9
77.5°	1350.1	1376.5	1516.8	1683.2	1925.7	2295.5	2895.2	8702.0	13970.8	15387.7	13319.0
80°	1055.1	1045.8	1055.5	1130.3	1359.4	1517.8	1924.7	4472.5	7217.7	8204.4	8724.8
82.5°	577.9	578.4	641.6	604.9	749.8	853.0	1167.5	2515.7	3771.4	4187.7	4674.1
85°	292.7	285.7	318.2	296.9	347.0	389.3	530.1	1249.7	1924.7	2086.4	2202.6
87.5°	104.5	99.4	114.3	137.1	128.2	136.1	183.0	449.2	743.8	795.8	780.0
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°	7661.8	7661.8	7661.8	7661.8	7661.8	7661.8	7661.8	7661.8	7661.8	7661.8	7661.8
2.5°	7678.5	7633.9	7580.0	7535.0	7439.7	7390.0	7350.5	7361.7	7318.9	7257.2	7256.2
5°	7673.4	7588.4	7472.7	7377.0	7223.7	7144.7	7070.4	7050.9	6987.2	6925.9	6922.7
7.5°	7691.1	7578.2	7390.5	7237.6	7037.9	6914.8	6799.5	6754.5	6679.7	6615.1	6611.9
10°	7739.9	7590.7	7333.8	7122.0	6872.0	6703.4	6554.3	6463.7	6377.2	6310.8	6309.9
12.5°	7827.2	7627.9	7284.1	7007.7	6710.8	6487.4	6296.9	6179.8	6059.0	6009.8	6007.0
15°	7950.3	7682.2	7219.5	6855.8	6512.4	6257.9	6022.3	5867.6	5733.8	5686.4	5696.6
17.5°	8108.3	7771.0	7167.5	6688.1	6293.6	5986.5	5741.7	5586.1	5389.1	5345.4	5357.5
20°	8304.3	7908.0	7156.3	6534.7	6053.9	5688.3	5387.7	5277.6	5028.1	4969.6	4961.7
22.5°	8558.0	8069.7	7151.7	6370.7	5772.8	5345.4	4989.1	4849.3	4639.7	4541.2	4518.9
25°	8872.0	8256.9	7143.8	6206.7	5459.7	4954.7	4521.3	4324.7	4193.7	4044.6	4041.4
27.5°	9285.5	8508.3	7162.4	6044.1	5118.2	4499.0	4019.1	3780.7	3705.5	3608.8	3558.7
30°	9998.2	8956.1	7213.0	5847.6	4744.7	3974.5	3469.0	3288.3	3195.8	3097.8	3081.1
32.5°	11194.4	9925.2	7369.6	5634.9	4328.9	3407.2	3018.8	2829.7	2676.4	2625.8	2612.3
35°	12692.7	11076.0	7771.9	5407.2	3879.2	2958.0	2648.1	2398.6	2252.3	2240.2	2239.3
37.5°	14038.6	12303.4	8296.4	5126.6	3383.5	2637.4	2280.1	2065.0	1954.9	1966.1	1995.4
40°	15340.3	13392.4	8852.5	4846.9	2902.2	2298.3	1922.9	1819.7	1770.5	1810.5	1830.0
42.5°	16563.1	14387.0	9253.0	4467.4	2485.5	1934.0	1676.7	1737.5	1755.2	1788.2	1801.6
45°	17706.0	15406.3	9550.8	4010.2	2110.6	1677.1	1641.4	1746.3	1796.5	1822.1	1820.7
47.5°	18811.7	16380.5	9640.0	3405.8	1820.7	1648.8	1673.9	1733.8	1812.3	1859.2	1856.0
50°	19915.0	17266.9	9565.2	2791.6	1762.1	1703.6	1705.0	1695.2	1786.8	1824.9	1810.5
52.5°	20904.1	18094.8	9142.4	2336.4	1801.2	1761.2	1741.7	1692.5	1718.5	1745.0	1731.9
55°	21793.3	18785.6	8479.5	2112.0	1834.6	1798.4	1824.4	1728.7	1677.1	1654.8	1659.0
57.5°	22620.7	19318.5	7717.6	1972.6	1827.6	1789.6	1857.4	1718.9	1643.7	1549.8	1531.7
60°	23405.4	19668.3	6859.5	1852.3	1794.7	1776.5	1785.8	1719.4	1612.5	1490.8	1461.1
62.5°	23960.1	19686.9	5874.6	1745.0	1731.0	1756.6	1729.6	1705.9	1620.9	1528.5	1509.9
65°	23948.9	19108.5	4900.4	1621.8	1651.6	1703.1	1656.7	1578.2	1449.5	1422.1	1412.8
67.5°	22909.7	17644.6	3955.4	1439.3	1522.9	1631.1	1552.2	1424.4	1313.4	1280.8	1286.9
70°	20650.0	15574.9	2921.3	1166.6	1329.6	1508.5	1459.2	1317.1	1195.4	1169.8	1197.2
72.5°	17971.7	13379.4	2076.7	925.0	1104.3	1334.7	1315.2	1192.6	1085.7	1096.4	1121.0
75°	15004.0	10650.4	1523.3	795.8	866.9	1137.7	1187.0	1108.5	1040.7	1074.6	1073.6
77.5°	11182.4	7865.3	1160.0	667.6	717.8	885.5	1046.2	1016.5	1201.4	1460.2	1468.5
80°	7348.2	5106.6	782.8	548.2	587.2	664.3	853.9	979.3	1230.2	1066.2	1053.2
82.5°	4071.6	2710.3	485.5	426.5	440.9	481.8	618.8	1022.5	903.6	838.6	841.8
85°	1805.3	1049.5	286.6	286.2	287.1	292.2	397.2	775.4	635.5	615.6	625.8
87.5°	625.3	276.4	90.1	71.5	80.8	101.3	206.7	472.9	331.7	275.0	276.0
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)