

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: P195829

Luminaire Tested: **NAV-AF-01-D-UNV-T3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195829
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-01-D-UNV-T3-7050
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6111 lumens
Efficiency: N/A
Efficacy: 103.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

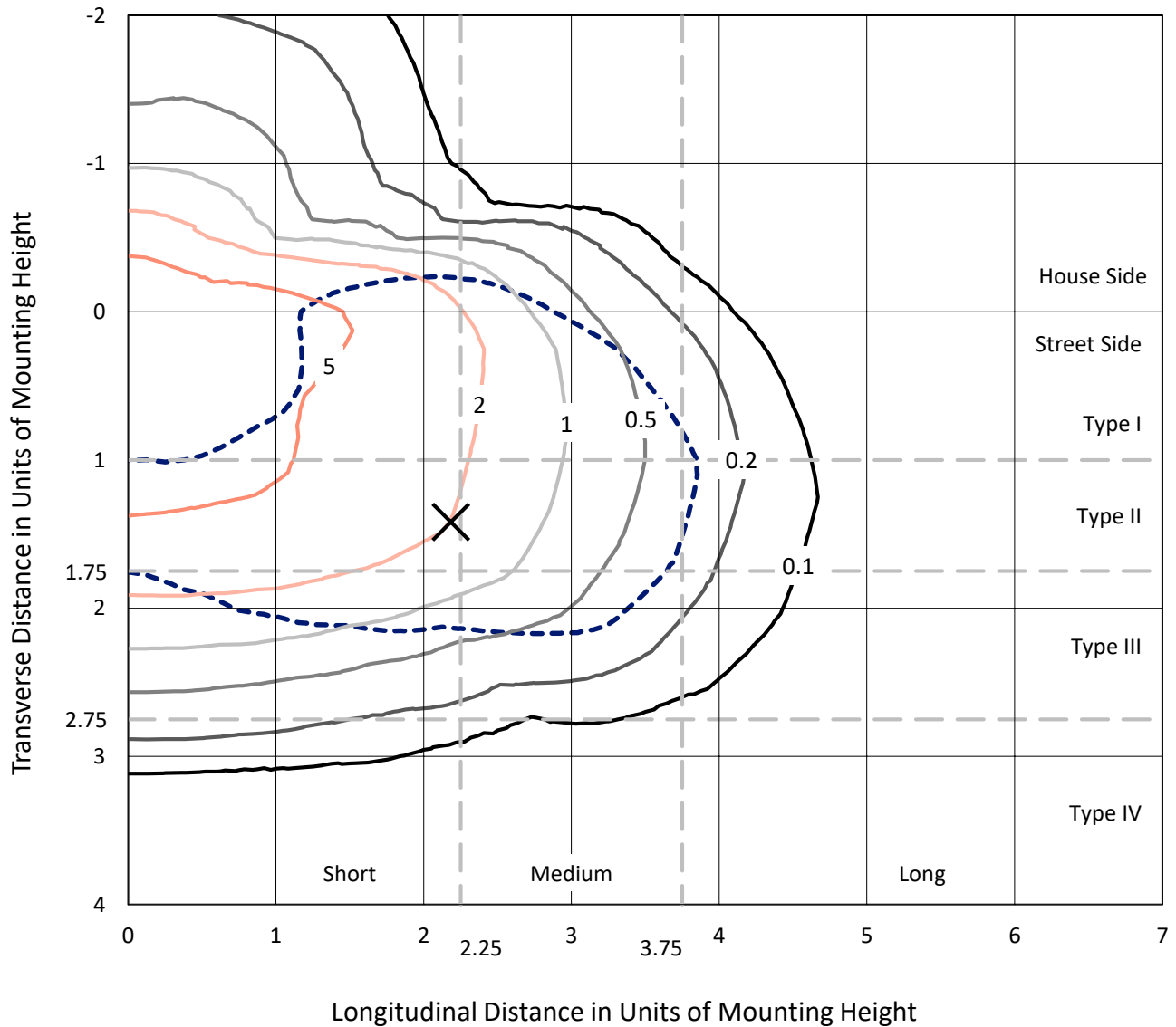
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

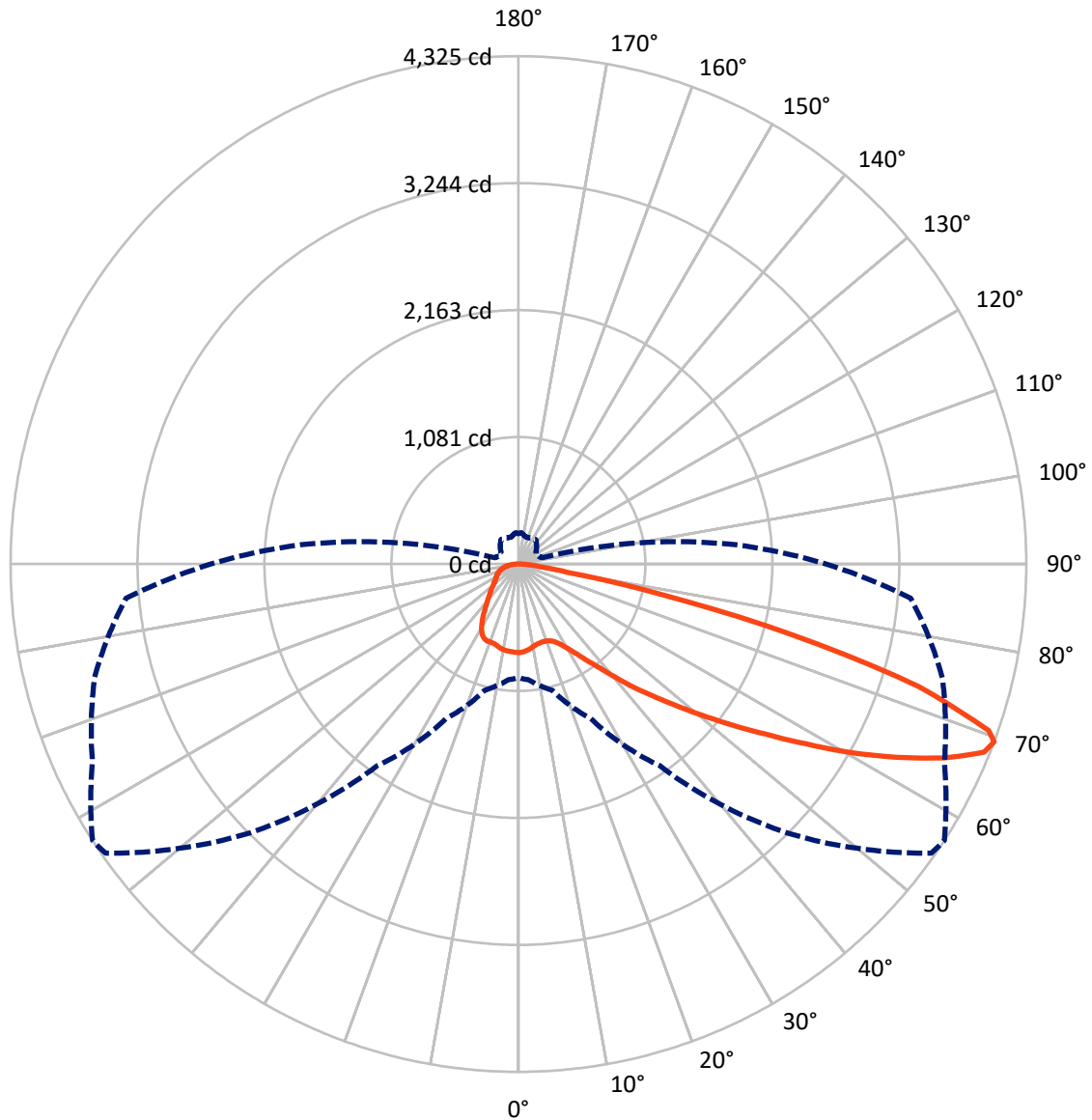
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.7 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1348.5	0.0	1348.5
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	4762.5	0.0	4762.5
	% Fixture	77.9	0.0	77.9
Total	Lumens	6111.0	0.0	6111.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.7	1.2
10°-20°	201.0	3.3
20°-30°	334.3	5.5
30°-40°	546.0	8.9
40°-50°	921.5	15.1
50°-60°	1433.4	23.5
60°-70°	1707.5	27.9
70°-80°	795.5	13.0
80°-90°	101.2	1.7
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°	6111.0	100.0
0°-180°	6111.0	100.0



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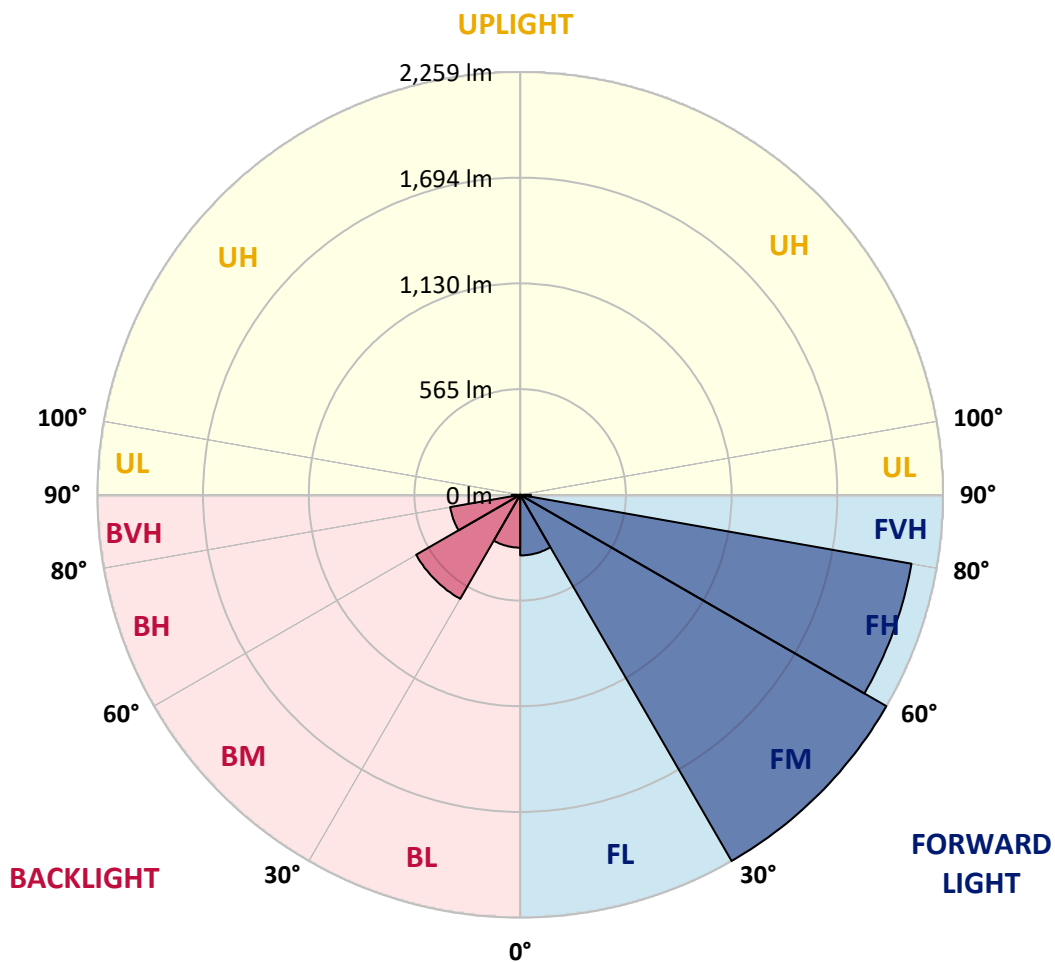
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	323.6	5.3			
FM	(30°-60°)	2259.0	37.0			
FH	(60°-80°)	2123.0	34.7			G2/5000
FVH	(80°-90°)	56.9	0.9			G1/100
BL	(0°-30°)	282.4	4.6	B1/500		
BM	(30°-60°)	641.8	10.5	B1/1000		
BH	(60°-80°)	380.0	6.2	B1/500		G1/500
BVH	(80°-90°)	44.3	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1
2.5°	750.8	750.8	752.7	752.7	752.7	751.9	749.6	750.4	748.8	747.6	745.7
5°	735.5	736.3	738.6	739.4	740.6	741.0	741.0	740.6	741.0	741.0	739.8
7.5°	714.4	715.2	717.9	719.5	723.0	726.1	727.7	727.7	729.6	731.2	731.6
10°	701.5	701.5	703.0	703.0	705.8	707.3	712.4	712.0	717.5	722.6	724.9
12.5°	699.9	699.9	699.1	696.4	694.8	694.4	699.5	700.3	708.5	717.5	721.8
15°	705.0	705.0	702.6	697.2	691.3	688.6	693.7	695.2	704.2	714.8	721.4
17.5°	721.4	721.0	716.0	705.0	694.8	690.5	692.1	693.7	701.9	714.0	722.2
20°	757.8	757.8	746.9	726.9	709.3	699.1	696.8	698.0	703.8	715.2	725.7
22.5°	821.6	822.8	803.2	770.3	740.2	718.7	709.3	710.5	713.2	724.2	735.9
25°	915.5	912.3	884.6	838.0	791.1	754.3	735.1	736.3	736.3	746.5	758.6
27.5°	1014.9	1015.6	975.7	925.6	863.8	809.1	778.5	778.2	777.8	787.5	800.5
30°	1127.1	1127.5	1081.4	1023.5	952.6	882.6	836.8	836.4	832.9	845.1	861.9
32.5°	1250.0	1249.6	1196.0	1130.7	1052.0	972.6	913.1	912.7	910.0	926.4	946.8
35°	1386.1	1386.1	1332.9	1252.3	1167.4	1079.0	1010.2	1009.8	1011.3	1033.6	1052.8
37.5°	1550.1	1553.6	1489.4	1391.6	1298.9	1204.6	1124.4	1122.0	1110.3	1147.9	1179.6
40°	1721.0	1730.8	1664.3	1550.1	1449.9	1352.5	1264.1	1262.5	1252.3	1292.2	1343.5
42.5°	1906.1	1928.4	1854.4	1737.8	1628.7	1523.4	1434.6	1430.3	1391.2	1453.4	1533.6
45°	2148.6	2163.1	2055.9	1950.3	1847.4	1727.3	1621.6	1598.6	1559.4	1639.3	1743.3
47.5°	2313.7	2306.7	2239.8	2169.0	2102.9	1987.8	1825.5	1796.1	1748.4	1854.0	1968.7
50°	2416.2	2421.3	2383.8	2380.2	2376.7	2296.5	2055.5	2020.3	1965.1	2090.3	2224.1
52.5°	2483.9	2460.8	2467.5	2547.3	2643.9	2605.6	2315.7	2276.6	2219.8	2345.0	2496.0
55°	2455.7	2425.2	2486.7	2643.9	2871.2	2879.8	2601.3	2561.0	2512.5	2615.8	2823.1
57.5°	2339.2	2354.4	2451.4	2670.1	3026.6	3125.5	2929.5	2888.5	2793.0	2897.8	3133.8
60°	2175.2	2206.1	2354.4	2628.7	3135.3	3316.8	3289.9	3262.5	3098.1	3172.5	3460.0
62.5°	1999.2	2029.7	2212.0	2557.9	3086.4	3486.2	3643.5	3626.7	3435.0	3437.0	3667.0
65°	1739.0	1751.5	1937.8	2364.6	2950.7	3639.2	3997.6	3982.7	3757.0	3662.7	3724.9
67.5°	1313.4	1329.0	1482.0	1866.6	2537.5	3556.3	4280.4	4278.1	3950.6	3746.4	3587.2
69°	969.9	989.0	1113.8	1449.1	2098.2	3240.2	4293.7	4325.4	4003.1	3737.8	3354.4
70°	709.7	731.6	847.0	1150.2	1747.6	2891.2	4179.9	4248.0	3983.1	3683.4	3172.9
72.5°	301.6	309.1	365.8	519.2	886.5	1743.3	3423.7	3566.8	3597.4	3300.4	2478.8
75°	189.0	191.3	213.6	266.4	394.4	721.0	2217.1	2412.3	2685.8	2560.6	1659.6
77.5°	142.4	144.4	157.3	183.5	244.9	269.2	1028.5	1226.5	1538.3	1506.2	825.9
80°	109.2	110.3	118.9	133.4	172.5	168.6	333.7	419.4	642.0	566.5	292.2
82.5°	85.7	86.1	93.5	96.2	120.5	113.5	167.4	186.6	259.4	215.6	142.8
85°	75.9	77.1	84.5	70.4	77.1	68.5	91.9	99.8	137.7	129.9	54.0
87.5°	38.7	40.7	70.8	60.2	38.7	32.5	40.3	43.4	55.9	60.6	26.2
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°	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1
2.5°	746.1	746.5	747.6	749.6	752.7	756.6	761.3	766.0	768.8	770.7	769.9
5°	739.8	740.2	742.6	746.1	750.0	755.9	763.7	769.5	773.9	776.6	776.2
7.5°	732.0	733.2	737.9	741.8	747.2	751.9	758.2	763.7	768.0	770.7	770.3
10°	726.1	727.3	733.2	738.3	742.9	743.7	742.6	741.0	740.6	742.6	741.8
12.5°	723.4	725.7	731.2	734.7	732.8	725.3	716.7	713.2	712.0	716.0	716.3
15°	724.2	726.1	730.8	728.5	717.9	705.4	700.7	703.4	705.8	708.1	708.5
17.5°	726.1	727.3	728.5	719.9	705.0	696.8	695.2	692.5	685.4	681.5	681.1
20°	729.6	731.2	729.3	715.6	702.3	691.3	672.5	655.7	639.7	631.1	627.5
22.5°	741.8	742.9	737.1	723.8	703.4	667.8	629.9	600.9	576.3	563.0	557.9
25°	765.6	767.6	759.4	742.6	689.3	627.1	573.5	534.4	503.5	487.5	483.2
27.5°	807.5	809.5	800.5	756.6	656.5	572.8	507.8	469.1	442.5	428.8	426.8
30°	870.1	872.8	864.6	756.2	606.4	503.5	443.7	421.0	405.7	396.3	395.9
32.5°	956.9	967.1	933.5	742.9	544.6	433.5	395.1	387.3	379.9	373.6	373.6
35°	1067.3	1091.1	1001.5	715.2	476.5	385.8	368.1	360.7	351.3	344.7	343.9
37.5°	1199.1	1236.3	1050.1	665.9	417.8	362.7	351.7	339.6	324.7	311.8	308.7
40°	1380.3	1388.9	1073.9	585.7	374.0	350.2	336.5	321.2	302.4	287.9	286.4
42.5°	1562.2	1534.0	1069.2	499.6	349.0	338.8	320.8	304.0	287.2	275.0	275.0
45°	1769.1	1660.8	1033.6	413.1	326.3	325.9	306.3	290.3	277.4	268.4	266.4
47.5°	1967.1	1774.6	972.2	349.4	302.8	313.0	296.9	284.0	272.3	263.7	262.1
50°	2207.3	1906.5	906.9	304.8	280.1	301.6	293.0	286.4	275.0	260.2	258.6
52.5°	2446.0	2060.6	856.4	271.1	260.2	292.6	295.4	296.2	285.6	256.6	254.7
55°	2702.2	2225.3	803.2	244.9	243.7	288.3	300.9	300.1	295.0	257.4	254.3
57.5°	2946.0	2390.8	723.8	226.5	230.8	284.0	302.0	289.5	280.5	261.3	256.3
60°	3147.8	2527.7	607.2	213.6	219.9	275.4	294.2	275.4	260.2	260.6	255.9
62.5°	3246.0	2566.1	464.4	198.7	210.9	261.3	282.9	264.9	250.8	262.1	259.4
65°	3171.3	2456.9	331.0	185.1	199.9	244.9	276.2	255.9	246.1	269.9	266.8
67.5°	2902.9	2159.6	240.2	172.9	189.4	228.1	263.7	247.6	241.4	275.8	268.8
69°	2617.7	1864.6	208.1	165.9	181.9	219.1	255.5	243.3	237.9	267.6	257.4
70°	2380.6	1637.3	192.1	161.6	175.7	214.0	249.2	240.6	234.3	257.8	245.7
72.5°	1706.9	1058.3	161.6	148.7	159.2	202.7	235.5	230.4	221.0	232.8	225.0
75°	1031.3	552.4	137.3	135.4	142.0	187.0	219.5	213.2	203.8	205.0	201.1
77.5°	473.8	255.1	115.0	119.7	124.0	167.4	199.9	192.9	184.3	181.1	181.5
80°	207.7	149.1	96.2	102.1	104.5	150.6	178.8	171.0	161.6	178.4	165.5
82.5°	112.3	86.5	75.1	79.0	85.7	131.1	155.3	145.1	136.1	158.4	127.9
85°	45.4	44.2	50.9	54.8	59.5	94.3	129.9	119.3	108.4	97.0	94.7
87.5°	19.6	21.1	25.0	26.6	31.7	58.7	87.2	76.3	76.7	65.7	64.6
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)