

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: LUMARK

Report Number: P196577

Luminaire Tested: **NAV-AF-05-D-UNV-SL2-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196577
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-05-D-UNV-SL2-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28511.2 lumens
Efficiency: N/A
Efficacy: 102.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B3 - U0 - G4

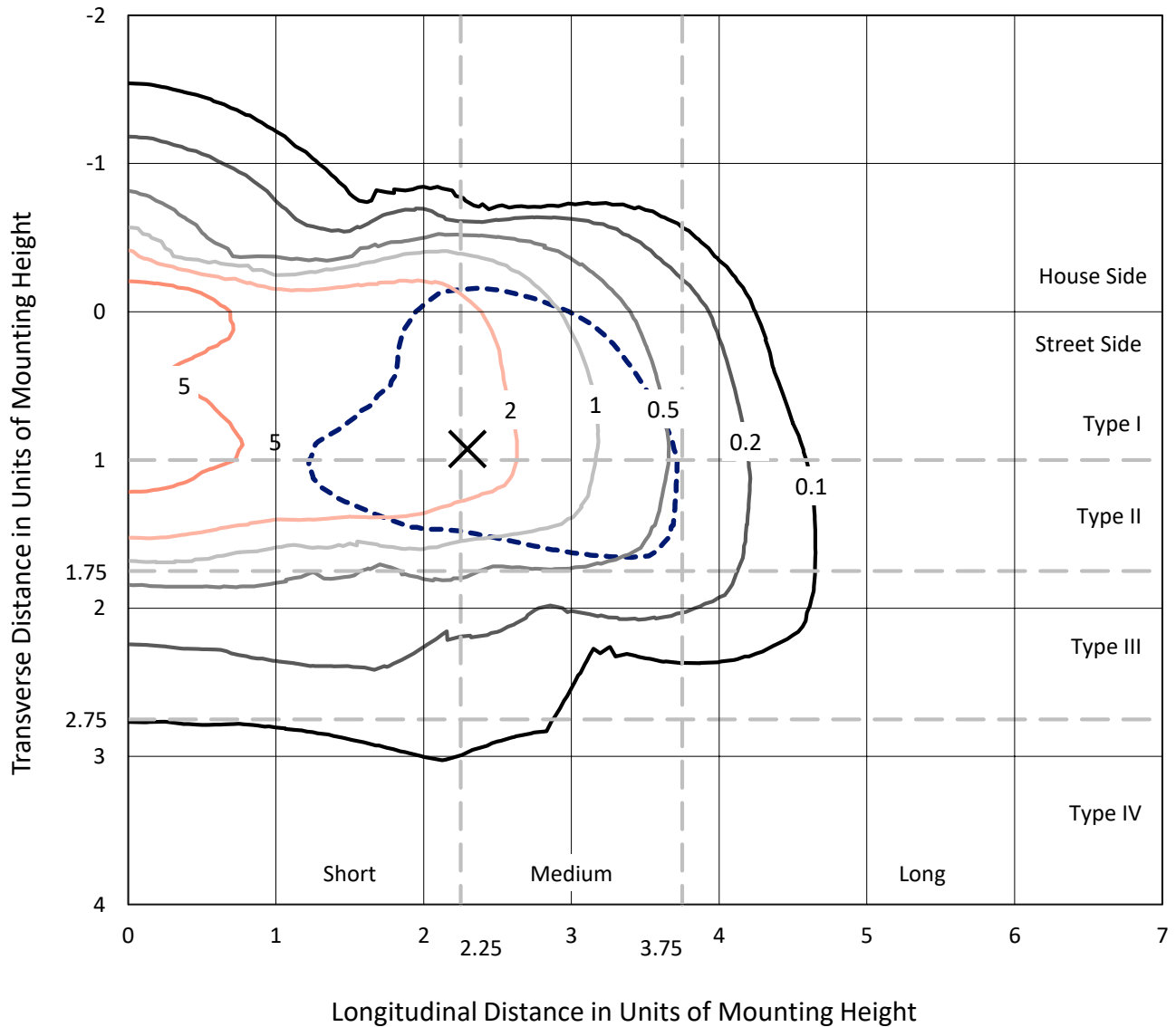
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

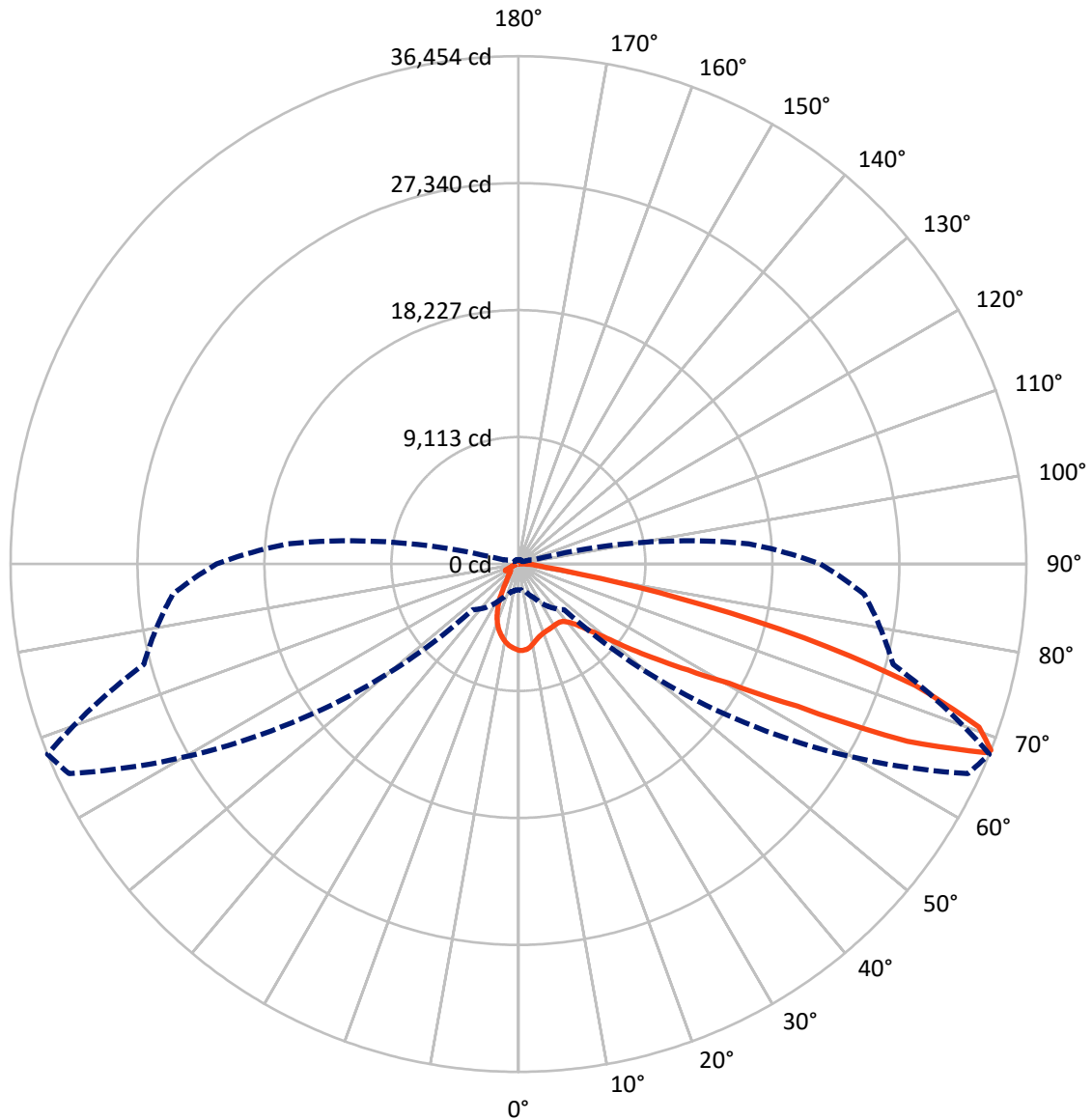
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.9 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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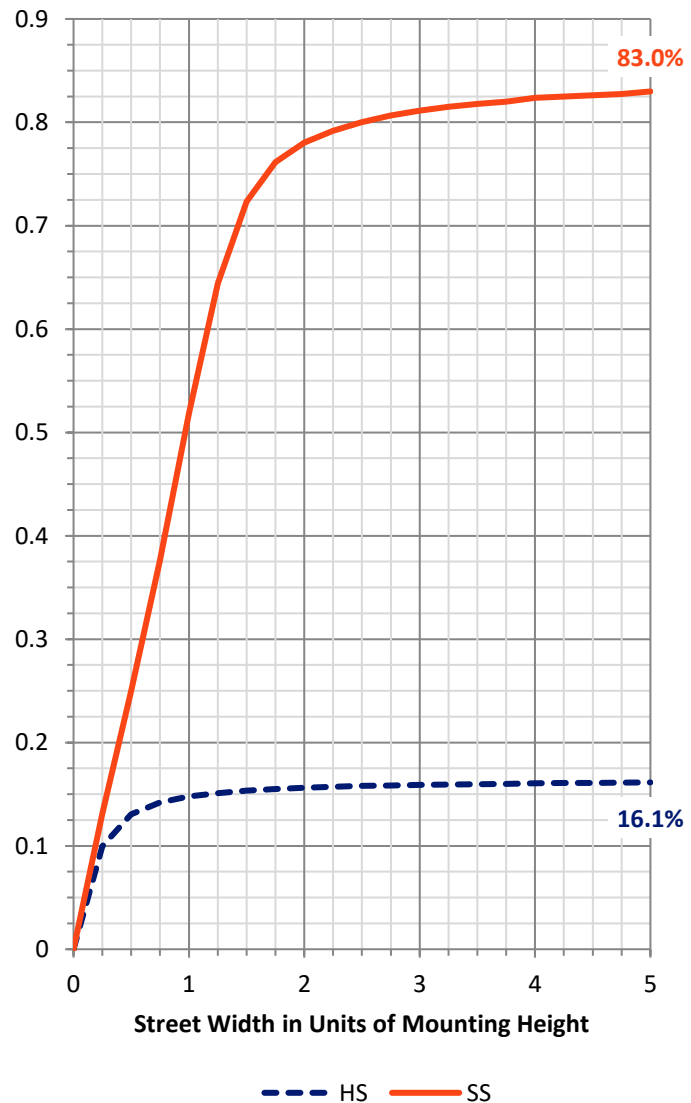
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4664.5	0.0	4664.5
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	23846.7	0.0	23846.7
	% Fixture	83.6	0.0	83.6
Total	Lumens	28511.2	0.0	28511.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	531.5	1.9
10°-20°	1232.9	4.3
20°-30°	1667.4	5.8
30°-40°	2351.0	8.2
40°-50°	3865.9	13.6
50°-60°	5992.5	21.0
60°-70°	7769.7	27.3
70°-80°	4458.7	15.6
80°-90°	641.5	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°	28511.2	100.0
0°-180°	28511.2	100.0



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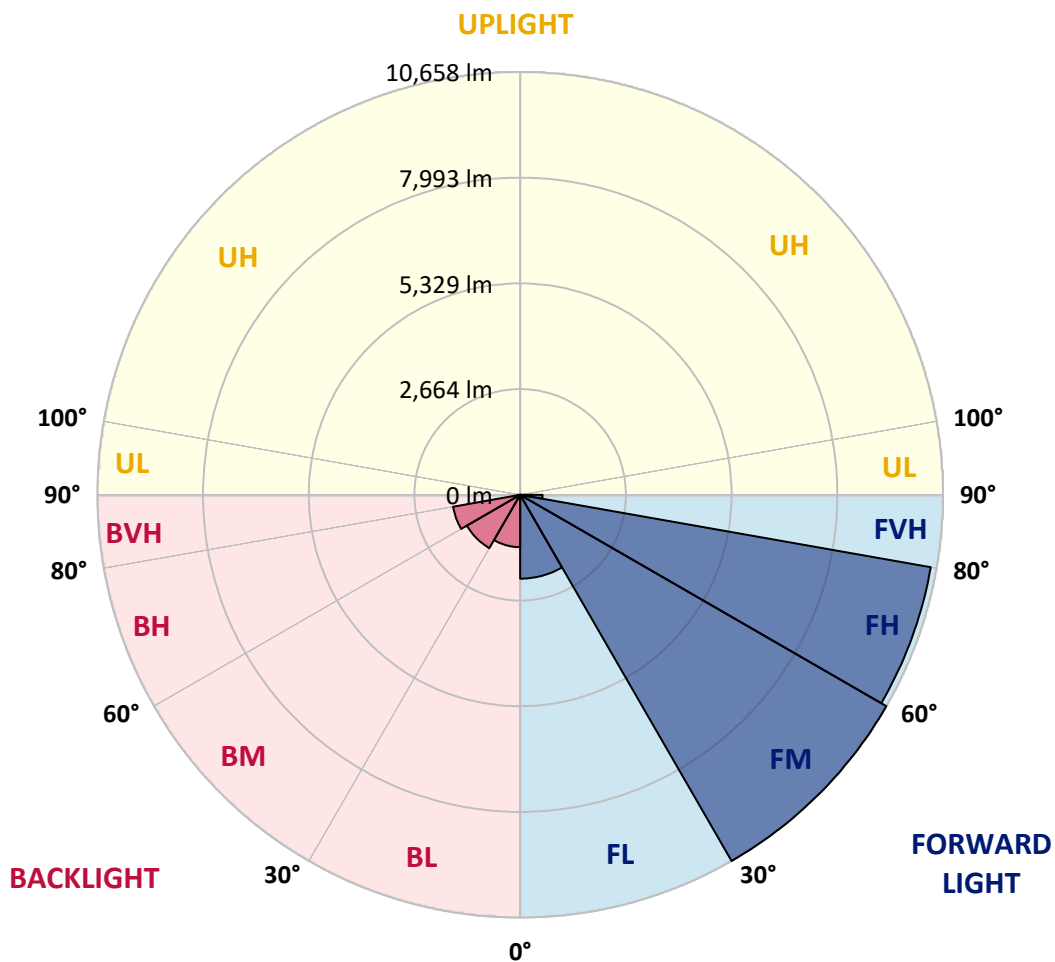
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2113.1	7.4			
FM (30°-60°)	10658.0	37.4			
FH (60°-80°)	10510.5	36.9			G4/12000
FVH (80°-90°)	565.0	2.0			G4/750
BL (0°-30°)	1318.7	4.6	B3/2500		
BM (30°-60°)	1551.5	5.4	B2/2500		
BH (60°-80°)	1717.9	6.0	B3/2500		G3/2500
BVH (80°-90°)	76.5	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	6203.7	6203.7	6203.7	6203.7	6203.7	6203.7	6203.7	6203.7	6203.7	6203.7	6203.7
2.5°	6038.0	6086.4	6086.4	6121.8	6153.5	6179.6	6201.9	6201.9	6201.9	6187.1	6174.0
5°	5403.0	5468.1	5477.3	5566.9	5684.2	5827.6	5987.7	6129.3	6157.2	6209.4	6229.9
7.5°	4961.6	4982.0	5017.4	5078.9	5198.1	5375.0	5626.5	5943.0	6019.4	6183.3	6269.0
10°	4648.7	4665.4	4695.2	4756.7	4864.7	5024.9	5272.6	5684.2	5810.9	6101.4	6270.8
12.5°	4419.5	4432.6	4460.5	4516.4	4626.2	4769.7	5022.9	5451.4	5607.8	6019.4	6296.9
15°	4240.8	4263.1	4285.4	4339.4	4451.2	4589.0	4846.0	5281.9	5451.4	5954.2	6345.3
17.5°	4170.0	4181.2	4184.8	4212.8	4313.4	4453.1	4710.0	5162.7	5337.8	5902.0	6382.6
20°	4214.6	4216.6	4179.2	4160.7	4218.4	4346.9	4596.5	5073.2	5252.1	5855.5	6397.4
22.5°	4410.2	4410.2	4313.4	4231.5	4192.4	4272.5	4520.2	5011.8	5205.5	5820.1	6397.4
25°	4782.8	4766.0	4615.1	4453.1	4279.9	4246.4	4471.8	4972.7	5170.1	5801.4	6373.3
27.5°	5272.6	5257.7	5065.8	4825.6	4512.7	4302.2	4454.9	4941.0	5134.7	5773.6	6321.0
30°	5868.6	5855.5	5637.6	5322.9	4861.0	4479.2	4494.1	4918.8	5106.8	5727.1	6233.6
32.5°	6462.6	6455.2	6282.0	5959.8	5341.4	4779.0	4596.5	4915.0	5091.9	5671.1	6127.5
35°	7060.6	7060.6	6954.4	6682.4	5987.7	5229.7	4810.6	4983.9	5119.9	5641.3	6036.1
37.5°	7943.2	7907.9	7710.5	7429.3	6801.6	5814.6	5157.1	5129.1	5227.8	5691.7	6006.4
40°	9310.3	9208.0	8714.3	8241.3	7690.0	6563.2	5663.7	5410.4	5469.9	5863.0	6077.1
42.5°	10740.7	10578.7	9924.9	9168.8	8608.2	7487.0	6328.6	5866.6	5864.8	6194.5	6302.5
45°	11968.0	11884.2	11176.4	10217.4	9656.8	8526.3	7168.5	6544.6	6477.6	6708.5	6736.5
47.5°	12681.4	12625.5	12199.1	11327.4	10900.9	9753.6	8233.9	7485.2	7358.5	7496.3	7453.4
50°	12484.0	12537.9	12415.0	11969.9	12238.1	11478.2	9591.6	8773.9	8533.7	8671.5	8567.2
52.5°	11444.7	11590.0	11699.8	11785.5	13007.4	13785.8	11297.5	10383.1	10183.8	10159.6	10059.1
55°	9573.0	9803.9	10150.3	10779.8	12800.6	15639.0	14277.5	12329.4	12038.8	11886.1	11925.2
57.5°	6514.8	6865.0	7611.8	8809.3	11725.9	16428.6	18684.0	14843.6	14352.0	13808.0	13934.8
60°	3588.9	3881.3	4769.7	5976.6	9273.1	16311.2	22589.6	18929.8	17382.2	15940.6	16201.4
62.5°	2322.5	2385.7	3046.9	4082.5	5691.7	14400.4	24759.2	25759.4	22479.6	18752.9	19119.9
65°	1866.1	1910.8	2234.9	3292.7	3965.1	9263.8	24856.2	32844.1	30681.8	22574.6	22585.7
67.5°	1823.3	1843.9	2031.9	2769.4	3719.3	5043.5	21485.1	35637.7	36138.8	27085.5	24904.5
68°	1849.4	1873.6	2063.6	2683.7	3717.4	4648.7	19857.4	35594.9	36453.5	27839.7	24904.5
70°	1631.5	1661.3	2104.6	2777.0	3559.1	3996.8	13597.7	33704.6	35086.5	29573.6	23630.6
72.5°	853.0	828.7	1041.1	2192.1	4006.1	4164.4	7183.5	28158.2	29771.1	27389.0	20416.0
75°	664.9	605.3	582.9	866.0	3523.7	4319.0	4171.8	20013.8	21231.8	19743.7	13646.1
77.5°	625.7	553.2	510.4	512.2	1551.4	4494.1	3374.7	11778.0	11778.0	9418.3	4354.4
80°	502.8	435.8	407.9	465.7	748.8	4142.0	3521.9	5367.6	4577.9	2434.2	1199.4
82.5°	331.5	296.1	297.9	378.0	568.0	2765.7	4078.7	2650.3	1990.9	1078.4	705.9
85°	210.5	180.6	201.1	264.5	424.6	1232.9	4037.7	1842.0	1318.6	605.3	352.1
87.5°	106.2	82.0	100.5	137.7	258.8	353.9	3324.4	1644.6	977.8	251.4	191.9
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°	6203.7	6203.7	6203.7	6203.7	6203.7	6203.7	6203.7	6203.7	6203.7	6203.7	6203.7
2.5°	6174.0	6133.0	6112.5	6078.9	6038.0	5997.0	5969.2	5956.0	5948.6	5952.3	5950.5
5°	6218.7	6164.6	6077.1	5952.3	5823.8	5687.9	5583.5	5503.5	5453.2	5438.3	5434.5
7.5°	6252.3	6174.0	6010.2	5782.9	5563.2	5324.8	5121.7	4959.8	4849.8	4799.5	4797.7
10°	6246.6	6146.1	5887.2	5551.9	5229.7	4879.6	4561.1	4289.2	4091.8	3996.8	3993.1
12.5°	6252.3	6114.3	5736.3	5281.9	4820.0	4319.0	3845.9	3423.2	3128.8	2989.3	2983.7
15°	6274.5	6080.9	5581.7	4980.1	4341.3	3633.6	2957.5	2426.7	2158.5	2067.3	2067.3
17.5°	6272.7	6025.0	5403.0	4630.0	3773.3	2825.3	2018.9	1691.2	1665.0	1748.8	1762.0
20°	6235.4	5935.6	5172.0	4214.6	3106.6	1955.5	1368.9	1322.4	1530.9	1762.0	1787.9
22.5°	6177.7	5820.1	4905.6	3732.3	2330.0	1273.9	1056.0	1126.8	1409.9	1696.7	1737.7
25°	6097.6	5680.4	4600.3	3171.7	1549.6	916.3	880.9	968.5	1167.8	1359.6	1389.3
27.5°	5980.3	5503.5	4266.9	2564.6	988.9	754.3	767.3	828.7	914.5	996.5	1013.2
30°	5833.2	5296.8	3903.8	1892.3	750.6	674.2	696.5	733.7	771.1	823.2	834.4
32.5°	5684.2	5086.3	3525.6	1299.9	655.5	631.4	653.7	674.2	705.9	741.3	748.8
35°	5550.1	4890.8	3136.4	907.0	614.6	603.4	614.6	627.7	659.3	694.7	698.3
37.5°	5453.2	4730.6	2730.4	717.1	590.4	579.2	584.7	590.4	627.7	679.8	685.4
40°	5440.2	4624.4	2318.7	644.4	571.8	556.9	553.2	556.9	605.3	664.9	670.6
42.5°	5566.9	4630.0	1916.4	614.6	556.9	540.1	525.2	532.6	575.5	622.0	625.7
45°	5866.6	4760.4	1568.2	601.6	543.8	530.8	508.5	512.2	532.6	556.9	560.6
47.5°	6395.6	5045.4	1301.9	594.2	532.6	521.5	493.6	482.4	484.2	497.2	497.2
50°	7241.1	5522.2	1139.8	586.7	523.4	502.8	471.2	448.8	443.3	450.7	452.6
52.5°	8502.0	6339.8	1061.6	571.8	506.6	478.7	443.3	420.8	411.6	419.0	419.0
55°	10206.1	7645.3	1024.3	551.3	486.1	448.8	417.2	398.6	391.1	396.7	396.7
57.5°	12148.6	9342.0	1087.6	523.4	460.0	417.2	394.9	381.8	376.2	381.8	383.6
60°	14456.2	11562.1	1523.5	488.0	432.1	389.3	376.2	368.8	365.0	370.6	370.6
62.5°	17523.6	14515.8	2357.9	460.0	402.3	363.2	359.5	355.7	352.1	357.6	357.6
65°	20835.0	17203.3	2426.7	443.3	376.2	340.8	342.6	342.6	338.9	344.6	344.6
67.5°	21889.2	16970.5	1355.9	422.8	344.6	318.5	325.9	325.9	324.1	329.6	327.8
68°	21665.8	16601.7	1180.8	417.2	338.9	312.9	320.3	322.2	320.3	325.9	324.1
70°	20000.8	14575.4	776.7	385.5	314.7	294.2	305.5	307.3	305.5	312.9	311.1
72.5°	16510.5	10932.5	573.6	337.1	284.9	270.1	281.3	283.1	284.9	292.4	290.5
75°	10485.5	6038.0	452.6	286.8	255.1	242.1	253.3	258.8	262.6	273.8	268.2
77.5°	2871.9	1832.6	366.9	243.9	219.7	214.1	221.6	229.1	232.8	245.9	236.5
80°	1005.7	810.1	305.5	206.7	182.6	180.6	188.2	195.6	199.3	210.5	199.3
82.5°	610.9	529.0	243.9	162.0	143.4	141.5	150.9	158.3	162.0	162.0	154.6
85°	318.5	279.3	178.7	113.6	98.7	93.1	110.0	119.2	121.1	119.2	113.6
87.5°	178.7	158.3	94.9	54.0	44.7	46.6	57.7	70.8	76.4	74.6	70.8
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)