

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: STREETWORKS

Report Number: P234764

Luminaire Tested: **ARCH-AF24-90-D-U-T4W-8027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234764  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29625)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-AF24-90-D-U-T4W-8027-HSS  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 1180mA LIGHT ENGINE WITH 24 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5372 lumens  
Efficiency: N/A  
Efficacy: 57.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type IV - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 94  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: 28.75 FT

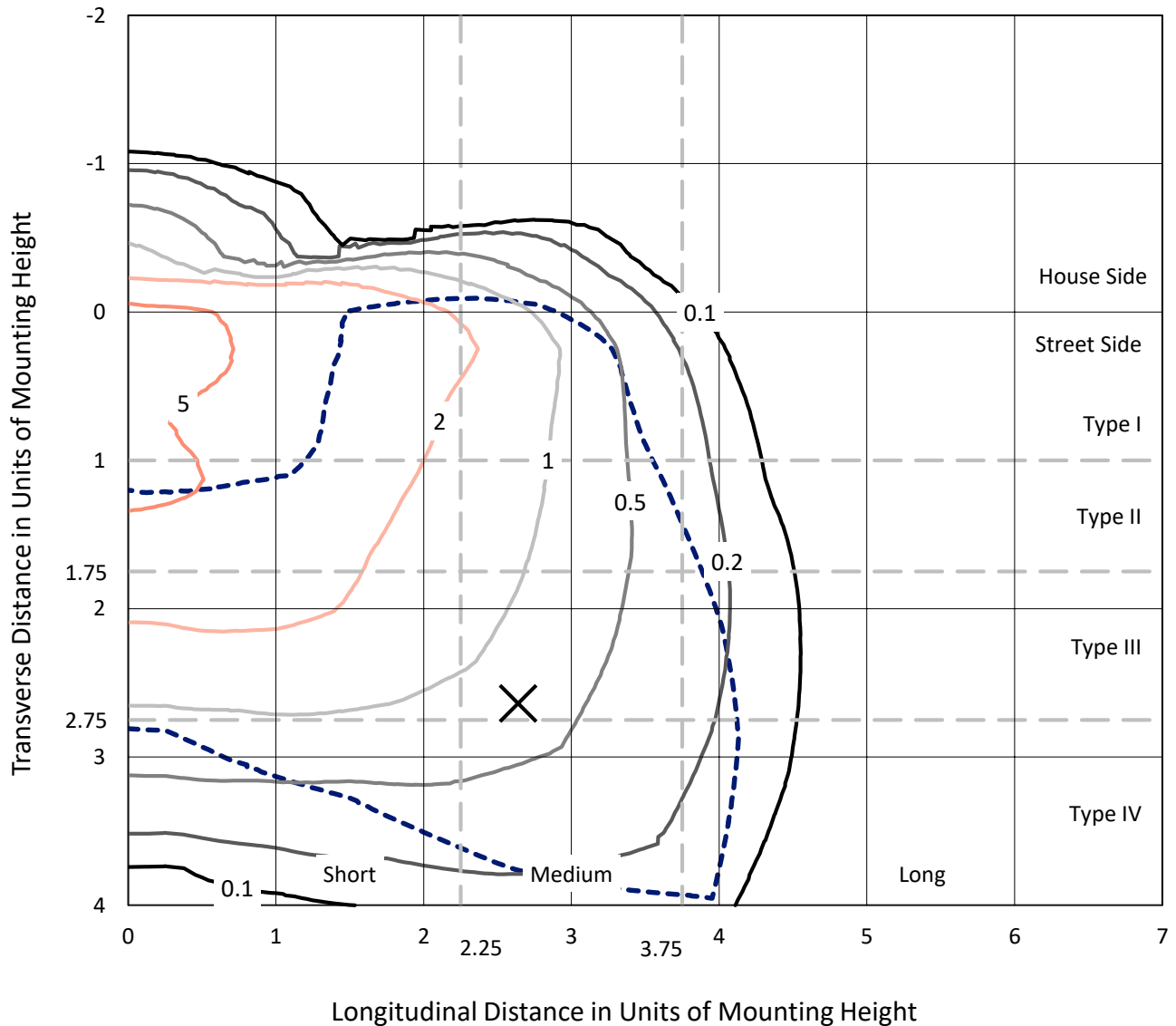


REPORT NUMBER: P234764

CATALOG NUMBER: ARCH-AF24-90-D-U-T4W-8027-HSS

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

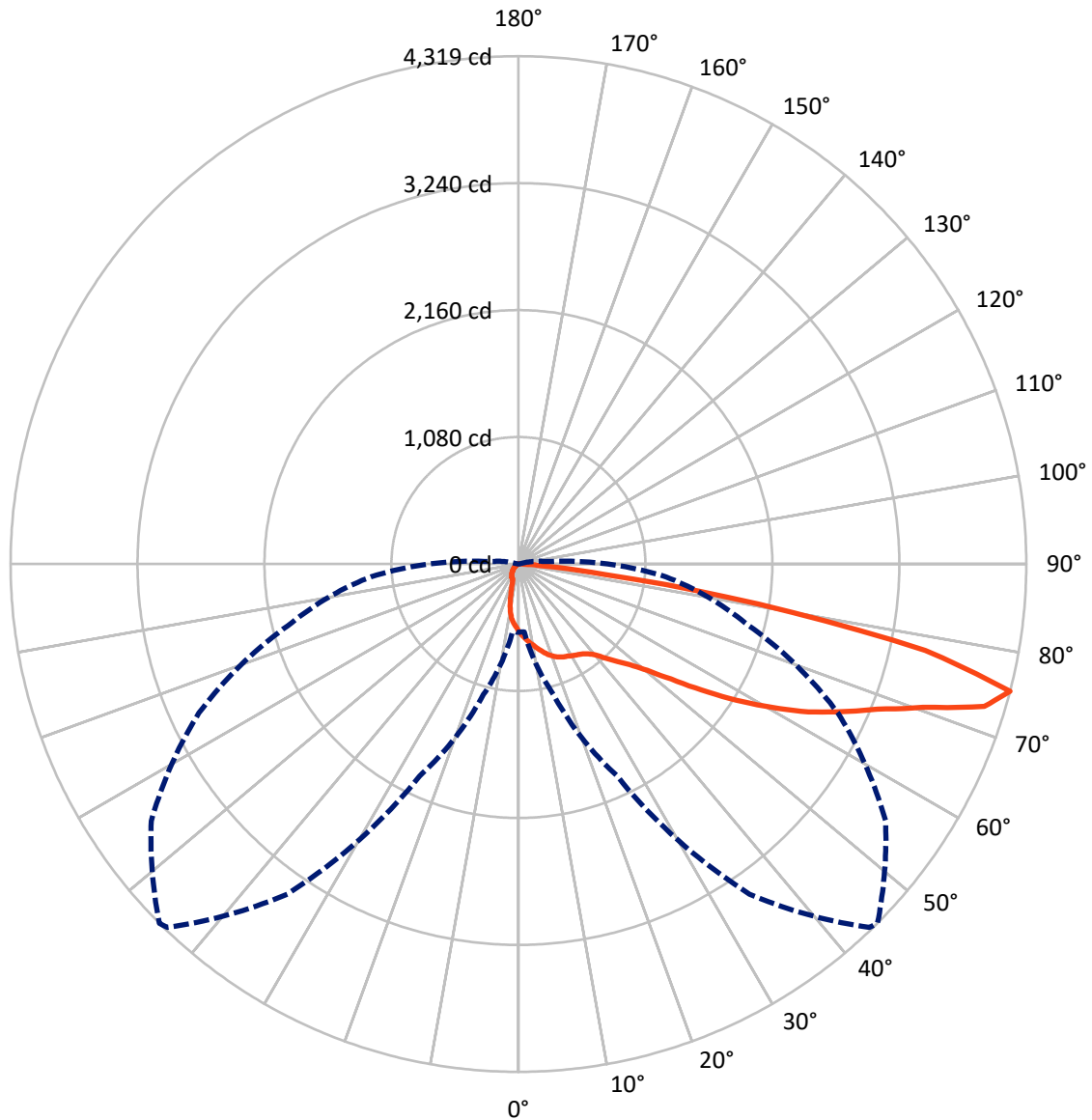


Based on 10 foot mounting height. Maximum calculated value = 7.7 fc  
 Type IV - Medium - Non-Cutoff

REPORT NUMBER: P234764

CATALOG NUMBER: ARCH-AF24-90-D-U-T4W-8027-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 75-Deg Vertical

REPORT NUMBER: P234764

CATALOG NUMBER: ARCH-AF24-90-D-U-T4W-8027-HSS

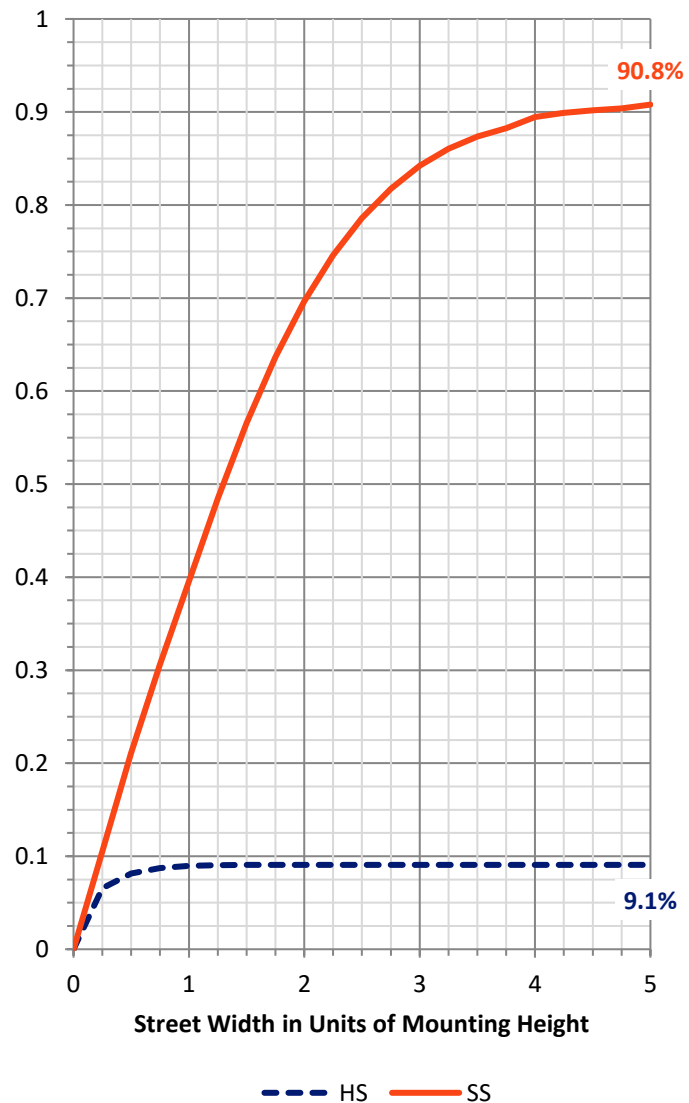
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	491.4	0.0	491.4
	% Fixture	9.1	0.0	9.1
<b>Street Side</b>	Lumens	4880.6	0.0	4880.6
	% Fixture	90.9	0.0	90.9
<b>Total</b>	Lumens	5372.0	0.0	5372.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.2	1.0
10°-20°	153.6	2.9
20°-30°	254.4	4.7
30°-40°	368.2	6.9
40°-50°	602.9	11.2
50°-60°	1074.3	20.0
60°-70°	1579.4	29.4
70°-80°	1191.5	22.2
80°-90°	93.5	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°	5372.0	100.0
0°-180°	5372.0	100.0



REPORT NUMBER: P234764

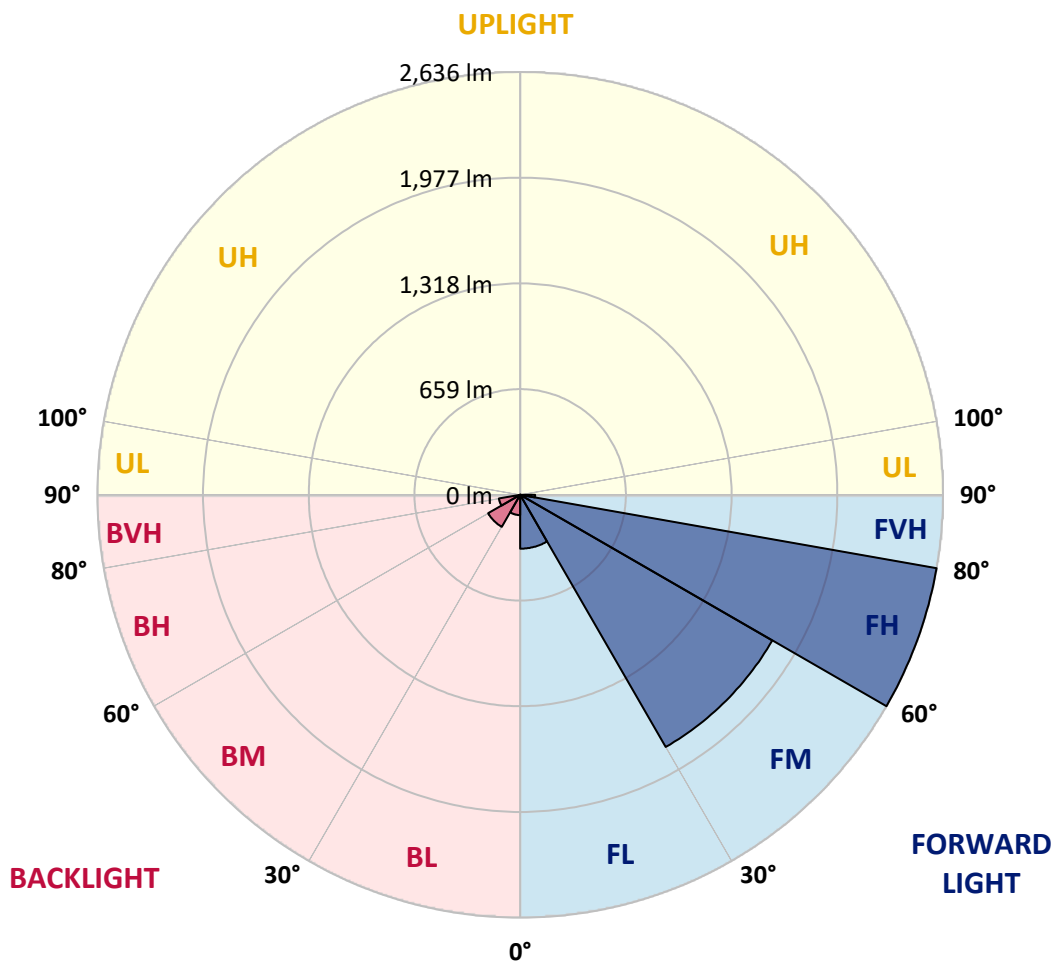
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	336.0	6.3			
FM	(30°-60°)	1815.2	33.8			
FH	(60°-80°)	2636.2	49.1			G2/5000
FVH	(80°-90°)	93.2	1.7			G1/100
BL	(0°-30°)	126.3	2.4	B1/500		
BM	(30°-60°)	230.3	4.3	B1/1000		
BH	(60°-80°)	134.6	2.5	B1/500		G1/500
BVH	(80°-90°)	0.3	0.0			G0/10
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 Medium





REPORT NUMBER: P234764

CATALOG NUMBER: ARCH-AF24-90-D-U-T4W-8027-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	574.6	574.6	574.6	574.6	574.6	574.6	574.6	574.6	574.6	574.6	574.6
2.5°	624.1	624.1	622.9	621.6	615.2	608.9	607.6	603.8	592.4	584.7	577.1
5°	676.3	677.5	675.0	668.6	654.6	640.7	639.4	629.2	607.6	592.4	575.8
7.5°	725.8	728.4	722.0	710.6	694.1	673.7	672.4	653.4	625.4	603.8	579.6
10°	767.8	767.8	758.9	744.9	727.1	705.5	703.0	681.3	649.6	622.9	591.1
12.5°	813.5	812.3	799.6	780.5	760.2	739.8	738.5	711.8	681.3	647.0	607.6
15°	855.5	852.9	836.4	818.6	797.0	775.4	774.1	747.4	715.7	675.0	631.8
17.5°	878.4	877.1	861.8	844.1	826.3	809.7	808.5	780.5	746.2	704.2	655.9
20°	882.2	883.5	870.7	855.5	845.3	836.4	836.4	811.0	774.1	729.6	681.3
22.5°	883.5	887.3	878.4	858.0	855.5	856.8	859.3	839.0	800.8	758.9	708.0
25°	892.4	897.4	891.1	866.9	864.4	873.3	875.8	866.9	832.6	790.7	738.5
27.5°	910.2	915.2	910.2	879.6	875.8	884.7	887.3	892.4	866.9	821.2	770.3
30°	945.7	947.0	935.6	897.4	889.8	901.3	905.1	919.0	898.7	850.4	800.8
32.5°	1008.0	995.3	961.0	910.2	903.8	916.5	920.3	935.6	927.9	878.4	832.6
35°	1135.1	1069.0	990.2	927.9	921.6	934.3	939.4	961.0	964.8	917.8	872.0
37.5°	1133.9	1074.1	1058.9	962.3	953.4	962.3	968.6	995.3	1010.6	969.9	929.2
40°	1214.0	1188.5	1188.5	1027.1	997.9	1010.6	1016.9	1043.6	1070.3	1038.5	996.6
42.5°	1465.6	1449.1	1431.3	1151.7	1060.1	1095.7	1099.6	1116.1	1147.9	1137.7	1088.1
45°	1746.6	1731.3	1662.7	1362.7	1166.9	1173.3	1182.2	1208.9	1254.6	1273.7	1215.2
47.5°	1966.5	1951.2	1892.8	1616.9	1333.4	1277.5	1277.5	1329.6	1400.8	1449.1	1393.2
50°	2143.2	2125.4	2089.8	1887.7	1606.7	1427.5	1419.9	1480.9	1586.4	1661.4	1623.3
52.5°	2314.8	2262.7	2241.1	2167.3	1915.6	1644.9	1624.5	1667.8	1813.9	1906.7	1875.0
55°	2429.2	2421.6	2398.7	2424.1	2239.8	1909.3	1891.5	1900.4	2083.4	2145.7	2106.3
57.5°	2536.0	2534.7	2585.5	2703.8	2593.2	2211.8	2183.9	2169.9	2344.0	2328.8	2363.1
60°	2668.2	2645.3	2763.5	2932.6	2917.3	2506.7	2474.9	2447.0	2543.6	2500.4	2670.7
62.5°	2674.5	2668.2	2908.4	3151.2	3238.9	2806.7	2769.9	2669.4	2717.7	2668.2	2964.3
65°	2431.7	2463.5	2969.4	3266.9	3508.4	3069.9	3025.4	2869.0	2872.8	2839.8	3310.1
67.5°	2377.1	2393.6	2801.6	3391.5	3702.9	3335.5	3293.6	3099.1	3053.3	3055.9	3514.8
70°	2241.1	2266.5	2593.2	3382.6	3856.7	3690.2	3648.2	3437.2	3326.6	3203.3	3357.1
72.5°	1712.3	1755.5	2185.1	2965.6	3814.8	4154.2	4142.7	3865.6	3435.9	2941.5	2539.8
75°	579.6	578.4	1147.9	1991.9	3427.0	4296.5	4319.4	3812.2	2997.4	2028.8	1261.0
77.5°	124.6	125.8	236.4	807.2	2276.6	3449.9	3537.6	2875.4	1933.4	903.8	288.6
80°	61.0	62.3	97.9	213.6	910.2	1934.7	2072.0	1478.4	714.4	180.5	48.3
82.5°	30.5	31.8	50.8	113.1	336.9	687.7	734.7	544.1	204.7	101.7	24.2
85°	11.4	11.4	25.4	67.4	153.8	161.4	198.3	157.6	123.3	82.6	6.4
87.5°	2.5	2.5	14.0	33.1	68.6	50.8	50.8	48.3	75.0	55.9	2.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P234764

CATALOG NUMBER: ARCH-AF24-90-D-U-T4W-8027-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	574.6	574.6	574.6	574.6	574.6	574.6	574.6	574.6	574.6	574.6	574.6
2.5°	573.3	568.2	559.3	550.4	544.1	536.4	532.6	528.8	527.5	526.3	528.8
5°	566.9	559.3	542.8	528.8	516.1	505.9	498.3	490.7	486.9	484.3	485.6
7.5°	566.9	555.5	531.3	509.7	489.4	467.8	446.2	429.7	416.9	409.3	410.6
10°	573.3	558.0	526.3	497.0	458.9	413.1	366.1	330.5	306.3	292.4	292.4
12.5°	587.3	566.9	527.5	481.8	416.9	336.9	265.7	222.5	204.7	194.5	195.8
15°	606.3	582.2	533.9	461.4	358.5	250.4	185.6	157.6	157.6	160.2	161.4
17.5°	628.0	601.3	539.0	430.9	283.5	179.2	146.2	143.6	147.5	153.8	153.8
20°	649.6	620.3	541.5	382.6	212.3	142.4	138.6	138.6	141.1	147.5	148.7
22.5°	676.3	644.5	539.0	322.9	158.9	134.7	133.5	133.5	133.5	141.1	141.1
25°	704.2	672.4	528.8	259.3	134.7	129.7	128.4	127.1	127.1	133.5	134.7
27.5°	736.0	701.7	504.7	198.3	127.1	124.6	123.3	120.8	120.8	125.8	125.8
30°	767.8	734.7	467.8	150.0	120.8	119.5	116.9	114.4	111.9	116.9	116.9
32.5°	802.1	769.1	419.5	119.5	111.9	111.9	110.6	106.8	104.2	106.8	108.0
35°	847.9	808.5	364.8	104.2	100.4	100.4	100.4	99.2	94.1	96.6	96.6
37.5°	908.9	863.1	301.3	96.6	91.5	89.0	89.0	89.0	85.2	86.4	86.4
40°	986.4	926.7	240.2	90.3	85.2	78.8	76.3	77.5	75.0	75.0	73.7
42.5°	1091.9	995.3	180.5	85.2	80.1	71.2	66.1	64.8	62.3	61.0	61.0
45°	1243.2	1079.2	129.7	80.1	76.3	62.3	57.2	53.4	47.0	43.2	43.2
47.5°	1439.0	1174.6	96.6	75.0	72.5	54.7	48.3	40.7	31.8	29.2	29.2
50°	1677.9	1281.3	81.4	67.4	66.1	48.3	38.1	26.7	17.8	15.3	16.5
52.5°	1910.6	1381.8	72.5	59.7	58.5	41.9	28.0	14.0	7.6	7.6	7.6
55°	2106.3	1452.9	66.1	53.4	50.8	33.1	15.3	6.4	3.8	3.8	3.8
57.5°	2283.0	1493.6	59.7	47.0	40.7	22.9	6.4	2.5	2.5	1.3	1.3
60°	2444.4	1517.8	52.1	40.7	31.8	12.7	2.5	1.3	1.3	0.0	0.0
62.5°	2603.3	1535.6	44.5	33.1	24.2	5.1	1.3	1.3	0.0	0.0	0.0
65°	2724.1	1529.2	35.6	26.7	15.3	2.5	1.3	0.0	0.0	0.0	0.0
67.5°	2720.3	1442.8	26.7	20.3	7.6	1.3	0.0	0.0	0.0	0.0	0.0
70°	2433.0	1215.2	17.8	12.7	2.5	1.3	0.0	0.0	0.0	0.0	0.0
72.5°	1726.2	779.2	11.4	7.6	1.3	0.0	0.0	0.0	0.0	0.0	0.0
75°	760.2	236.4	6.4	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	148.7	54.7	3.8	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	35.6	6.4	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	15.3	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	3.8	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)