

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: P195154

Luminaire Tested: **NAV-AF-04-D-UNV-SL3-7060-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195154
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-04-D-UNV-SL3-7060-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16733 lumens
Efficiency: N/A
Efficacy: 97.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 171
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

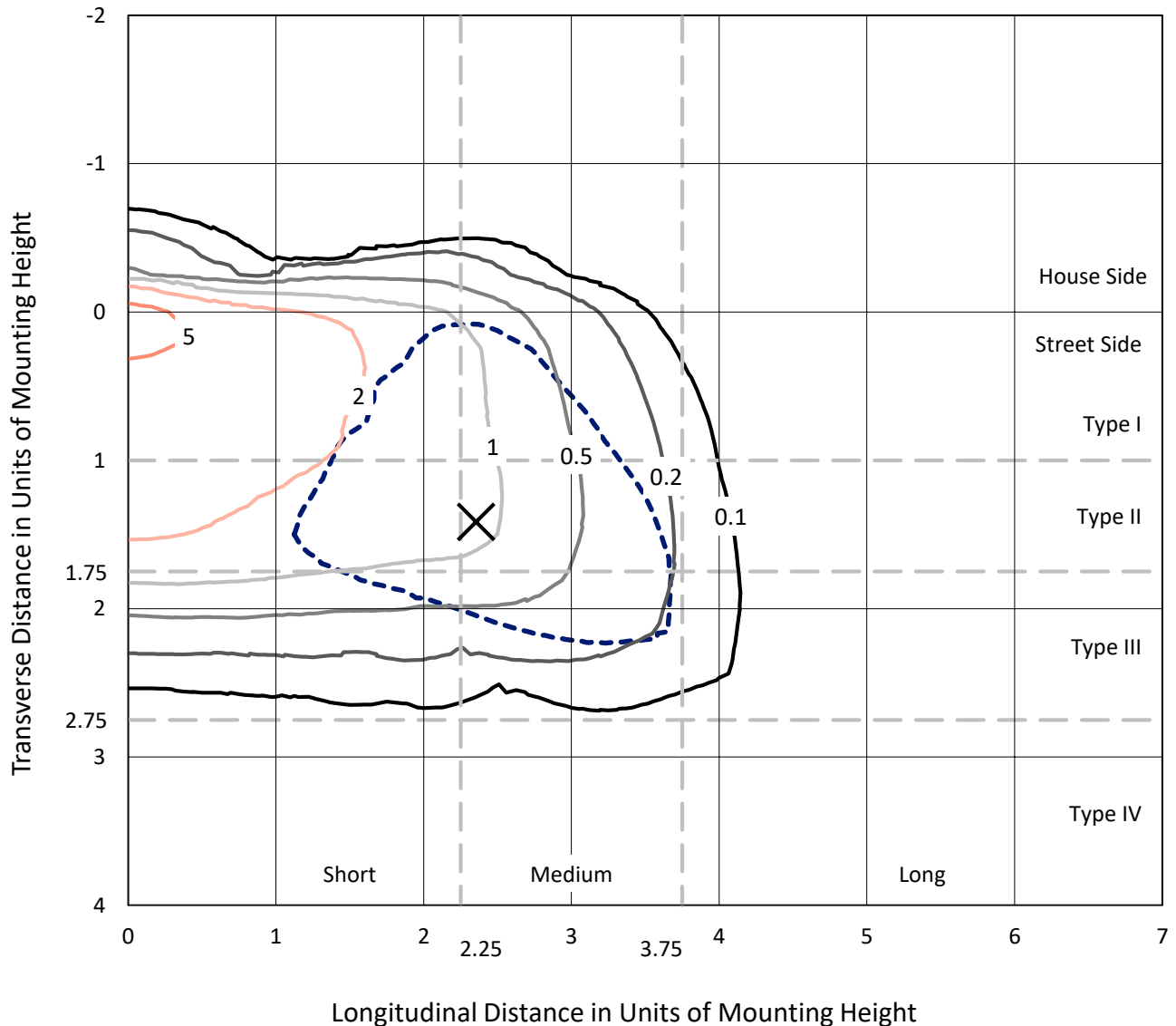


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

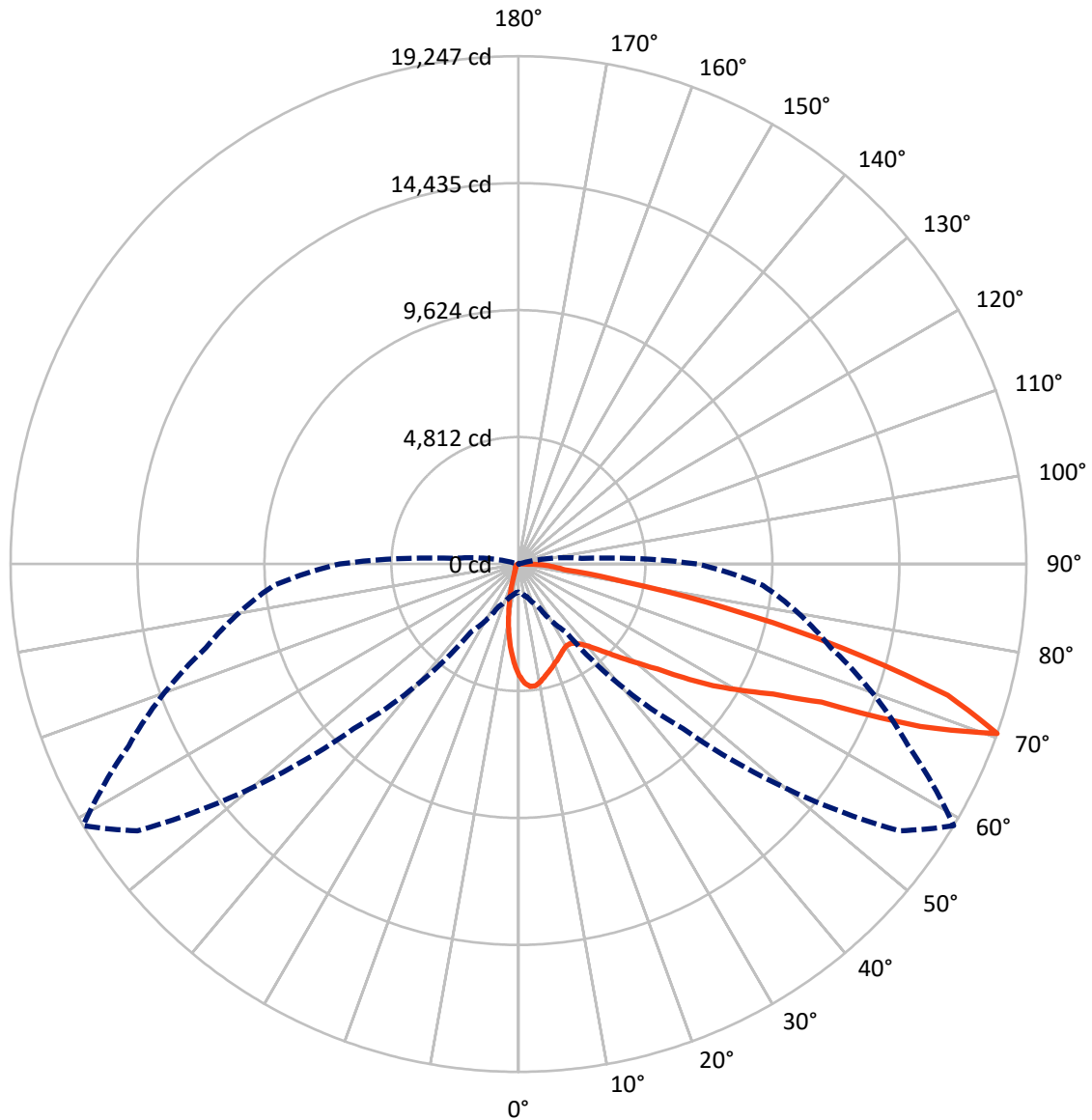


Based on 25 foot mounting height. Maximum calculated value = 7.2 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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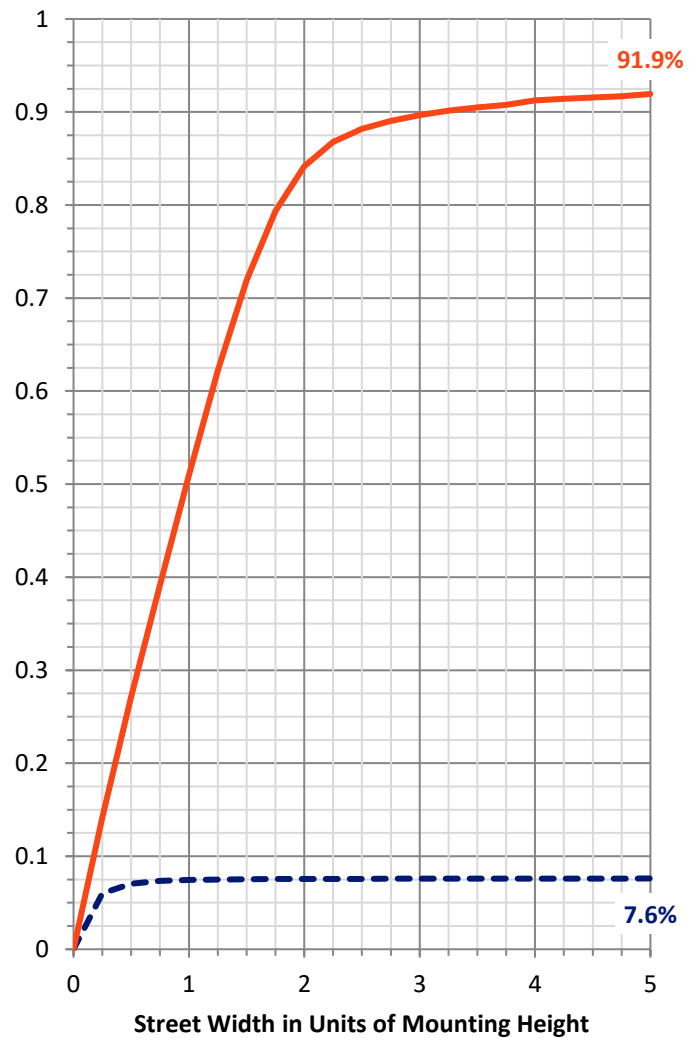
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1286.3	0.0	1286.3
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	15446.7	0.0	15446.7
	% Fixture	92.3	0.0	92.3
Total	Lumens	16733.0	0.0	16733.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	347.9	2.1
10°-20°	729.8	4.4
20°-30°	987.9	5.9
30°-40°	1425.6	8.5
40°-50°	2367.6	14.1
50°-60°	3621.6	21.6
60°-70°	4504.4	26.9
70°-80°	2490.0	14.9
80°-90°	258.2	1.5
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°	16733.0	100.0
0°-180°	16733.0	100.0



--- HS — SS

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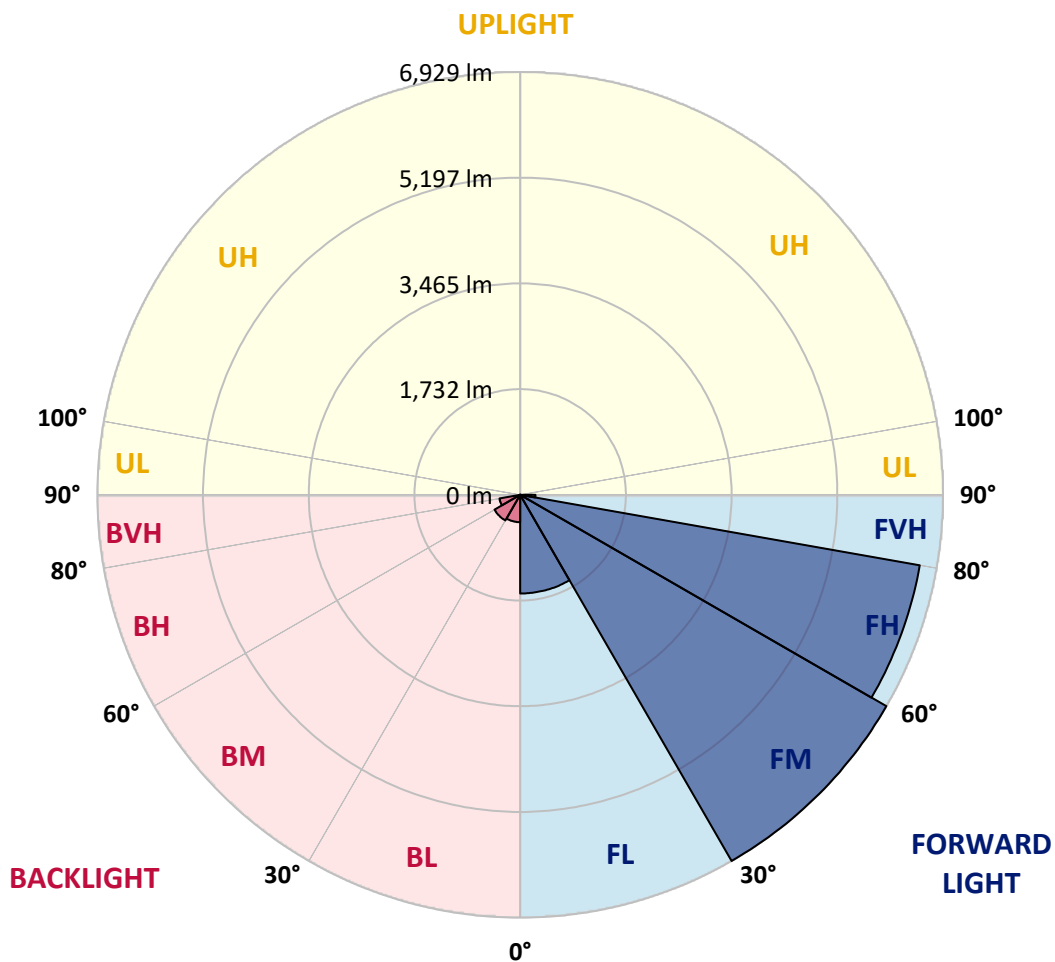
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1617.3	9.7			
FM	(30°-60°)	6929.3	41.4			
FH	(60°-80°)	6649.3	39.7			G3/7500
FVH	(80°-90°)	250.7	1.5			G3/500
BL	(0°-30°)	448.3	2.7	B1/500		
BM	(30°-60°)	485.5	2.9	B1/1000		
BH	(60°-80°)	345.1	2.1	B1/500		G1/500
BVH	(80°-90°)	7.5	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	4231.2	4231.2	4231.2	4231.2	4231.2	4231.2	4231.2	4231.2	4231.2	4231.2	4231.2
2.5°	4782.8	4775.2	4743.7	4737.3	4702.0	4631.3	4549.3	4516.4	4449.5	4343.5	4226.1
5°	4862.3	4866.1	4868.6	4854.7	4849.7	4791.6	4700.7	4661.6	4572.0	4397.8	4183.2
7.5°	4564.4	4574.5	4606.1	4620.0	4680.5	4703.3	4684.3	4659.1	4588.4	4382.6	4081.0
10°	4250.1	4269.0	4303.1	4325.8	4400.3	4460.9	4537.9	4544.2	4529.1	4332.2	3966.1
12.5°	3980.0	3997.7	4035.5	4081.0	4156.7	4235.0	4349.8	4390.2	4440.7	4299.3	3884.0
15°	3747.7	3752.8	3789.4	3846.2	3945.9	4053.2	4189.5	4248.8	4347.3	4286.7	3820.9
17.5°	3544.5	3545.8	3569.7	3621.5	3742.7	3884.0	4043.1	4121.4	4246.3	4269.0	3765.4
20°	3410.7	3409.4	3410.7	3438.5	3545.8	3713.6	3906.8	3988.8	4149.1	4247.6	3708.6
22.5°	3365.2	3358.9	3329.9	3319.8	3388.0	3535.7	3766.7	3873.9	4062.0	4241.3	3666.9
25°	3420.8	3417.0	3355.1	3297.1	3303.4	3395.5	3624.0	3755.3	3993.9	4264.0	3656.8
27.5°	3600.0	3592.5	3497.8	3384.2	3312.2	3328.6	3518.0	3655.6	3939.6	4319.5	3670.7
30°	3834.8	3836.1	3735.1	3597.5	3428.4	3335.0	3461.2	3591.2	3903.0	4402.8	3701.0
32.5°	4096.1	4094.8	4022.9	3863.8	3648.0	3451.1	3486.4	3596.2	3908.0	4525.3	3759.1
35°	4366.2	4352.4	4328.4	4188.3	3935.8	3654.3	3601.3	3682.1	3961.0	4686.9	3857.5
37.5°	4678.0	4673.0	4697.0	4549.3	4291.8	3953.5	3803.3	3857.5	4094.8	4925.4	4016.6
40°	5174.1	5146.3	5157.7	4957.0	4693.2	4356.1	4086.0	4099.9	4308.2	5241.0	4267.8
42.5°	6119.5	6007.2	5796.4	5420.2	5135.0	4803.0	4455.9	4431.9	4609.9	5623.5	4598.5
45°	7249.3	7120.5	6589.1	5931.5	5576.8	5282.7	4912.8	4848.4	4981.0	6079.2	5025.1
47.5°	8192.2	8053.4	7349.0	6465.4	6026.1	5777.5	5419.0	5343.2	5425.3	6608.1	5537.6
50°	8514.1	8437.1	7818.6	6909.7	6479.3	6332.9	6053.9	5927.7	5947.9	7178.6	6136.0
52.5°	8366.4	8339.9	7925.9	7213.9	6898.4	6946.3	6749.4	6616.9	6594.2	7802.2	6797.4
55°	8054.6	8042.0	7840.0	7383.1	7268.2	7508.1	7725.2	7610.3	7395.7	8464.9	7344.0
57.5°	7609.0	7657.0	7802.2	7708.8	7722.6	8101.3	8631.5	8690.8	8370.2	8992.5	7749.2
60°	6418.7	6547.5	7212.7	8058.4	8706.0	9088.4	9602.2	9713.3	9195.7	9353.5	8217.5
62.5°	4744.9	4929.2	5877.2	7431.1	9247.5	10965.5	10893.5	10844.3	9983.4	9837.0	9069.5
65°	2787.1	3003.0	3804.5	5806.5	8430.8	12172.2	13304.5	12622.8	11183.8	10841.8	10426.5
67.5°	1388.5	1389.8	1752.0	3064.8	6230.6	11330.3	16823.7	16429.9	13736.2	12322.4	10961.7
70°	1067.9	1096.9	1296.4	1781.1	3150.7	8824.6	17630.3	19247.3	16301.1	12256.8	9300.5
72.5°	905.1	924.0	1153.7	1550.1	2355.4	4844.6	15262.3	17013.1	15555.1	10355.8	6855.5
75°	651.3	666.5	1021.2	1406.2	2168.6	2403.4	10469.4	12617.8	11671.1	7284.6	3773.0
77.5°	161.6	160.3	356.0	1141.1	1940.1	2002.0	6007.2	8091.2	6696.4	2982.8	969.4
80°	72.0	69.4	80.8	239.8	1805.1	1889.6	2642.0	4086.0	2568.7	483.5	296.6
82.5°	50.5	48.0	50.5	88.4	603.4	1753.3	1596.8	1771.0	940.4	165.4	126.2
85°	16.4	15.1	27.8	74.5	169.1	1011.1	1557.7	1322.9	699.3	70.7	84.6
87.5°	2.5	2.5	10.1	40.4	49.2	337.0	913.9	916.4	314.3	41.7	37.9
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°	4231.2	4231.2	4231.2	4231.2	4231.2	4231.2	4231.2	4231.2	4231.2	4231.2	4231.2
2.5°	4166.8	4092.3	3987.6	3882.8	3788.1	3690.9	3612.7	3576.0	3559.6	3536.9	3487.7
5°	4070.9	3935.8	3706.1	3480.1	3269.3	3067.3	2894.4	2796.0	2689.9	2684.9	2633.1
7.5°	3916.9	3725.0	3362.7	3011.8	2689.9	2381.9	2116.8	1945.2	1827.8	1754.6	1704.1
10°	3745.2	3499.0	3019.4	2525.8	2087.8	1676.3	1335.5	1113.3	978.3	910.1	871.0
12.5°	3608.9	3299.6	2681.1	2060.0	1511.0	1038.9	722.0	560.5	488.5	460.7	448.1
15°	3491.5	3116.6	2364.3	1643.5	1008.6	597.1	417.8	364.8	353.4	353.4	352.2
17.5°	3372.8	2939.9	2056.3	1234.5	634.9	391.3	329.5	321.9	323.1	326.9	326.9
20°	3260.5	2772.0	1759.6	879.8	416.6	313.0	299.2	296.6	300.4	305.5	304.2
22.5°	3169.6	2624.3	1481.9	604.6	320.6	284.0	275.2	271.4	273.9	277.7	276.4
25°	3105.2	2498.1	1226.9	421.6	279.0	258.8	248.7	243.6	241.1	243.6	242.4
27.5°	3066.1	2392.0	987.1	316.8	249.9	233.5	220.9	210.8	204.5	204.5	202.0
30°	3040.8	2292.3	773.8	262.6	225.9	208.3	190.6	176.7	166.6	164.1	162.8
32.5°	3039.6	2206.5	578.1	232.3	203.2	183.0	161.6	143.9	132.5	130.0	128.8
35°	3071.1	2137.0	425.4	209.5	183.0	159.0	135.1	116.1	106.0	106.0	104.8
37.5°	3153.2	2096.7	321.9	191.9	166.6	138.9	113.6	95.9	87.1	89.6	89.6
40°	3305.9	2089.1	262.6	178.0	152.7	121.2	92.1	78.3	74.5	78.3	78.3
42.5°	3539.4	2129.5	233.5	167.9	140.1	103.5	77.0	66.9	65.6	69.4	69.4
45°	3843.7	2209.0	217.1	159.0	126.2	85.8	64.4	58.1	56.8	61.9	61.9
47.5°	4212.2	2316.3	202.0	148.9	112.3	70.7	54.3	49.2	49.2	54.3	55.5
50°	4649.0	2461.5	186.8	138.9	101.0	59.3	45.4	41.7	42.9	48.0	49.2
52.5°	5151.4	2639.4	172.9	130.0	88.4	48.0	37.9	35.3	36.6	41.7	42.9
55°	5584.3	2794.7	156.5	121.2	72.0	39.1	31.6	30.3	31.6	37.9	37.9
57.5°	5961.8	2943.6	141.4	107.3	56.8	31.6	25.2	25.2	27.8	34.1	35.3
60°	6462.9	3178.4	128.8	90.9	42.9	24.0	20.2	21.5	25.2	30.3	31.6
62.5°	7350.3	3577.3	112.3	75.7	31.6	18.9	16.4	17.7	22.7	29.0	30.3
65°	8461.1	3954.7	93.4	63.1	24.0	13.9	12.6	16.4	22.7	29.0	30.3
67.5°	8347.5	3439.7	73.2	50.5	17.7	11.4	10.1	15.1	21.5	29.0	30.3
70°	6769.6	2411.0	54.3	34.1	13.9	10.1	10.1	15.1	21.5	27.8	29.0
72.5°	4695.7	1341.8	41.7	22.7	12.6	10.1	8.8	13.9	20.2	27.8	29.0
75°	2234.2	411.5	32.8	16.4	11.4	8.8	7.6	13.9	20.2	27.8	29.0
77.5°	429.2	104.8	26.5	13.9	10.1	8.8	7.6	12.6	20.2	26.5	27.8
80°	145.2	46.7	21.5	12.6	10.1	8.8	7.6	12.6	18.9	25.2	26.5
82.5°	79.5	26.5	18.9	11.4	10.1	7.6	6.3	11.4	17.7	25.2	26.5
85°	61.9	18.9	15.1	11.4	10.1	7.6	6.3	11.4	17.7	24.0	25.2
87.5°	31.6	13.9	12.6	11.4	10.1	7.6	6.3	10.1	16.4	22.7	25.2
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)