

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: P197335

Luminaire Tested: **NAV-AF-01-D-UNV-T4W-8030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197335  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)  
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-T4W-8030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3980 lumens  
Efficiency: N/A  
Efficacy: 90.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

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

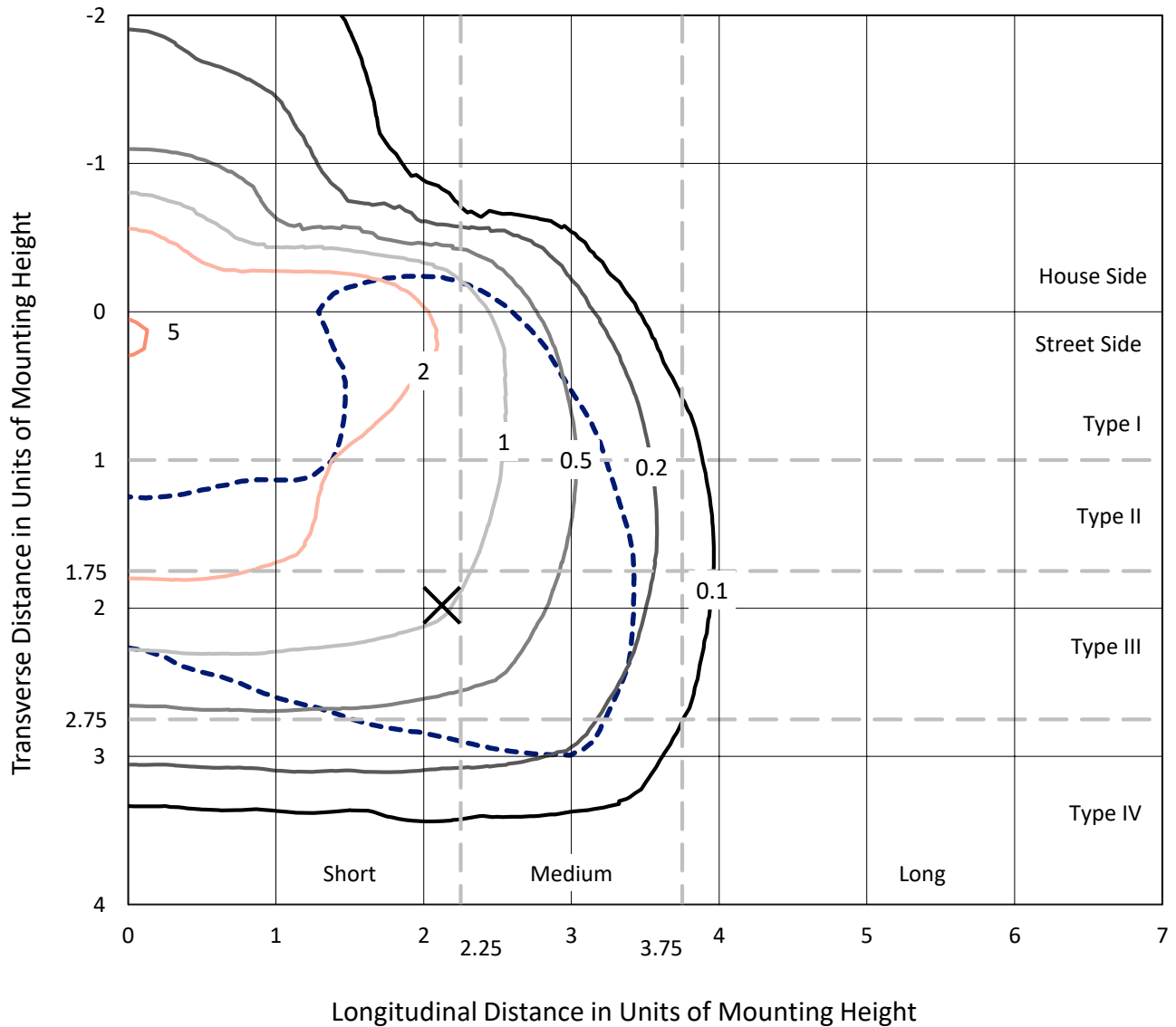


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### Iso-Footcandle Lines of Horizontal Illumination

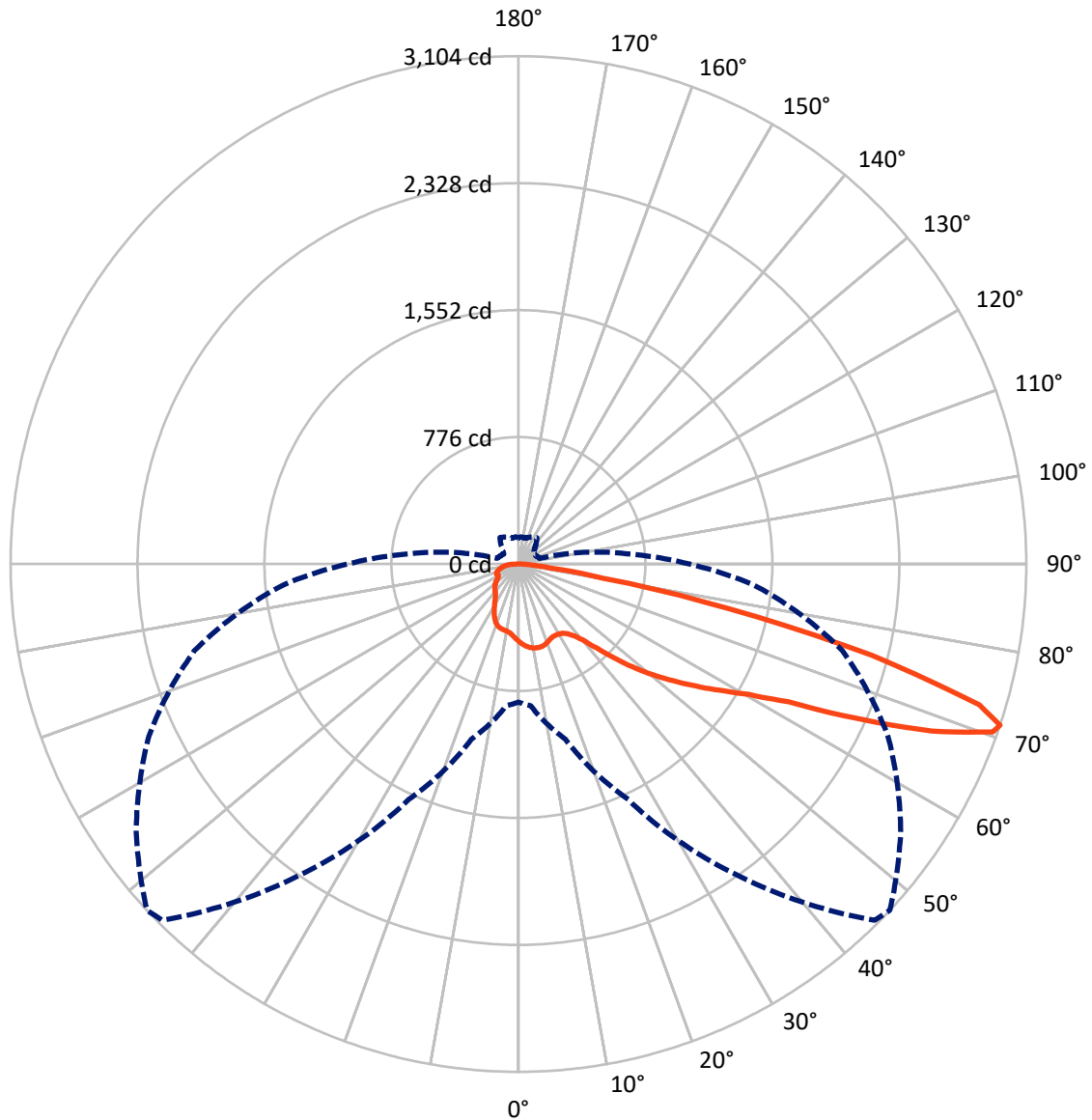
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.4 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral      - - - Horizontal Cone Through 71-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	853.0	0.0	853.0
	% Fixture	21.4	0.0	21.4
<b>Street Side</b>	Lumens	3127.0	0.0	3127.0
	% Fixture	78.6	0.0	78.6
<b>Total</b>	Lumens	3980.0	0.0	3980.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.2	1.1
10°-20°	132.2	3.3
20°-30°	196.5	4.9
30°-40°	282.1	7.1
40°-50°	500.1	12.6
50°-60°	855.8	21.5
60°-70°	1214.9	30.5
70°-80°	665.4	16.7
80°-90°	87.8	2.2
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°	3980.0	100.0
0°-180°	3980.0	100.0



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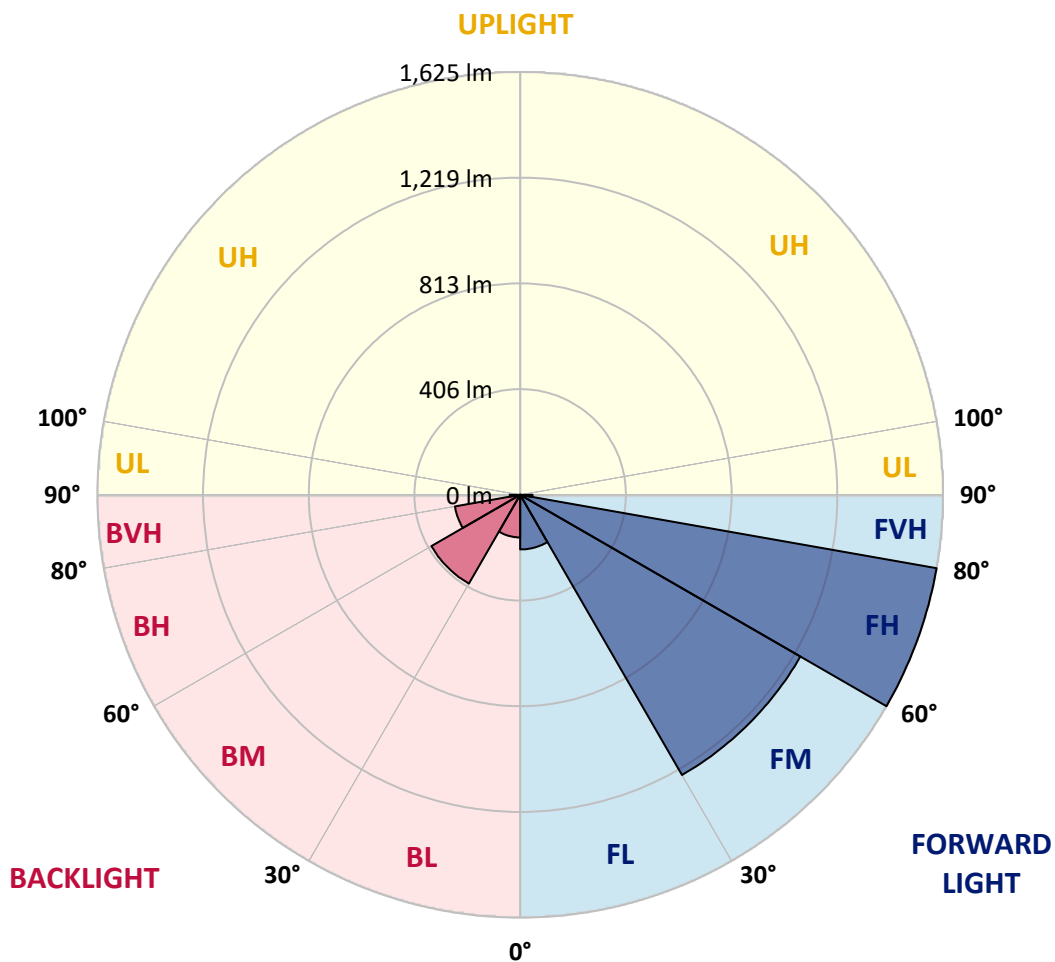
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	210.0	5.3			
FM	(30°-60°)	1243.9	31.3			
FH	(60°-80°)	1625.5	40.8			G1/1800
FVH	(80°-90°)	47.6	1.2			G1/100
BL	(0°-30°)	163.8	4.1	B1/500		
BM	(30°-60°)	394.1	9.9	B1/1000		
BH	(60°-80°)	254.9	6.4	B1/500		G1/500
BVH	(80°-90°)	40.2	1.0			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	473.3	473.3	473.3	473.3	473.3	473.3	473.3	473.3	473.3	473.3	473.3
2.5°	502.2	501.1	501.7	499.9	495.5	490.8	490.8	485.9	480.8	475.6	469.9
5°	533.4	531.8	530.5	524.9	516.4	506.8	505.3	495.5	484.9	474.3	464.0
7.5°	559.4	557.9	554.0	543.7	531.3	517.1	515.3	502.4	488.5	473.8	459.4
10°	578.0	577.0	569.5	556.3	541.9	525.1	522.0	508.9	492.4	474.1	455.7
12.5°	588.3	586.8	577.7	562.3	545.2	528.2	525.1	512.5	493.7	473.5	452.1
15°	584.2	583.4	574.9	559.2	542.2	527.5	524.9	512.0	492.9	471.7	448.8
17.5°	566.7	568.5	561.8	546.3	532.4	522.0	519.2	507.1	489.0	467.4	443.6
20°	542.4	544.5	541.1	525.4	517.4	510.7	509.1	499.3	482.6	460.9	437.4
22.5°	516.6	518.4	518.7	504.0	501.4	498.8	497.5	490.6	476.9	457.0	433.3
25°	498.8	500.9	501.4	488.5	490.1	490.8	490.6	485.7	475.9	457.0	433.8
27.5°	494.2	495.2	494.7	482.8	485.7	490.1	490.3	489.3	480.0	462.2	441.0
30°	510.2	510.7	504.2	486.4	489.3	495.0	495.2	494.7	488.8	475.6	457.3
32.5°	579.3	578.8	556.6	510.7	500.9	502.9	503.7	508.4	508.9	497.8	480.8
35°	684.5	684.3	658.5	580.1	533.9	523.1	524.1	531.3	537.8	530.3	520.5
37.5°	800.3	801.1	785.4	679.1	605.1	560.0	558.9	564.3	575.9	578.5	579.8
40°	928.8	932.6	931.9	792.9	704.9	622.9	612.6	606.4	628.8	643.0	661.3
42.5°	1075.5	1074.5	1075.0	917.7	818.9	721.9	702.8	674.0	700.0	724.5	764.7
45°	1201.7	1205.8	1208.9	1050.5	946.6	835.2	815.8	763.2	786.7	823.3	884.7
47.5°	1328.6	1321.3	1327.0	1198.3	1088.7	964.4	939.4	868.4	890.4	941.9	1035.3
50°	1476.4	1473.0	1447.2	1391.2	1260.5	1095.4	1062.6	978.3	1010.3	1079.1	1221.3
52.5°	1608.9	1590.9	1570.8	1542.9	1429.4	1228.0	1186.4	1092.6	1151.4	1236.7	1452.1
55°	1657.4	1645.3	1669.5	1705.6	1608.1	1363.1	1316.7	1225.9	1310.5	1417.0	1723.7
57.5°	1709.0	1713.1	1767.8	1840.8	1777.3	1507.3	1457.0	1383.8	1485.1	1618.7	2027.3
60°	1734.8	1751.3	1860.4	1997.4	1938.3	1665.4	1617.2	1565.1	1678.8	1841.6	2330.1
62.5°	1739.2	1761.4	1915.9	2052.3	2159.8	1907.6	1851.9	1795.4	1920.8	2087.9	2549.3
65°	1658.7	1692.7	1911.0	2119.9	2361.8	2312.3	2276.9	2178.4	2244.7	2304.8	2586.7
67.5°	1422.2	1459.3	1721.9	2092.0	2523.8	2732.2	2725.5	2580.0	2494.9	2388.6	2309.4
70°	1043.8	1073.7	1326.0	1788.4	2453.1	3061.8	3073.7	2840.2	2564.8	2210.7	1717.3
71°	844.2	870.0	1107.8	1587.8	2315.4	3078.8	3103.6	2851.9	2492.1	2050.0	1437.7
72.5°	525.4	539.8	735.6	1198.3	1993.7	2903.4	2945.2	2703.3	2263.0	1732.7	1016.2
75°	198.3	204.0	272.9	528.5	1190.1	2181.3	2231.8	2043.0	1589.8	989.1	425.3
77.5°	106.5	109.4	135.4	219.8	476.9	1250.4	1315.4	1165.3	762.7	346.1	173.8
80°	71.4	73.3	93.6	130.3	219.2	476.1	530.3	467.9	285.5	197.6	123.8
82.5°	46.2	47.2	63.7	85.6	141.6	167.4	191.1	199.6	178.2	141.6	74.8
85°	30.4	31.2	42.0	54.7	87.7	82.5	84.6	110.6	121.5	93.4	38.2
87.5°	17.5	18.1	25.3	28.1	39.5	31.0	33.5	52.6	72.2	60.9	21.9
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°	473.3	473.3	473.3	473.3	473.3	473.3	473.3	473.3	473.3	473.3	473.3
2.5°	467.4	465.3	460.7	457.8	456.5	456.0	455.5	456.5	456.5	456.0	455.0
5°	458.8	455.0	447.2	441.8	439.0	438.2	439.2	440.5	441.3	441.3	440.5
7.5°	452.7	447.0	436.7	429.2	424.8	423.5	426.3	431.0	434.1	435.6	435.9
10°	447.5	439.8	428.4	420.7	417.1	416.5	420.2	426.1	432.5	435.4	435.9
12.5°	442.9	434.1	421.7	414.5	411.9	413.2	418.1	423.5	431.0	435.1	435.4
15°	438.5	429.4	416.3	408.8	408.3	410.4	415.0	419.4	425.1	430.2	430.2
17.5°	433.3	423.5	409.8	402.9	402.9	404.7	407.8	410.1	413.7	418.6	418.4
20°	427.1	417.1	403.1	395.9	394.4	393.3	393.3	393.8	396.9	401.3	402.1
22.5°	422.5	412.2	397.5	388.7	381.7	375.0	372.2	371.2	374.0	378.1	379.1
25°	422.5	412.2	395.7	381.0	363.9	351.0	345.6	344.1	346.9	350.8	352.3
27.5°	429.4	419.1	399.8	374.0	342.8	322.1	315.7	314.4	317.0	320.1	321.6
30°	445.7	435.6	411.6	366.0	319.3	292.2	285.0	283.7	285.0	286.3	288.1
32.5°	472.8	464.3	431.0	358.8	295.6	265.1	256.4	254.3	254.8	255.1	256.6
35°	516.9	513.0	456.8	350.3	273.1	243.0	233.9	229.8	229.6	230.8	232.6
37.5°	584.5	586.8	490.1	337.9	254.6	227.2	218.2	214.1	212.0	214.6	216.7
40°	679.9	685.3	528.5	321.1	239.4	217.9	208.4	204.5	201.7	200.9	202.0
42.5°	803.9	802.4	567.7	299.7	222.8	211.8	201.7	197.6	192.9	187.0	185.7
45°	951.0	928.8	600.4	273.4	204.0	205.8	195.5	189.8	182.6	173.8	172.8
47.5°	1124.5	1063.4	620.6	245.3	186.5	198.1	188.5	179.8	169.2	163.5	162.7
50°	1333.7	1221.0	634.7	216.7	170.7	188.3	178.7	167.1	156.8	155.3	155.0
52.5°	1581.3	1407.0	652.3	190.9	158.4	175.6	168.9	157.1	148.8	149.6	149.6
55°	1844.7	1599.4	652.8	170.5	147.5	160.9	161.7	152.2	145.7	148.3	149.1
57.5°	2084.8	1767.5	601.5	156.0	137.2	149.3	159.4	154.0	149.1	158.1	158.9
60°	2294.2	1897.0	491.1	144.2	128.7	145.0	164.6	165.1	164.0	188.5	190.3
62.5°	2370.8	1898.3	348.7	134.1	124.1	147.5	175.4	176.2	176.2	198.9	202.2
65°	2263.5	1740.2	232.1	128.2	121.0	153.2	184.2	180.8	172.8	188.5	184.9
67.5°	1885.4	1354.6	169.7	124.3	116.6	153.5	191.9	183.4	169.7	183.1	176.9
70°	1295.8	862.0	142.1	120.7	111.4	146.8	196.0	182.6	165.1	170.7	162.5
71°	1043.0	687.9	134.9	119.4	109.4	142.9	196.5	181.6	162.7	166.4	158.9
72.5°	687.1	423.8	126.1	116.6	106.3	136.2	195.2	179.3	159.7	159.9	155.0
75°	271.1	175.6	113.5	110.1	97.5	125.4	189.6	174.4	153.7	148.6	146.5
77.5°	137.0	114.8	99.8	101.1	87.2	114.3	181.6	166.4	145.5	138.5	137.0
80°	100.1	87.2	85.4	87.7	75.6	103.4	171.5	155.5	134.9	142.1	139.0
82.5°	60.9	53.1	66.8	72.5	63.2	92.3	159.7	142.9	121.5	111.9	108.3
85°	28.9	31.2	48.2	53.4	46.7	73.8	146.0	129.0	106.0	91.6	93.1
87.5°	14.2	17.3	27.6	32.0	30.7	54.2	110.1	100.1	83.6	68.9	67.3
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)