

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: P196105

Luminaire Tested: **NAV-AF-01-D-UNV-SL3-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196105
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-01-D-UNV-SL3-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 615mA LIGHTSQUARE 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: 3495.4 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B0 - U0 - G1

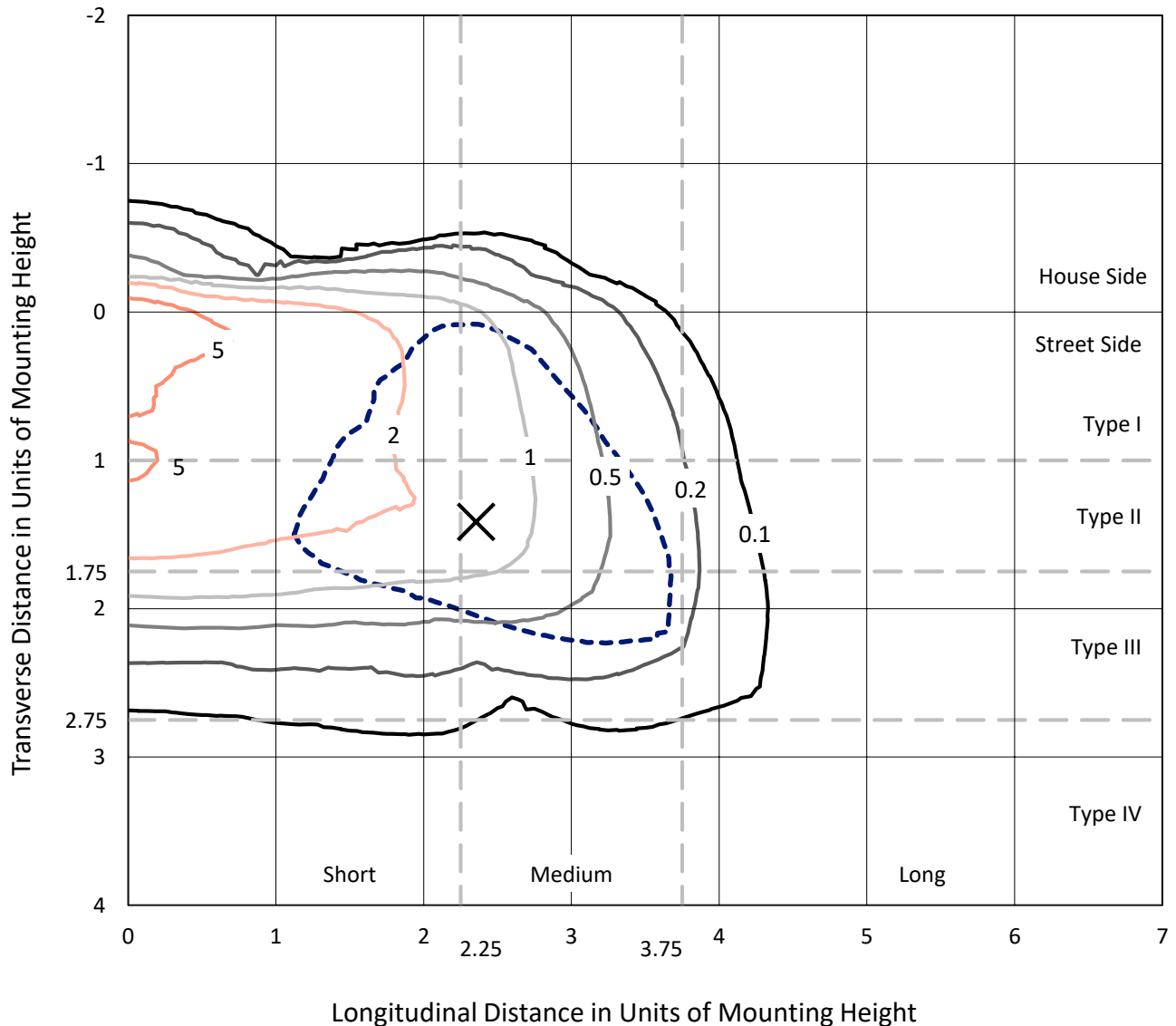
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

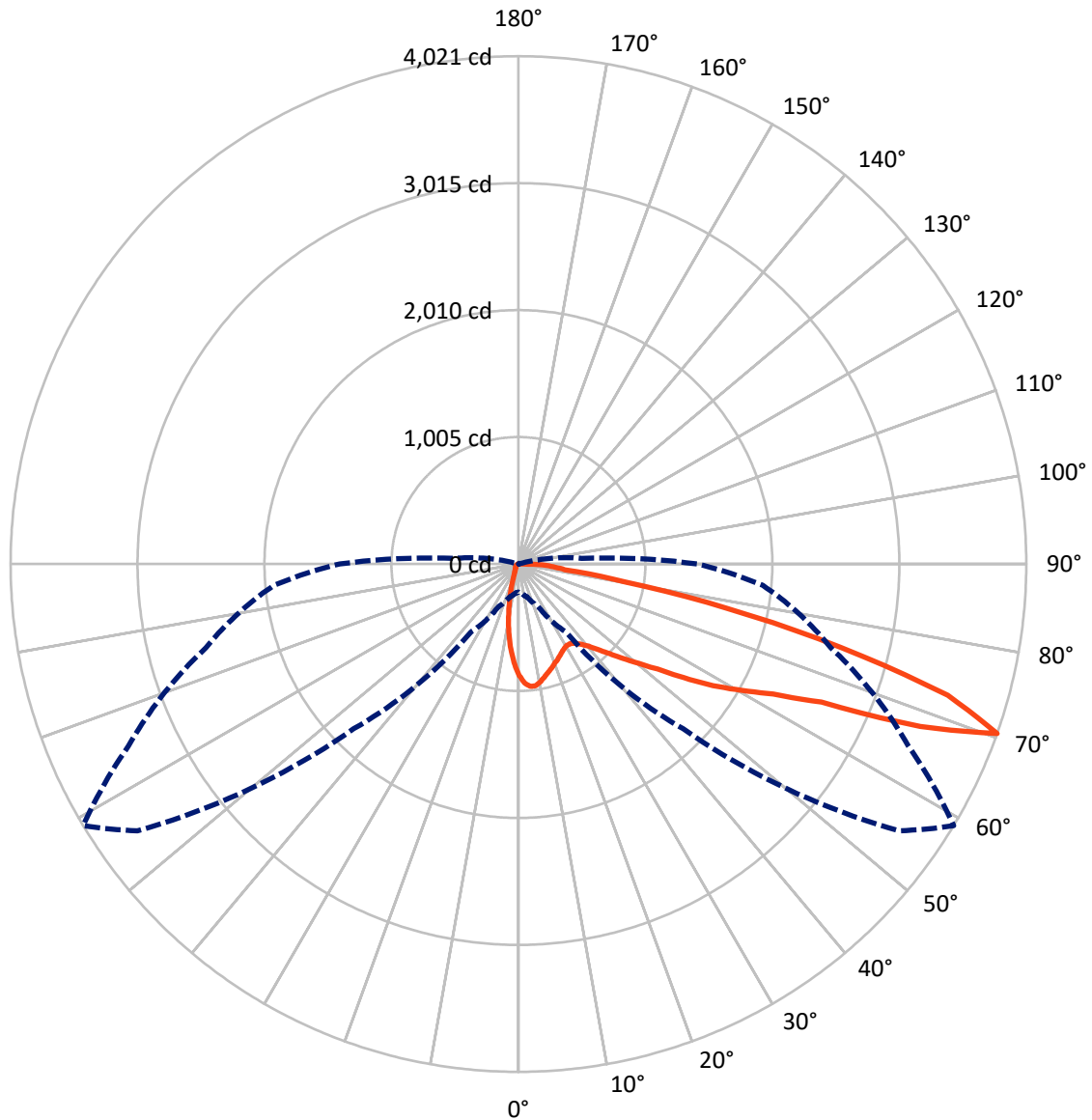
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.4 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	268.7	0.0	268.7
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	3226.7	0.0	3226.7
	% Fixture	92.3	0.0	92.3
Total	Lumens	3495.4	0.0	3495.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.7	2.1
10°-20°	152.4	4.4
20°-30°	206.4	5.9
30°-40°	297.8	8.5
40°-50°	494.6	14.1
50°-60°	756.5	21.6
60°-70°	940.9	26.9
70°-80°	520.1	14.9
80°-90°	53.9	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°	3495.4	100.0
0°-180°	3495.4	100.0



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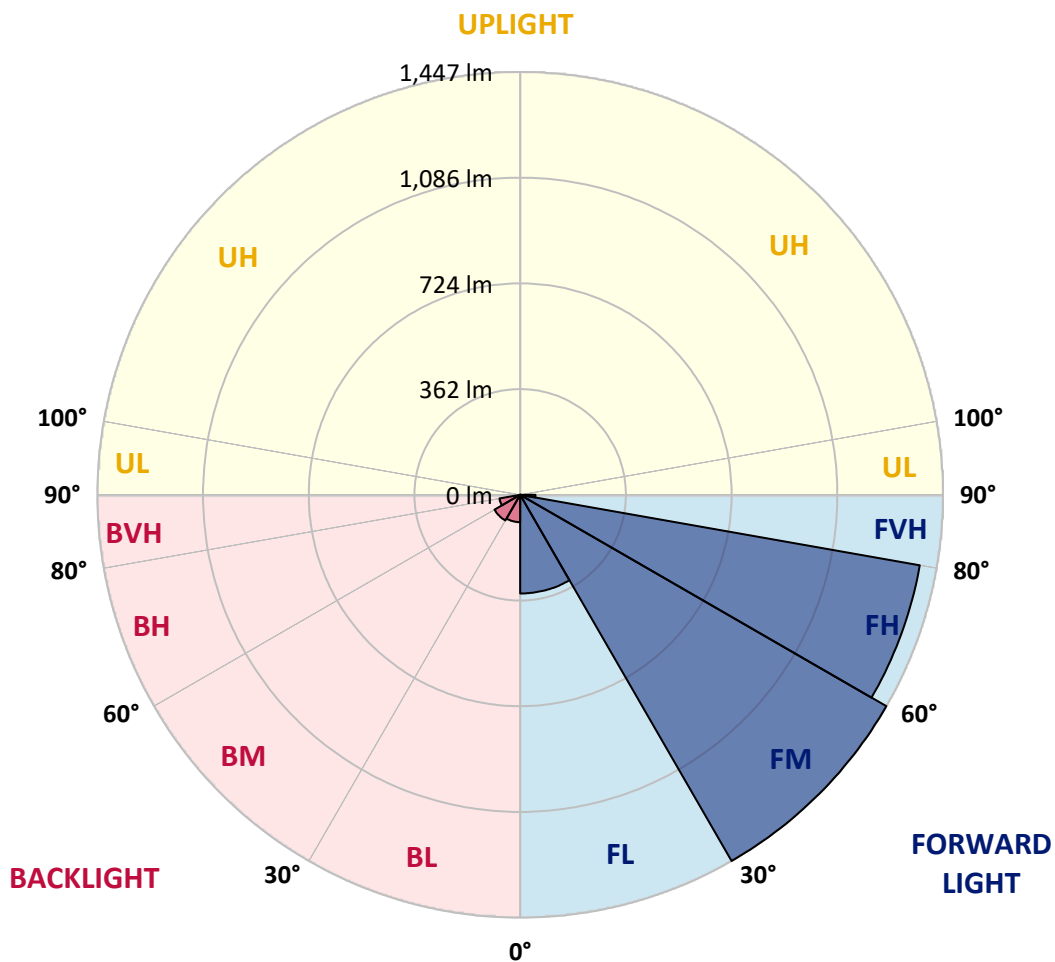
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	337.8	9.7			
FM	(30°-60°)	1447.5	41.4			
FH	(60°-80°)	1389.0	39.7			G1/1800
FVH	(80°-90°)	52.4	1.5			G1/100
BL	(0°-30°)	93.6	2.7	B0/110		
BM	(30°-60°)	101.4	2.9	B0/220		
BH	(60°-80°)	72.1	2.1	B0/110		G0/110
BVH	(80°-90°)	1.6	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	883.8	883.8	883.8	883.8	883.8	883.8	883.8	883.8	883.8	883.8	883.8
2.5°	999.1	997.5	990.9	989.6	982.2	967.4	950.3	943.5	929.5	907.4	882.8
5°	1015.7	1016.5	1017.0	1014.2	1013.0	1001.0	981.9	973.7	955.0	918.7	873.8
7.5°	953.5	955.5	962.2	965.1	977.7	982.4	978.6	973.2	958.5	915.5	852.5
10°	887.8	891.8	898.9	903.7	919.2	931.9	948.0	949.3	946.1	905.0	828.5
12.5°	831.4	835.0	843.0	852.5	868.3	884.6	908.7	917.1	927.6	898.2	811.4
15°	782.9	783.9	791.6	803.4	824.3	846.7	875.1	887.5	908.2	895.5	798.2
17.5°	740.4	740.7	745.7	756.5	781.8	811.4	844.5	860.9	887.0	891.8	786.5
20°	712.5	712.2	712.5	718.3	740.7	775.8	816.1	833.2	866.7	887.3	774.7
22.5°	703.0	701.6	695.6	693.5	707.7	738.6	786.9	809.3	848.5	886.0	766.0
25°	714.5	713.8	700.8	688.8	690.1	709.3	757.1	784.5	834.3	890.7	763.9
27.5°	752.1	750.4	730.7	707.0	691.9	695.3	734.9	763.6	823.0	902.3	766.8
30°	801.1	801.4	780.2	751.5	716.2	696.6	723.0	750.1	815.3	919.7	773.1
32.5°	855.7	855.4	840.4	807.1	762.0	720.9	728.3	751.3	816.3	945.3	785.2
35°	912.1	909.2	904.2	874.9	822.1	763.3	752.3	769.2	827.5	979.1	805.8
37.5°	977.2	976.2	981.2	950.3	896.5	825.8	794.5	805.8	855.4	1028.9	839.0
40°	1080.8	1075.0	1077.4	1035.5	980.4	910.0	853.6	856.4	900.0	1094.9	891.5
42.5°	1278.4	1254.9	1210.9	1132.3	1072.7	1003.3	930.8	925.8	963.0	1174.8	960.6
45°	1514.4	1487.5	1376.4	1239.0	1164.9	1103.6	1026.2	1012.8	1040.5	1269.9	1049.8
47.5°	1711.3	1682.3	1535.1	1350.6	1258.8	1206.9	1132.0	1116.1	1133.3	1380.4	1156.8
50°	1778.5	1762.4	1633.2	1443.4	1353.5	1322.9	1264.7	1238.3	1242.5	1499.5	1281.8
52.5°	1747.7	1742.2	1655.6	1506.9	1441.0	1451.1	1409.9	1382.2	1377.5	1629.9	1420.0
55°	1682.5	1679.9	1637.7	1542.3	1518.3	1568.4	1613.7	1589.8	1545.0	1768.3	1534.1
57.5°	1589.5	1599.5	1629.9	1610.3	1613.2	1692.4	1803.1	1815.4	1748.5	1878.4	1618.7
60°	1340.8	1367.7	1506.7	1683.4	1818.6	1898.5	2005.8	2029.0	1920.9	1953.9	1716.6
62.5°	991.1	1029.7	1227.7	1552.3	1931.7	2290.6	2275.6	2265.3	2085.5	2054.9	1894.6
65°	582.3	627.3	794.7	1212.9	1761.1	2542.7	2779.3	2636.9	2336.2	2264.8	2178.1
67.5°	290.0	290.3	366.0	640.3	1301.5	2366.8	3514.3	3432.1	2869.4	2574.1	2289.9
70°	223.1	229.1	270.8	372.0	658.2	1843.5	3682.8	4020.6	3405.2	2560.3	1942.8
72.5°	189.0	193.0	241.0	323.8	492.0	1012.0	3188.2	3553.9	3249.4	2163.2	1432.0
75°	136.1	139.2	213.3	293.8	453.0	502.1	2187.0	2635.7	2438.0	1521.7	788.2
77.5°	33.8	33.5	74.4	238.3	405.3	418.2	1254.9	1690.2	1398.9	623.1	202.5
80°	15.0	14.5	16.9	50.1	377.1	394.8	551.9	853.6	536.6	101.0	62.0
82.5°	10.5	10.0	10.5	18.4	126.0	366.2	333.6	369.9	196.4	34.6	26.4
85°	3.5	3.2	5.8	15.5	35.3	211.2	325.4	276.3	146.1	14.7	17.7
87.5°	0.5	0.5	2.1	8.4	10.3	70.4	190.9	191.4	65.7	8.7	7.9
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°	883.8	883.8	883.8	883.8	883.8	883.8	883.8	883.8	883.8	883.8	883.8
2.5°	870.4	854.9	833.0	811.1	791.4	771.0	754.6	747.1	743.6	738.9	728.5
5°	850.4	822.1	774.2	727.0	682.9	640.8	604.7	584.1	561.9	560.9	550.0
7.5°	818.3	778.2	702.5	629.1	561.9	497.6	442.2	406.3	381.8	366.5	356.0
10°	782.4	730.9	630.8	527.6	436.1	350.2	279.0	232.6	204.4	190.2	182.0
12.5°	753.9	689.3	560.1	430.4	315.6	217.0	150.8	117.0	102.1	96.3	93.6
15°	729.4	651.0	493.9	343.3	210.7	124.7	87.3	76.2	73.9	73.9	73.6
17.5°	704.6	614.1	429.5	257.9	132.7	81.7	68.8	67.2	67.5	68.3	68.3
20°	681.1	579.1	367.5	183.8	87.1	65.4	62.5	62.0	62.7	63.8	63.5
22.5°	662.2	548.2	309.5	126.3	67.0	59.3	57.5	56.7	57.2	58.0	57.8
25°	648.7	521.8	256.2	88.1	58.3	54.0	52.0	50.8	50.3	50.8	50.6
27.5°	640.5	499.7	206.2	66.2	52.2	48.8	46.1	44.0	42.8	42.8	42.1
30°	635.3	478.8	161.6	54.8	47.2	43.5	39.8	36.9	34.8	34.3	34.1
32.5°	634.9	460.9	120.8	48.5	42.5	38.3	33.8	30.1	27.7	27.2	26.9
35°	641.5	446.4	88.9	43.8	38.3	33.2	28.2	24.2	22.2	22.2	21.9
37.5°	658.7	438.0	67.2	40.1	34.8	29.1	23.7	20.0	18.2	18.7	18.7
40°	690.6	436.4	54.8	37.1	31.9	25.3	19.2	16.4	15.5	16.4	16.4
42.5°	739.4	444.9	48.8	35.1	29.3	21.6	16.1	14.0	13.7	14.5	14.5
45°	802.9	461.5	45.3	33.2	26.4	17.9	13.4	12.2	11.9	12.9	12.9
47.5°	879.9	483.9	42.1	31.1	23.4	14.7	11.4	10.3	10.3	11.4	11.6
50°	971.2	514.1	39.0	29.1	21.1	12.4	9.5	8.7	9.0	10.0	10.3
52.5°	1076.0	551.4	36.1	27.2	18.4	10.0	7.9	7.4	7.7	8.7	9.0
55°	1166.6	583.8	32.7	25.3	15.0	8.2	6.5	6.3	6.5	7.9	7.9
57.5°	1245.3	614.9	29.6	22.4	11.9	6.5	5.3	5.3	5.8	7.2	7.4
60°	1350.1	664.0	26.9	19.0	9.0	5.0	4.2	4.5	5.3	6.3	6.5
62.5°	1535.4	747.3	23.4	15.9	6.5	4.0	3.5	3.7	4.7	6.0	6.3
65°	1767.5	826.1	19.5	13.2	5.0	2.9	2.7	3.5	4.7	6.0	6.3
67.5°	1743.7	718.5	15.3	10.5	3.7	2.4	2.1	3.2	4.5	6.0	6.3
70°	1414.1	503.6	11.4	7.2	2.9	2.1	2.1	3.2	4.5	5.8	6.0
72.5°	980.9	280.3	8.7	4.7	2.7	2.1	1.8	2.9	4.2	5.8	6.0
75°	466.7	85.9	6.9	3.5	2.4	1.8	1.5	2.9	4.2	5.8	6.0
77.5°	89.6	21.9	5.5	2.9	2.1	1.8	1.5	2.7	4.2	5.5	5.8
80°	30.3	9.7	4.5	2.7	2.1	1.8	1.5	2.7	4.0	5.3	5.5
82.5°	16.6	5.5	4.0	2.4	2.1	1.5	1.3	2.4	3.7	5.3	5.5
85°	12.9	4.0	3.2	2.4	2.1	1.5	1.3	2.4	3.7	5.0	5.3
87.5°	6.5	2.9	2.7	2.4	2.1	1.5	1.3	2.1	3.5	4.7	5.3
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)