

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: P195223

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7060-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195223
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)
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-SL4-7060-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5700K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4709 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 44
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

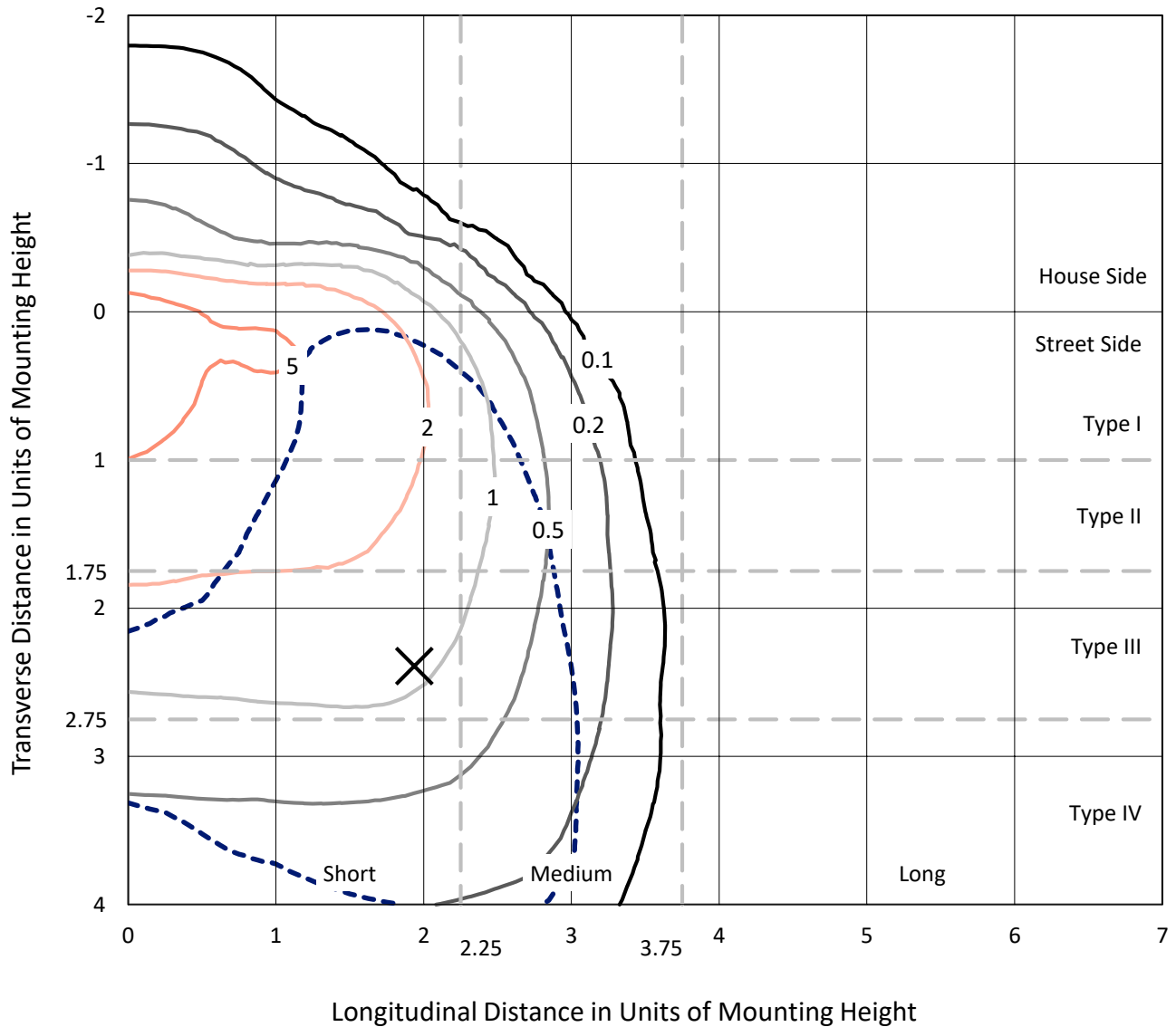


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Iso-Footcandle Lines of Horizontal Illumination

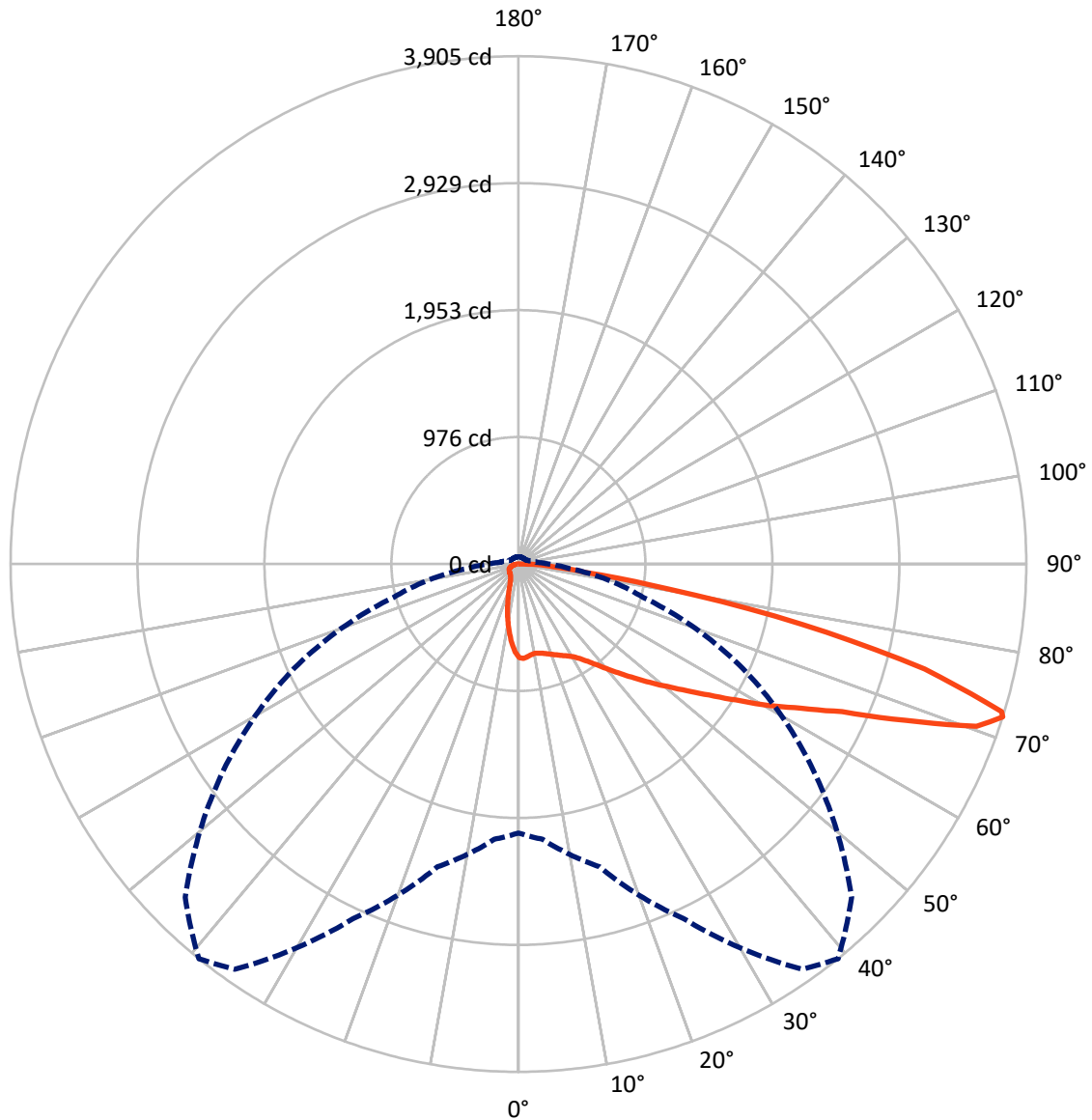
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.2 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	539.9	0.0	539.9
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	4169.1	0.0	4169.1
	% Fixture	88.5	0.0	88.5
Total	Lumens	4709.0	0.0	4709.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.8	1.3
10°-20°	155.3	3.3
20°-30°	242.0	5.1
30°-40°	372.6	7.9
40°-50°	607.4	12.9
50°-60°	943.9	20.0
60°-70°	1263.4	26.8
70°-80°	908.5	19.3
80°-90°	154.0	3.3
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°	4709.0	100.0
0°-180°	4709.0	100.0



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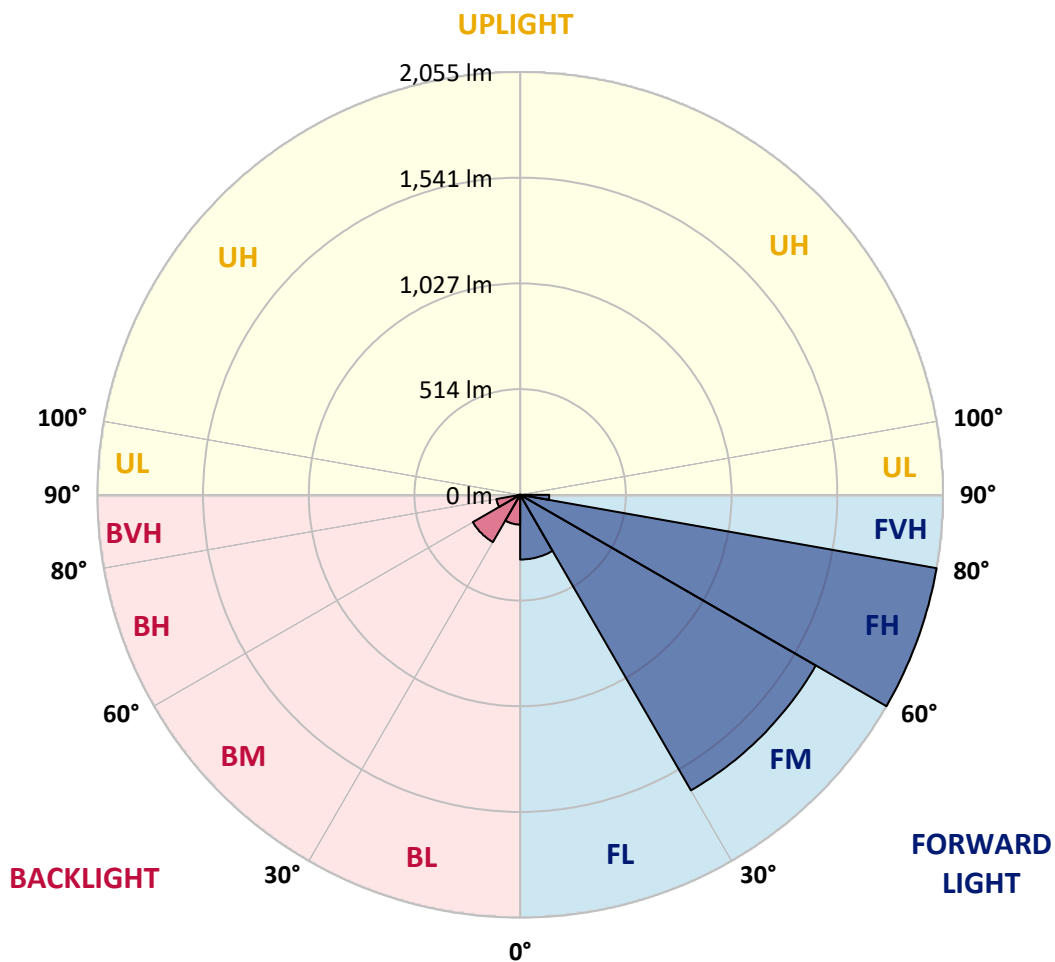
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	314.6	6.7			
FM	(30°-60°)	1658.6	35.2			
FH	(60°-80°)	2054.6	43.6			G2/5000
FVH	(80°-90°)	141.3	3.0			G2/225
BL	(0°-30°)	144.5	3.1	B1/500		
BM	(30°-60°)	265.4	5.6	B1/1000		
BH	(60°-80°)	117.3	2.5	B1/500		G1/500
BVH	(80°-90°)	12.7	0.3			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	719.1	719.1	719.1	719.1	719.1	719.1	719.1	719.1	719.1	719.1	719.1
2.5°	734.6	735.0	734.0	731.2	728.6	727.4	725.2	721.4	716.3	712.8	710.0
5°	727.7	728.6	728.0	723.3	718.8	716.3	712.8	707.5	700.8	698.0	691.3
7.5°	722.3	722.9	721.0	715.7	707.1	704.0	697.7	690.7	684.7	680.6	672.7
10°	718.5	719.1	717.6	712.2	702.7	698.9	691.3	683.7	675.8	670.8	661.9
12.5°	713.1	714.4	714.4	711.9	705.6	703.0	695.4	687.2	680.0	674.6	663.5
15°	712.2	713.8	716.6	716.3	714.4	712.5	706.5	698.3	692.0	685.6	672.0
17.5°	720.1	723.6	729.3	731.2	729.9	725.8	718.8	711.2	704.3	698.3	681.5
20°	740.0	741.9	750.4	754.2	747.9	741.9	732.7	722.9	716.6	711.9	690.4
22.5°	770.0	772.6	779.5	779.8	766.6	759.3	747.6	735.6	729.6	727.7	702.4
25°	818.1	817.5	819.4	811.5	787.4	778.9	764.7	750.8	746.7	750.4	720.1
27.5°	875.6	874.0	868.0	847.5	811.1	800.1	783.0	770.7	770.7	779.5	744.1
30°	942.0	940.4	920.8	886.4	839.3	826.6	808.6	795.6	802.3	819.4	776.7
32.5°	1012.2	1006.5	979.0	932.8	879.4	865.5	848.1	834.8	847.5	876.6	823.5
35°	1078.2	1075.1	1041.3	986.6	931.3	919.6	907.6	891.1	911.3	956.5	889.5
37.5°	1146.5	1144.0	1102.6	1044.4	994.5	986.6	976.5	965.1	997.6	1057.1	979.0
40°	1222.7	1217.7	1165.5	1107.3	1068.1	1064.3	1059.0	1055.8	1108.3	1196.8	1092.2
42.5°	1309.0	1299.2	1231.9	1176.6	1148.4	1151.6	1148.7	1161.4	1241.7	1358.0	1226.8
45°	1407.6	1388.0	1297.9	1250.2	1237.3	1249.9	1255.9	1288.1	1399.4	1544.2	1377.3
47.5°	1499.9	1474.7	1370.3	1330.2	1337.5	1359.3	1376.3	1433.2	1572.3	1728.2	1530.9
50°	1585.0	1556.5	1447.8	1413.0	1448.4	1479.4	1514.8	1595.1	1756.3	1917.5	1671.9
52.5°	1647.9	1627.3	1525.2	1503.4	1575.8	1616.9	1673.5	1775.0	1942.2	2098.0	1797.7
55°	1696.6	1685.5	1600.8	1607.1	1720.0	1778.7	1847.3	1964.0	2138.8	2259.9	1898.9
57.5°	1752.8	1744.6	1687.1	1732.3	1898.9	1972.8	2053.8	2183.4	2325.9	2402.4	1978.2
60°	1812.3	1812.3	1783.2	1883.1	2122.7	2207.4	2288.0	2388.8	2512.4	2530.8	2010.5
62.5°	1857.1	1868.8	1879.3	2043.6	2335.1	2440.4	2528.9	2625.6	2705.6	2594.0	1934.6
65°	1922.3	1947.2	2006.0	2229.2	2598.1	2735.9	2855.4	2936.7	2862.1	2543.7	1687.1
67.5°	2034.2	2071.1	2196.3	2505.5	3000.8	3207.2	3323.3	3182.9	2831.4	2227.3	1292.3
70°	2135.0	2187.2	2401.2	2856.0	3524.3	3738.6	3685.2	3125.7	2466.0	1632.7	795.0
72°	2068.0	2124.9	2410.7	3008.7	3804.1	3905.2	3623.6	2770.1	1905.5	996.4	392.0
72.5°	2024.0	2083.2	2380.0	3004.9	3811.6	3884.0	3537.9	2628.8	1729.8	871.8	317.1
75°	1690.9	1741.4	2046.5	2663.2	3359.0	3226.2	2760.9	1701.3	795.0	281.7	163.1
77.5°	1104.2	1142.7	1411.1	1845.1	2352.8	2225.1	1680.4	796.6	298.1	171.0	122.7
80°	554.8	582.3	755.2	970.1	1269.8	1168.3	775.7	385.3	199.5	123.6	96.4
82.5°	386.0	411.3	520.0	495.3	530.7	513.7	364.8	321.5	149.2	78.1	50.6
85°	323.7	349.9	430.2	353.1	288.9	263.3	261.4	303.8	98.6	38.6	42.7
87.5°	282.3	322.1	355.0	257.9	198.2	174.8	192.5	278.5	31.3	21.2	13.0
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°	719.1	719.1	719.1	719.1	719.1	719.1	719.1	719.1	719.1	719.1	719.1
2.5°	705.2	704.3	699.6	692.3	686.9	683.4	676.8	676.5	677.1	671.4	673.6
5°	685.3	681.5	669.2	652.4	638.9	625.9	611.7	606.9	602.8	594.3	595.2
7.5°	664.5	657.8	636.3	608.8	582.6	558.6	534.9	523.2	514.3	503.2	503.2
10°	652.1	641.7	608.8	568.7	527.0	491.9	456.5	435.3	419.8	405.6	404.6
12.5°	651.5	635.7	589.9	534.5	477.3	428.0	379.6	347.1	324.0	307.3	305.7
15°	656.6	634.4	574.1	502.6	430.5	366.4	306.6	265.2	235.8	217.2	215.3
17.5°	661.0	632.9	557.0	469.1	385.0	306.9	240.6	197.6	169.8	154.6	153.0
20°	665.1	629.4	535.2	433.7	334.8	251.3	188.1	153.3	135.0	126.4	125.5
22.5°	671.1	626.2	512.4	393.9	285.4	204.5	155.2	130.2	120.4	116.3	115.7
25°	680.9	626.5	490.3	353.1	240.2	170.4	134.3	118.9	113.5	110.6	110.6
27.5°	695.1	630.3	468.5	311.7	202.0	147.0	122.0	112.9	109.4	107.2	106.5
30°	716.0	637.3	445.4	272.5	171.6	130.9	114.7	109.1	106.2	104.3	104.0
32.5°	746.3	649.6	421.1	236.8	148.6	119.5	109.4	105.9	103.7	102.1	101.8
35°	791.5	671.4	397.3	206.4	132.1	111.3	104.9	102.1	100.8	100.2	99.9
37.5°	857.9	706.5	374.9	182.7	121.4	105.9	100.5	98.9	98.3	98.3	98.3
40°	941.4	752.7	354.7	166.0	115.4	101.8	97.4	96.1	96.1	96.4	96.4
42.5°	1042.8	810.5	337.3	154.6	111.9	98.9	95.1	94.5	94.2	94.2	94.5
45°	1160.8	878.8	326.5	145.7	109.4	97.4	93.6	93.3	92.0	91.4	91.4
47.5°	1279.3	951.8	325.9	140.7	106.2	95.5	92.0	92.0	89.5	88.2	88.5
50°	1389.9	1017.2	332.9	139.4	104.3	92.6	90.4	90.7	87.2	85.7	85.3
52.5°	1479.1	1067.2	341.4	141.0	104.3	90.1	87.6	89.1	85.3	83.5	83.1
55°	1548.0	1102.0	344.6	144.5	105.6	87.9	85.0	87.6	84.7	82.2	82.2
57.5°	1597.3	1113.0	331.0	146.0	107.5	87.6	82.5	87.2	85.7	82.5	82.5
60°	1579.3	1048.9	280.4	140.0	107.2	86.9	80.6	87.9	88.8	85.3	85.3
62.5°	1438.6	877.5	225.1	126.4	101.8	84.7	78.4	87.2	91.0	89.8	89.1
65°	1171.2	643.6	174.5	110.3	92.6	80.0	73.7	81.6	86.0	87.2	87.6
67.5°	825.4	407.5	135.6	93.9	81.2	73.0	68.3	72.1	73.7	74.3	75.6
70°	451.4	220.6	107.8	79.0	69.5	66.1	62.6	62.9	62.3	61.6	62.3
72°	226.7	144.1	91.0	68.6	61.6	59.4	57.8	56.9	56.9	56.0	56.3
72.5°	195.0	134.0	87.9	66.1	59.7	57.8	56.6	55.6	55.3	54.7	55.0
75°	129.9	106.2	73.3	55.3	50.9	49.6	50.3	49.3	49.6	49.0	49.3
77.5°	104.9	91.4	62.3	46.8	43.6	41.7	43.0	43.3	43.9	43.3	43.0
80°	87.9	77.8	52.2	38.6	36.4	34.8	35.4	37.6	37.9	36.0	35.7
82.5°	56.9	62.6	41.1	30.0	27.8	27.2	28.8	31.0	31.6	29.1	28.4
85°	47.7	50.3	29.7	20.5	18.3	17.7	20.9	23.1	24.7	22.1	21.5
87.5°	13.3	24.7	14.5	9.8	8.2	8.2	10.1	12.0	14.2	14.5	14.5
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)