

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: P270362

Luminaire Tested: **NAV-AF-02-D-UNV-SL4-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270362
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-02-D-UNV-SL4-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 615mA LIGHTSQUARES 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: 6651.5 lumens
Efficiency: N/A
Efficacy: 100.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

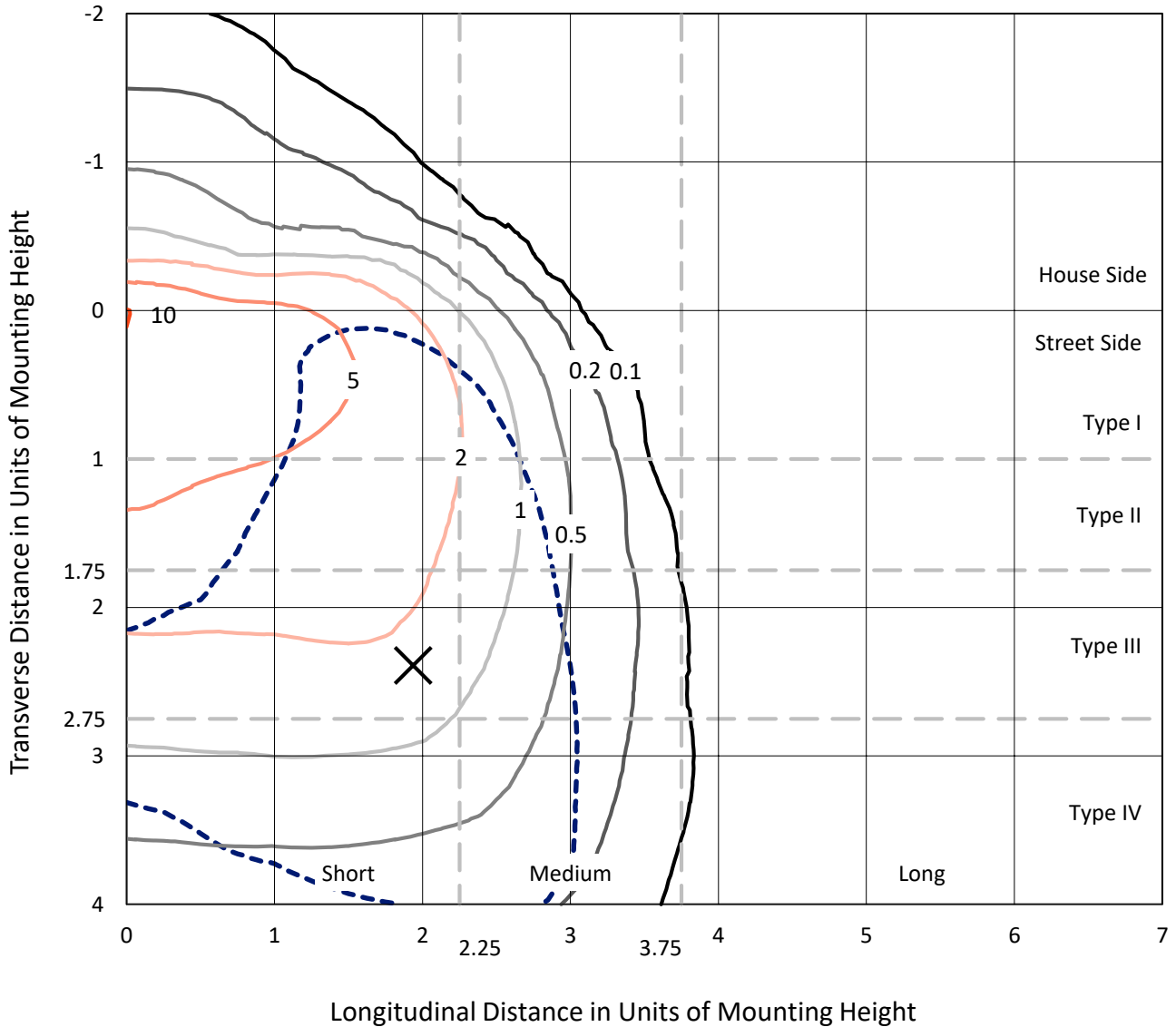
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

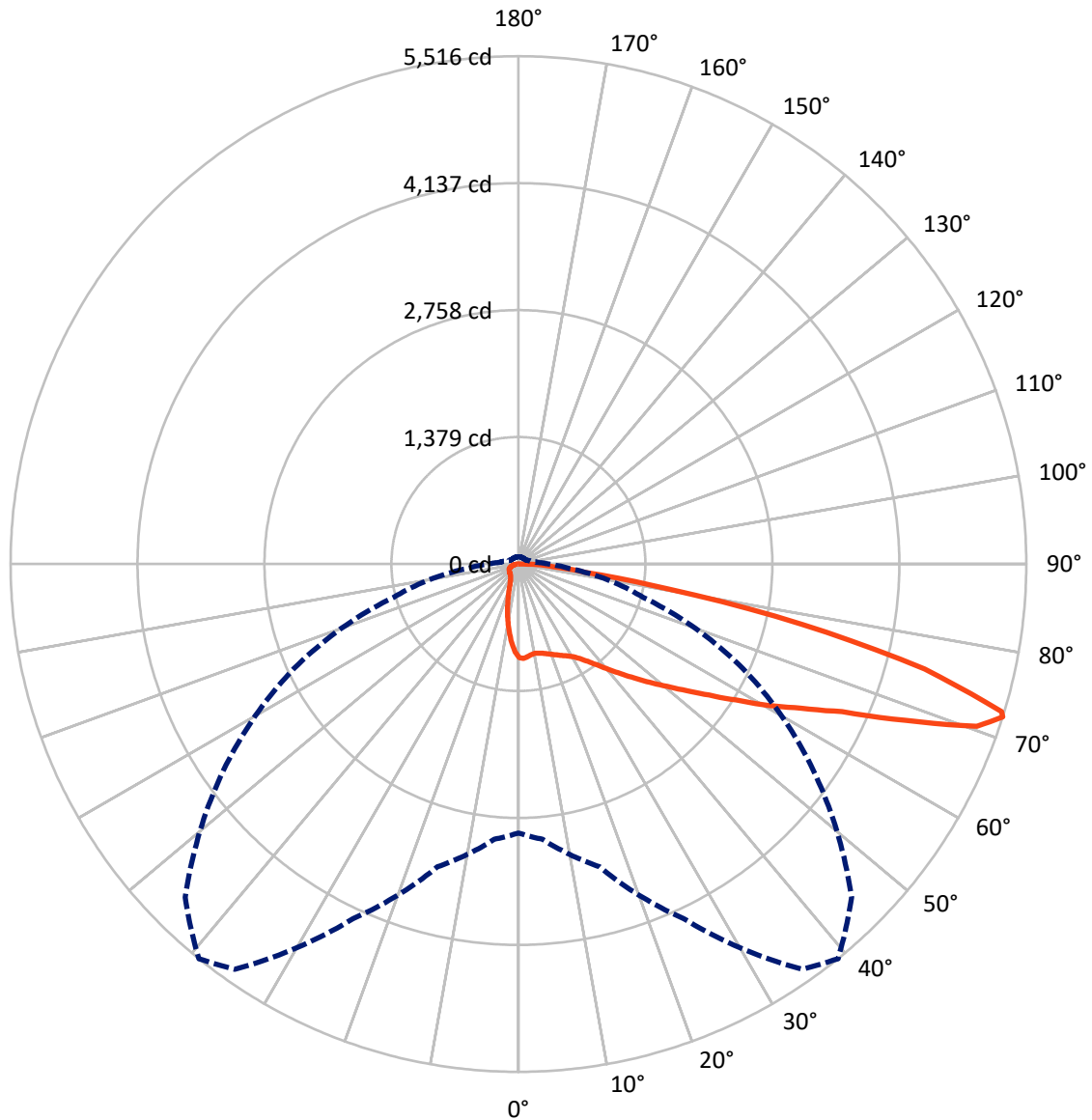
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.2 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	762.7	0.0	762.7
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	5888.8	0.0	5888.8
	% Fixture	88.5	0.0	88.5
Total	Lumens	6651.5	0.0	6651.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.3	1.3
10°-20°	219.4	3.3
20°-30°	341.8	5.1
30°-40°	526.3	7.9
40°-50°	858.0	12.9
50°-60°	1333.3	20.0
60°-70°	1784.5	26.8
70°-80°	1283.3	19.3
80°-90°	217.6	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°	6651.5	100.0
0°-180°	6651.5	100.0



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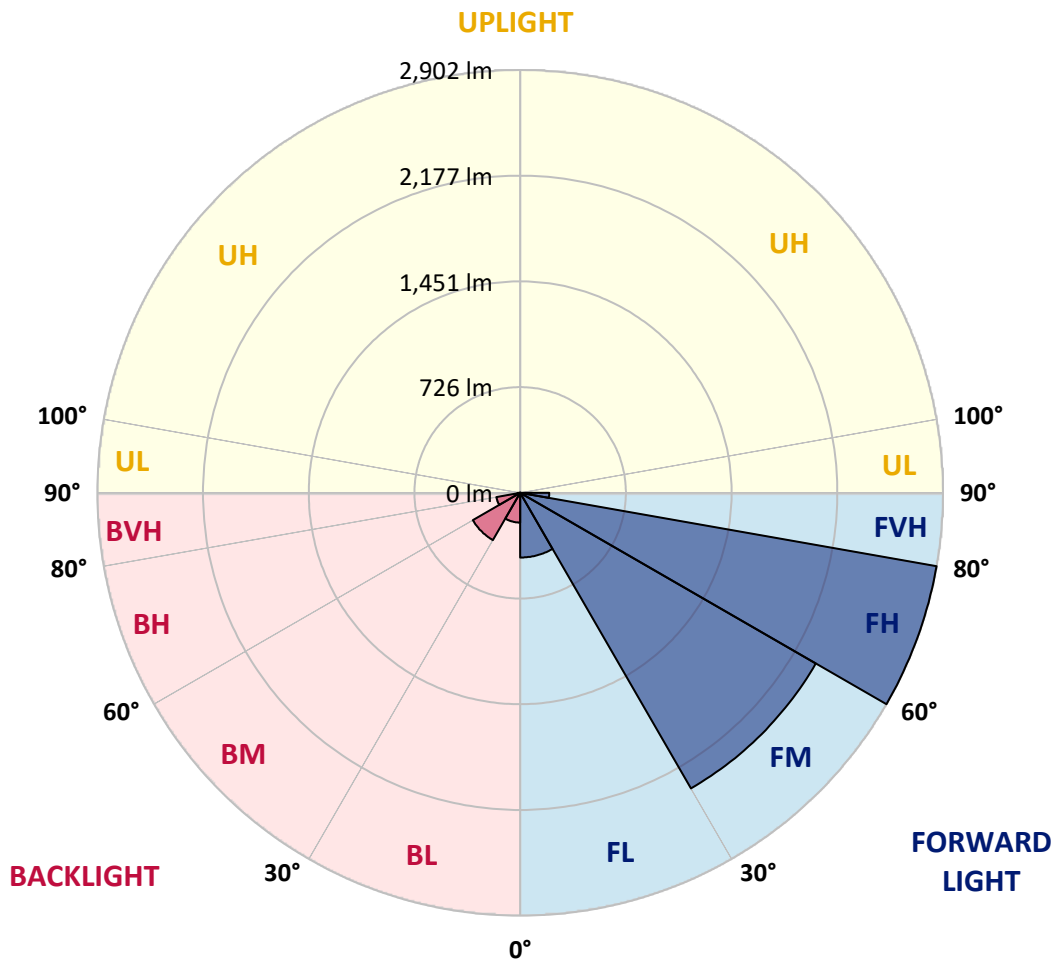
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	444.3	6.7			
FM	(30°-60°)	2342.8	35.2			
FH	(60°-80°)	2902.2	43.6			G2/5000
FVH	(80°-90°)	199.6	3.0			G2/225
BL	(0°-30°)	204.2	3.1	B1/500		
BM	(30°-60°)	374.8	5.6	B1/1000		
BH	(60°-80°)	165.7	2.5	B1/500		G1/500
BVH	(80°-90°)	18.0	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°	1015.9	1015.9	1015.9	1015.9	1015.9	1015.9	1015.9	1015.9	1015.9	1015.9	1015.9
2.5°	1037.7	1038.1	1036.9	1032.8	1029.2	1027.4	1024.2	1018.9	1011.9	1006.9	1002.9
5°	1027.9	1029.2	1028.3	1021.6	1015.4	1011.9	1006.9	999.3	989.9	985.9	976.5
7.5°	1020.3	1021.2	1018.5	1011.0	998.8	994.3	985.4	975.6	967.1	961.4	950.1
10°	1014.9	1015.9	1013.6	1006.0	992.5	987.2	976.5	965.8	954.5	947.5	935.0
12.5°	1007.3	1009.1	1009.1	1005.6	996.6	993.0	982.2	970.7	960.5	952.8	937.2
15°	1006.0	1008.2	1012.2	1011.9	1009.1	1006.5	997.9	986.2	977.4	968.5	949.2
17.5°	1017.2	1022.0	1030.0	1032.8	1031.0	1025.1	1015.4	1004.7	994.9	986.2	962.7
20°	1045.3	1048.0	1060.0	1065.4	1056.4	1048.0	1034.9	1021.2	1012.2	1005.6	975.2
22.5°	1087.7	1091.4	1101.1	1101.5	1082.7	1072.4	1056.0	1039.0	1030.5	1027.9	992.2
25°	1155.6	1154.7	1157.3	1146.1	1112.2	1100.2	1080.1	1060.4	1054.6	1060.0	1017.2
27.5°	1236.8	1234.6	1226.0	1197.1	1145.8	1130.1	1106.1	1088.6	1088.6	1101.1	1051.0
30°	1330.6	1328.4	1300.7	1252.0	1185.5	1167.5	1142.1	1123.9	1133.2	1157.3	1097.1
32.5°	1429.7	1421.7	1382.9	1317.6	1242.1	1222.6	1198.0	1179.3	1197.1	1238.1	1163.1
35°	1523.0	1518.6	1470.7	1393.5	1315.4	1298.9	1281.9	1258.7	1287.4	1351.1	1256.5
37.5°	1619.5	1616.0	1557.4	1475.2	1404.7	1393.5	1379.3	1363.2	1409.3	1493.2	1382.9
40°	1727.1	1720.0	1646.2	1564.0	1508.8	1503.5	1495.8	1491.4	1565.4	1690.5	1542.7
42.5°	1849.0	1835.1	1740.0	1662.0	1622.2	1626.7	1622.6	1640.5	1753.9	1918.2	1732.9
45°	1988.3	1960.6	1833.4	1766.0	1747.7	1765.4	1774.0	1819.4	1976.7	2181.2	1945.4
47.5°	2118.7	2083.0	1935.6	1879.0	1889.1	1919.9	1944.1	2024.5	2220.9	2441.1	2162.4
50°	2238.8	2198.6	2045.0	1995.9	2045.9	2089.6	2139.7	2253.0	2480.8	2708.5	2361.6
52.5°	2327.7	2298.7	2154.3	2123.7	2225.8	2283.9	2363.8	2507.1	2743.3	2963.5	2539.2
55°	2396.4	2380.8	2261.2	2270.0	2429.5	2512.5	2609.3	2774.1	3021.1	3192.0	2682.2
57.5°	2475.9	2464.3	2383.1	2446.9	2682.2	2786.6	2900.9	3084.1	3285.5	3393.4	2794.3
60°	2559.8	2559.8	2518.8	2659.8	2998.4	3117.9	3231.8	3374.3	3548.8	3574.7	2839.8
62.5°	2623.2	2639.8	2654.5	2886.7	3298.3	3447.1	3572.1	3708.7	3821.7	3664.0	2732.6
65°	2715.1	2750.5	2833.6	3148.7	3669.8	3864.5	4033.3	4148.1	4042.7	3593.0	2383.1
67.5°	2873.3	2925.5	3102.3	3539.1	4238.7	4530.2	4694.2	4495.8	3999.3	3146.0	1825.4
70°	3015.7	3089.5	3391.7	4034.2	4978.0	5280.9	5205.4	4415.1	3483.2	2306.2	1123.1
72°	2921.1	3001.4	3405.0	4249.8	5373.2	5516.1	5118.4	3912.7	2691.5	1407.4	553.6
72.5°	2858.9	2942.5	3361.7	4244.5	5384.0	5486.2	4997.4	3713.1	2443.3	1231.4	447.9
75°	2388.4	2459.7	2890.7	3761.8	4744.6	4557.0	3899.8	2403.1	1123.1	397.8	230.3
77.5°	1559.6	1614.2	1993.2	2606.3	3323.4	3143.0	2373.6	1125.1	421.0	241.6	173.3
80°	783.6	822.5	1066.6	1370.4	1793.6	1650.2	1095.8	544.4	281.8	174.6	136.3
82.5°	545.2	580.9	734.5	699.7	749.6	725.7	515.3	454.2	210.7	110.3	71.4
85°	457.2	494.2	607.8	498.7	408.1	372.0	369.3	429.1	139.2	54.4	60.2
87.5°	398.8	455.0	501.4	364.4	279.9	246.9	271.9	393.4	44.1	30.0	18.3
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°	1015.9	1015.9	1015.9	1015.9	1015.9	1015.9	1015.9	1015.9	1015.9	1015.9	1015.9
2.5°	996.2	994.9	988.1	977.8	970.3	965.4	955.9	955.5	956.4	948.4	951.6
5°	968.1	962.7	945.2	921.7	902.3	884.1	864.0	857.3	851.6	839.5	840.8
7.5°	938.5	929.1	898.8	859.9	822.8	789.0	755.5	738.9	726.5	710.9	710.9
10°	921.1	906.4	859.9	803.3	744.3	694.7	644.8	614.8	592.9	572.8	571.5
12.5°	920.3	897.9	833.2	755.0	674.2	604.6	536.3	490.3	457.6	434.1	431.7
15°	927.4	896.1	810.9	709.9	608.2	517.6	433.2	374.7	333.1	306.7	304.0
17.5°	933.7	894.0	786.7	662.6	543.8	433.5	339.7	279.1	239.8	218.4	216.1
20°	939.4	889.1	756.0	612.6	472.9	355.0	265.7	216.5	190.7	178.7	177.2
22.5°	947.9	884.6	723.8	556.3	403.2	288.9	219.2	184.0	170.0	164.3	163.4
25°	961.7	885.0	692.6	498.7	339.3	240.7	189.7	168.0	160.3	156.2	156.2
27.5°	981.8	890.3	661.7	440.3	285.3	207.6	172.4	159.4	154.5	151.4	150.5
30°	1011.3	900.1	629.2	385.0	242.5	184.8	162.1	154.1	150.0	147.3	147.0
32.5°	1054.3	917.6	594.8	334.3	209.8	168.8	154.5	149.6	146.5	144.2	143.8
35°	1118.0	948.4	561.3	291.6	186.7	157.2	148.2	144.2	142.4	141.6	141.2
37.5°	1211.9	997.9	529.6	258.2	171.4	149.6	142.0	139.7	138.9	138.9	138.9
40°	1329.8	1063.1	501.0	234.4	163.0	143.8	137.5	135.7	135.7	136.3	136.3
42.5°	1473.0	1144.8	476.5	218.4	158.0	139.7	134.3	133.5	133.0	133.0	133.5
45°	1639.5	1241.3	461.2	205.8	154.5	137.5	132.2	131.7	130.0	129.0	129.0
47.5°	1807.0	1344.5	460.3	198.6	150.0	134.8	130.0	130.0	126.3	124.5	125.0
50°	1963.2	1436.8	470.2	196.9	147.3	130.9	127.6	128.2	123.2	121.0	120.6
52.5°	2089.2	1507.4	482.2	199.2	147.3	127.3	123.6	125.9	120.6	117.9	117.4
55°	2186.6	1556.6	486.7	204.1	149.1	124.1	120.2	123.6	119.7	116.2	116.2
57.5°	2256.3	1572.2	467.5	206.3	151.9	123.6	116.5	123.2	121.0	116.5	116.5
60°	2230.8	1481.6	396.1	197.7	151.4	122.8	113.8	124.1	125.5	120.6	120.6
62.5°	2032.1	1239.5	317.9	178.7	143.8	119.7	110.8	123.2	128.5	126.8	125.9
65°	1654.3	909.1	246.4	155.9	130.9	112.9	104.1	115.3	121.5	123.2	123.6
67.5°	1165.8	575.5	191.6	132.6	114.8	103.1	96.5	101.8	104.1	104.9	106.7
70°	637.5	311.6	152.3	111.6	98.3	93.3	88.5	88.8	87.9	87.0	87.9
72°	320.2	203.6	128.5	96.8	87.0	83.9	81.7	80.4	80.4	79.1	79.5
72.5°	275.5	189.4	124.1	93.3	84.4	81.7	79.9	78.6	78.2	77.3	77.8
75°	183.6	150.0	103.6	78.2	71.9	70.1	71.0	69.7	70.1	69.2	69.7
77.5°	148.2	129.0	87.9	66.0	61.7	59.0	60.7	61.2	62.1	61.2	60.7
80°	124.1	109.9	73.8	54.4	51.4	49.0	50.0	53.1	53.5	50.9	50.5
82.5°	80.4	88.5	58.0	42.4	39.3	38.4	40.7	43.7	44.6	41.1	40.2
85°	67.5	71.0	42.0	29.0	26.0	25.1	29.5	32.6	34.9	31.3	30.4
87.5°	18.8	34.9	20.5	13.8	11.6	11.6	14.4	17.0	20.1	20.5	20.5
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)