

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: P232794

Luminaire Tested: **CTN-8-4-D-E1-T2**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232794
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-8-4-D-E1-T2
Description: CELESTEON HIGH MAST LUMINAIRE
(8) 70 CRI, 4000K LEDS AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 43096 lumens
Efficiency: N/A
Efficacy: 132.6 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B4 - U0 - G4

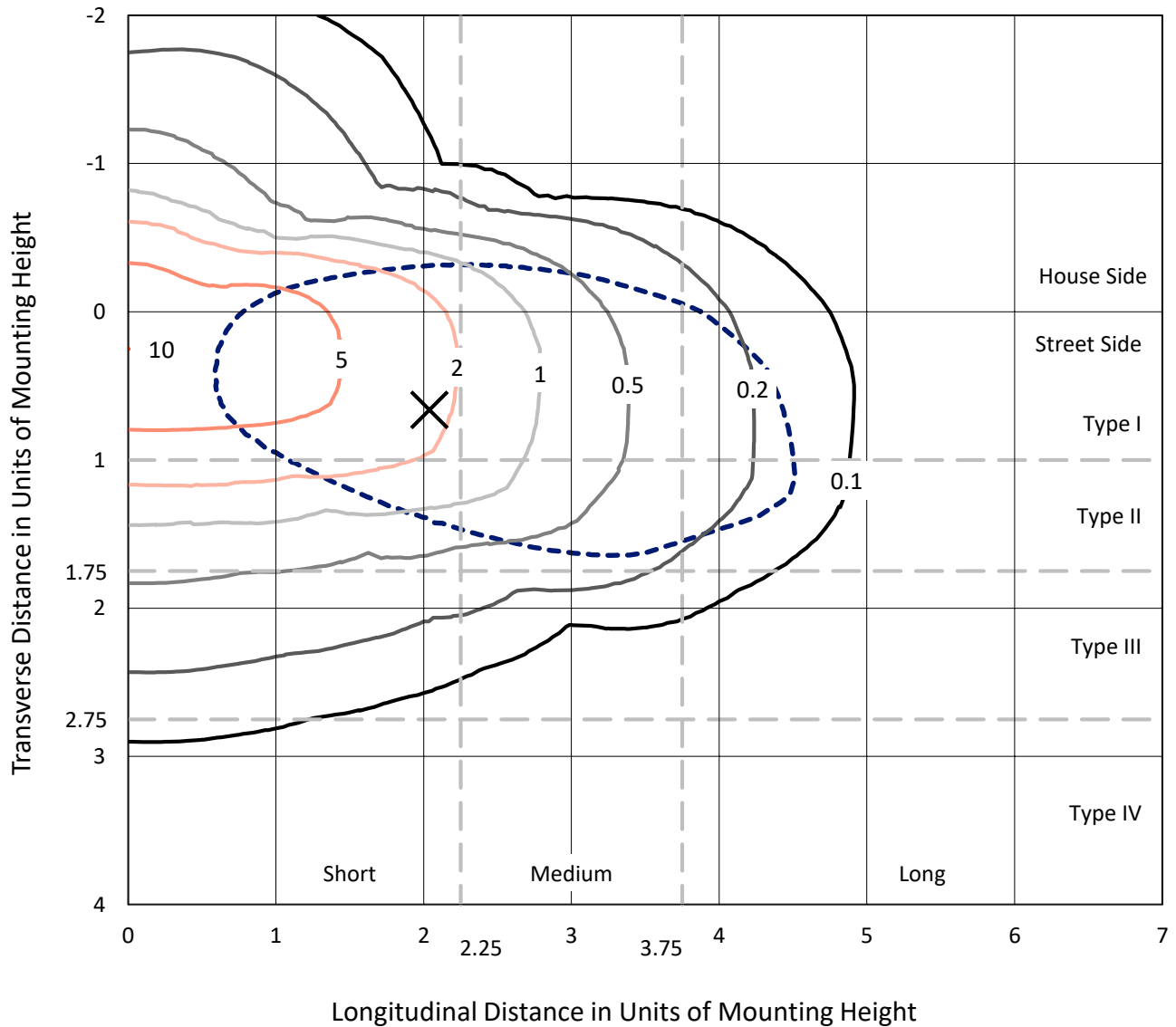
Input Watts (W): 325
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

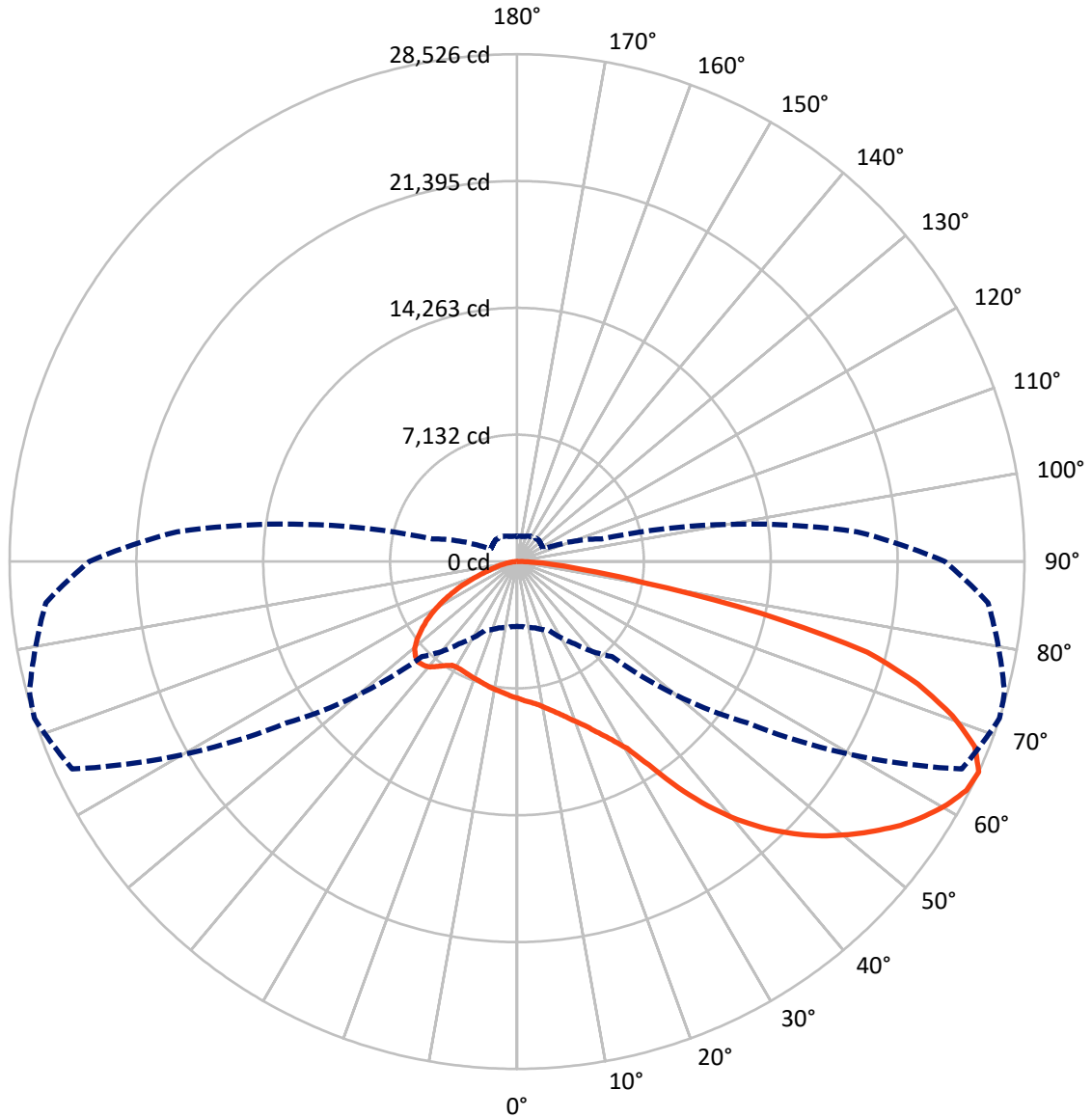
✕ Max cd
 - - - 1/2 Max cd



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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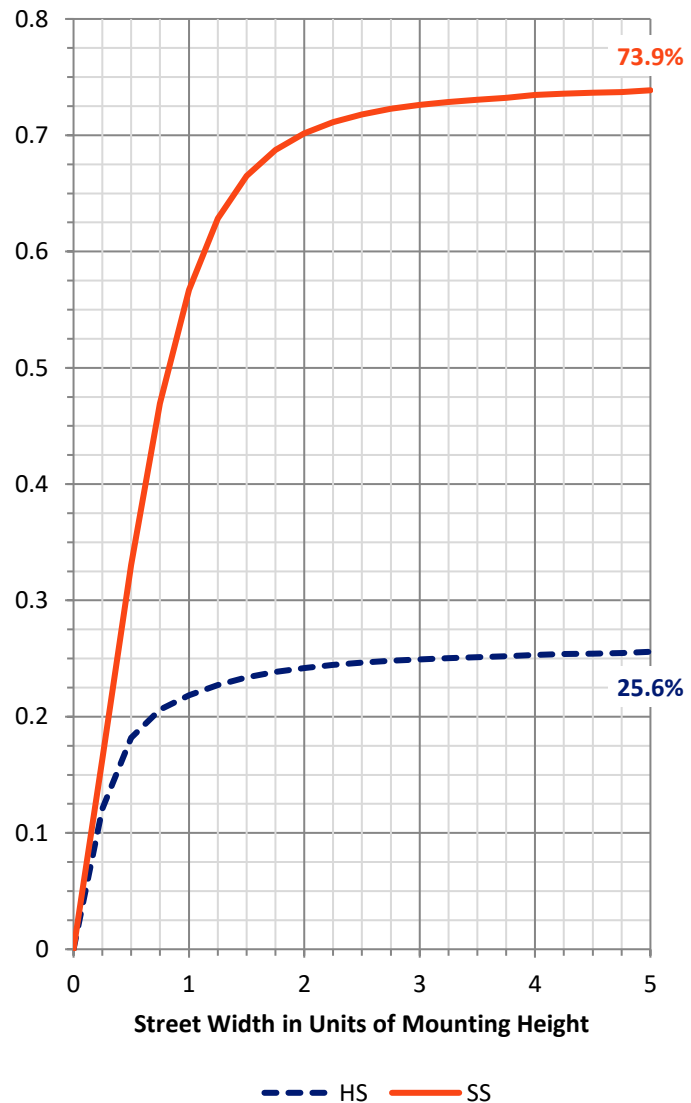
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	11226.1	0.0	11226.1
	% Fixture	26.0	0.0	26.0
Street Side	Lumens	31869.9	0.0	31869.9
	% Fixture	74.0	0.0	74.0
Total	Lumens	43096.0	0.0	43096.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	739.7	1.7
10°-20°	2254.5	5.2
20°-30°	3776.3	8.8
30°-40°	5481.3	12.7
40°-50°	7411.9	17.2
50°-60°	8651.7	20.1
60°-70°	8614.2	20.0
70°-80°	5223.6	12.1
80°-90°	942.9	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°	43096.0	100.0
0°-180°	43096.0	100.0



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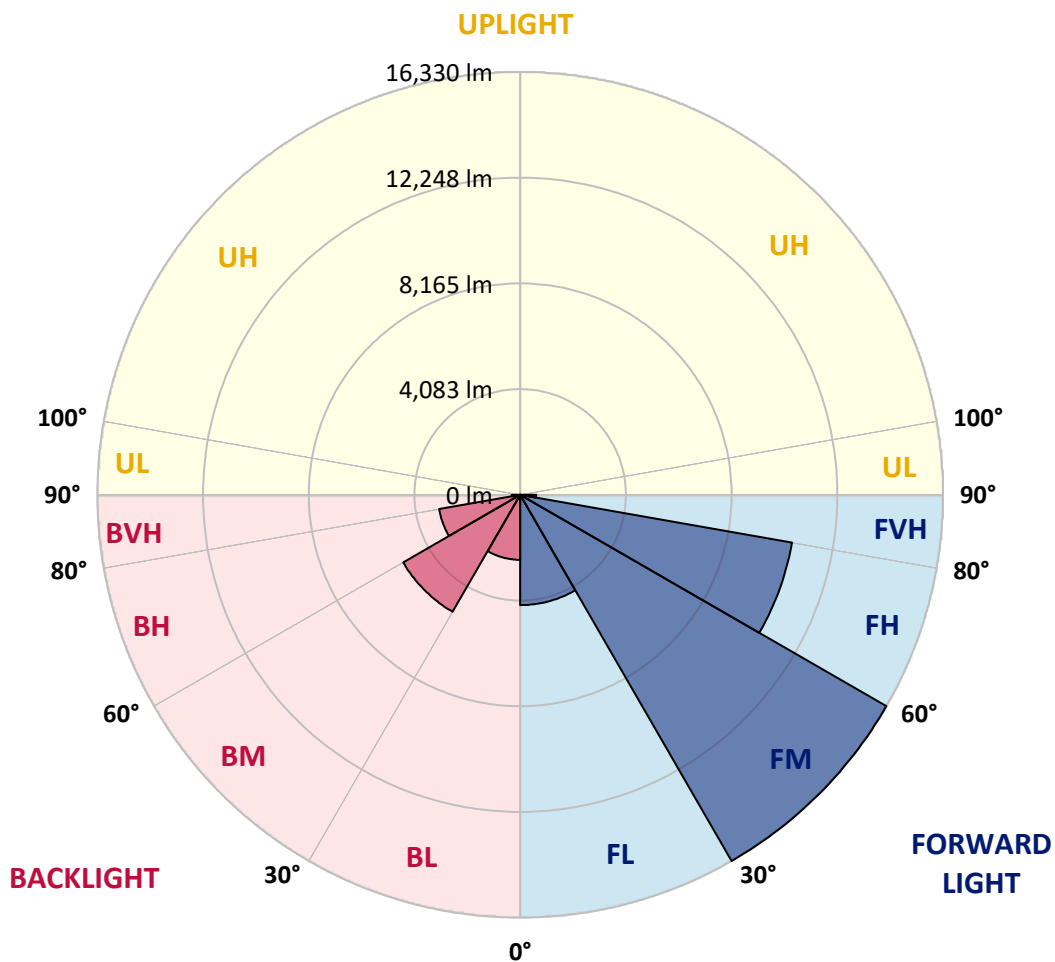
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	4259.4	9.9			
FM (30°-60°)	16330.0	37.9			
FH (60°-80°)	10660.2	24.7			G4/12000
FVH (80°-90°)	620.3	1.4			G4/750
BL (0°-30°)	2511.0	5.8	B4/5000		
BM (30°-60°)	5214.8	12.1	B4/8500		
BH (60°-80°)	3177.6	7.4	B4/5000		G4/5000
BVH (80°-90°)	322.7	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°	7692.3	7692.3	7692.3	7692.3	7692.3	7692.3	7692.3	7692.3	7692.3	7692.3	7692.3
2.5°	8092.5	8077.1	8082.3	8089.7	7997.8	7982.4	7906.4	7867.7	7825.3	7795.4	7728.2
5°	8509.0	8507.6	8474.5	8475.0	8330.9	8275.4	8135.0	8031.4	7941.4	7894.8	7754.8
7.5°	8886.8	8847.7	8844.4	8835.1	8672.3	8583.7	8397.6	8240.4	8102.8	8031.0	7814.1
10°	9241.8	9214.3	9214.7	9203.6	9036.6	8926.0	8702.1	8504.4	8320.6	8227.8	7912.0
12.5°	9620.5	9589.3	9584.2	9545.0	9391.5	9285.2	9040.3	8797.3	8574.8	8469.9	8060.3
15°	10009.1	9979.2	9964.3	9919.1	9747.9	9634.5	9429.3	9128.9	8875.7	8745.1	8255.3
17.5°	10367.3	10349.1	10323.9	10288.9	10139.2	10015.1	9809.9	9524.5	9221.7	9054.8	8479.7
20°	10588.4	10572.5	10589.3	10589.3	10503.0	10413.0	10206.4	9961.5	9634.5	9427.9	8737.6
22.5°	10757.7	10741.4	10816.0	10853.8	10862.6	10842.6	10639.7	10426.1	10085.6	9872.4	9056.6
25°	10799.2	10801.1	10927.5	11097.2	11223.2	11282.0	11125.7	10968.5	10674.7	10407.9	9492.7
27.5°	10787.1	10799.2	10961.1	11264.2	11566.0	11708.7	11652.3	11560.9	11328.1	11101.0	10075.3
30°	10769.4	10801.1	11014.7	11387.4	11823.9	12106.6	12163.0	12301.6	12187.3	12032.4	10999.3
32.5°	10549.2	10577.6	10883.6	11433.1	12043.6	12556.7	12860.3	13447.6	13633.7	13603.4	12429.4
35°	10033.8	10089.8	10543.6	11313.2	12212.9	13015.2	13735.8	14965.3	15609.5	15557.7	14079.1
37.5°	9508.6	9577.2	10121.5	11089.8	12289.4	13503.1	14693.9	16662.2	17440.7	17365.1	15664.5
40°	9032.4	9111.2	9660.7	10754.9	12268.9	13959.3	15700.4	18256.9	19071.3	18937.0	17078.3
42.5°	8482.0	8596.3	9096.7	10308.5	12108.9	14280.6	16696.2	19780.7	20518.2	20312.9	18364.7
45°	7969.4	8061.3	8542.2	9697.0	11865.0	14517.1	17607.2	21192.6	21834.0	21594.7	19549.9
47.5°	7413.9	7530.5	8013.7	9067.8	11380.4	14570.3	18441.2	22446.8	23050.4	22801.3	20655.3
50°	5948.4	6136.3	7227.8	8452.1	10628.0	14377.2	19181.8	23623.2	24143.7	23946.9	21799.0
52.5°	5186.2	5223.1	5775.3	7745.5	9712.0	13872.0	19716.4	24777.1	25171.7	24971.1	22811.1
55°	4845.3	4855.5	5102.7	6555.6	8823.4	12909.8	19975.2	25882.1	26178.7	25900.7	23769.2
57.5°	4495.0	4552.3	4800.9	5532.3	7988.0	11521.2	19795.7	26848.5	27025.3	26712.3	24648.8
60°	4205.3	4252.0	4500.1	4996.8	7071.5	9906.9	18958.9	27618.6	27774.4	27454.9	25474.4
62.5°	3942.7	3976.8	4168.9	4634.4	6243.6	8475.5	17397.3	27824.7	28347.6	28093.4	26237.5
65°	3644.7	3675.9	3854.1	4269.2	5637.7	7559.4	15826.4	27592.9	28526.3	28372.3	26580.8
67.5°	3290.6	3332.6	3493.5	3851.3	5013.6	6770.7	13971.8	27004.8	27764.1	27527.6	25840.6
70°	2825.6	2894.2	3076.6	3386.7	4284.6	5754.3	11145.8	25071.4	25973.5	25703.4	23863.8
72.5°	2227.7	2242.6	2374.6	2632.5	3393.3	4577.5	7522.1	21214.5	23570.5	23494.0	21109.6
75°	1660.9	1711.8	1923.5	2122.2	2479.1	3284.1	4572.4	15462.1	20349.8	20349.8	17790.5
77.5°	1355.4	1382.0	1522.9	1689.9	1933.3	2304.6	2906.8	8736.7	14026.4	15449.0	13372.0
80°	1059.3	1049.9	1059.7	1134.8	1364.8	1523.8	1932.4	4490.3	7246.4	8237.1	8759.5
82.5°	580.2	580.7	644.1	607.3	752.8	856.4	1172.1	2525.7	3786.5	4204.4	4692.7
85°	293.8	286.9	319.5	298.0	348.4	390.9	532.2	1254.7	1932.4	2094.7	2211.3
87.5°	104.9	99.8	114.7	137.6	128.7	136.7	183.8	451.0	746.8	799.0	783.1
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°	7692.3	7692.3	7692.3	7692.3	7692.3	7692.3	7692.3	7692.3	7692.3	7692.3	7692.3
2.5°	7709.1	7664.3	7610.2	7565.0	7469.4	7419.5	7379.8	7391.0	7348.1	7286.1	7285.1
5°	7704.0	7618.6	7502.5	7406.4	7252.5	7173.2	7098.6	7079.0	7015.1	6953.5	6950.2
7.5°	7721.7	7608.4	7419.9	7266.5	7065.9	6942.3	6826.6	6781.4	6706.3	6641.5	6638.2
10°	7770.7	7621.0	7363.0	7150.3	6899.4	6730.1	6580.4	6489.4	6402.7	6336.0	6335.0
12.5°	7858.4	7658.3	7313.1	7035.6	6737.5	6513.2	6322.0	6204.4	6083.2	6033.7	6030.9
15°	7982.0	7712.8	7248.3	6883.1	6538.4	6282.8	6046.3	5891.0	5756.7	5709.1	5719.3
17.5°	8140.6	7801.9	7196.0	6714.7	6318.7	6010.4	5764.6	5608.3	5410.6	5366.7	5378.8
20°	8337.4	7939.5	7184.9	6560.8	6078.0	5710.9	5409.2	5298.6	5048.1	4989.4	4981.4
22.5°	8592.1	8101.9	7180.2	6396.1	5795.8	5366.7	5009.0	4868.6	4658.2	4559.3	4536.9
25°	8907.4	8289.8	7172.3	6231.5	5481.5	4974.5	4539.3	4342.0	4210.4	4060.7	4057.5
27.5°	9322.5	8542.2	7190.9	6068.2	5138.6	4516.9	4035.1	3795.8	3720.2	3623.2	3572.8
30°	10038.0	8991.8	7241.8	5870.9	4763.6	3990.3	3482.8	3301.4	3208.6	3110.1	3093.3
32.5°	11239.0	9964.8	7398.9	5657.3	4346.2	3420.8	3030.8	2841.0	2687.1	2636.2	2622.7
35°	12743.3	11120.1	7802.9	5428.8	3894.7	2969.7	2658.6	2408.2	2261.2	2249.1	2248.2
37.5°	14094.5	12352.4	8329.5	5147.0	3397.0	2647.9	2289.2	2073.3	1962.7	1973.9	2003.3
40°	15401.4	13445.7	8887.8	4866.2	2913.8	2307.4	1930.5	1827.0	1777.6	1817.7	1837.3
42.5°	16629.1	14444.3	9289.8	4485.2	2495.4	1941.7	1683.3	1744.4	1762.2	1795.3	1808.8
45°	17776.5	15467.7	9588.8	4026.2	2119.0	1683.8	1647.9	1753.3	1803.7	1829.3	1827.9
47.5°	18886.6	16445.8	9678.4	3419.4	1827.9	1655.4	1680.5	1740.7	1819.5	1866.6	1863.4
50°	19994.4	17335.7	9603.3	2802.8	1769.2	1710.4	1711.8	1702.0	1793.9	1832.1	1817.7
52.5°	20987.4	18166.9	9178.8	2345.7	1808.3	1768.2	1748.6	1699.2	1725.3	1751.9	1738.8
55°	21880.1	18860.5	8513.2	2120.4	1841.9	1805.5	1831.7	1735.6	1683.8	1661.4	1665.6
57.5°	22710.8	19395.5	7748.3	1980.5	1834.9	1796.7	1864.8	1725.8	1650.2	1556.0	1537.8
60°	23498.6	19746.7	6886.8	1859.6	1801.8	1783.6	1792.9	1726.2	1619.0	1496.8	1466.9
62.5°	24055.5	19765.3	5898.0	1751.9	1737.9	1763.6	1736.5	1712.7	1627.4	1534.5	1515.9
65°	24044.4	19184.6	4919.9	1628.3	1658.2	1709.9	1663.3	1584.5	1455.3	1427.7	1418.4
67.5°	23001.0	17714.9	3971.2	1445.0	1529.0	1637.6	1558.3	1430.1	1318.6	1285.9	1292.0
70°	20732.2	15637.0	2932.9	1171.2	1334.9	1514.5	1465.0	1322.3	1200.1	1174.5	1202.0
72.5°	18043.3	13432.7	2084.9	928.7	1108.7	1340.0	1320.5	1197.3	1090.0	1100.8	1125.5
75°	15063.8	10692.9	1529.4	799.0	870.4	1142.3	1191.7	1112.9	1044.8	1078.8	1077.9
77.5°	11226.9	7896.6	1164.7	670.3	720.6	889.0	1050.4	1020.5	1206.2	1466.0	1474.4
80°	7377.5	5127.0	785.9	550.4	589.6	667.0	857.3	983.2	1235.1	1070.5	1057.4
82.5°	4087.8	2721.1	487.4	428.2	442.6	483.7	621.3	1026.6	907.2	841.9	845.2
85°	1812.5	1053.7	287.8	287.3	288.3	293.4	398.8	778.5	638.1	618.0	628.3
87.5°	627.8	277.5	90.5	71.8	81.2	101.7	207.6	474.8	333.0	276.1	277.1
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)