

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: McGRAW-EDISON

Report Number: P821189

Luminaire Tested: **TT-D1-735-24VDC-CQ-UPL**

Issue Date: 7/23/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P821189  
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-2) AND  
Test Lab: INNOVATION CENTER  
Issue Date: 7/23/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: TT-D1-735-24VDC-CQ-UPL  
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT  
3500K, 70 CRI LEDS AND CONCENTRATED DISTRIBUTION  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

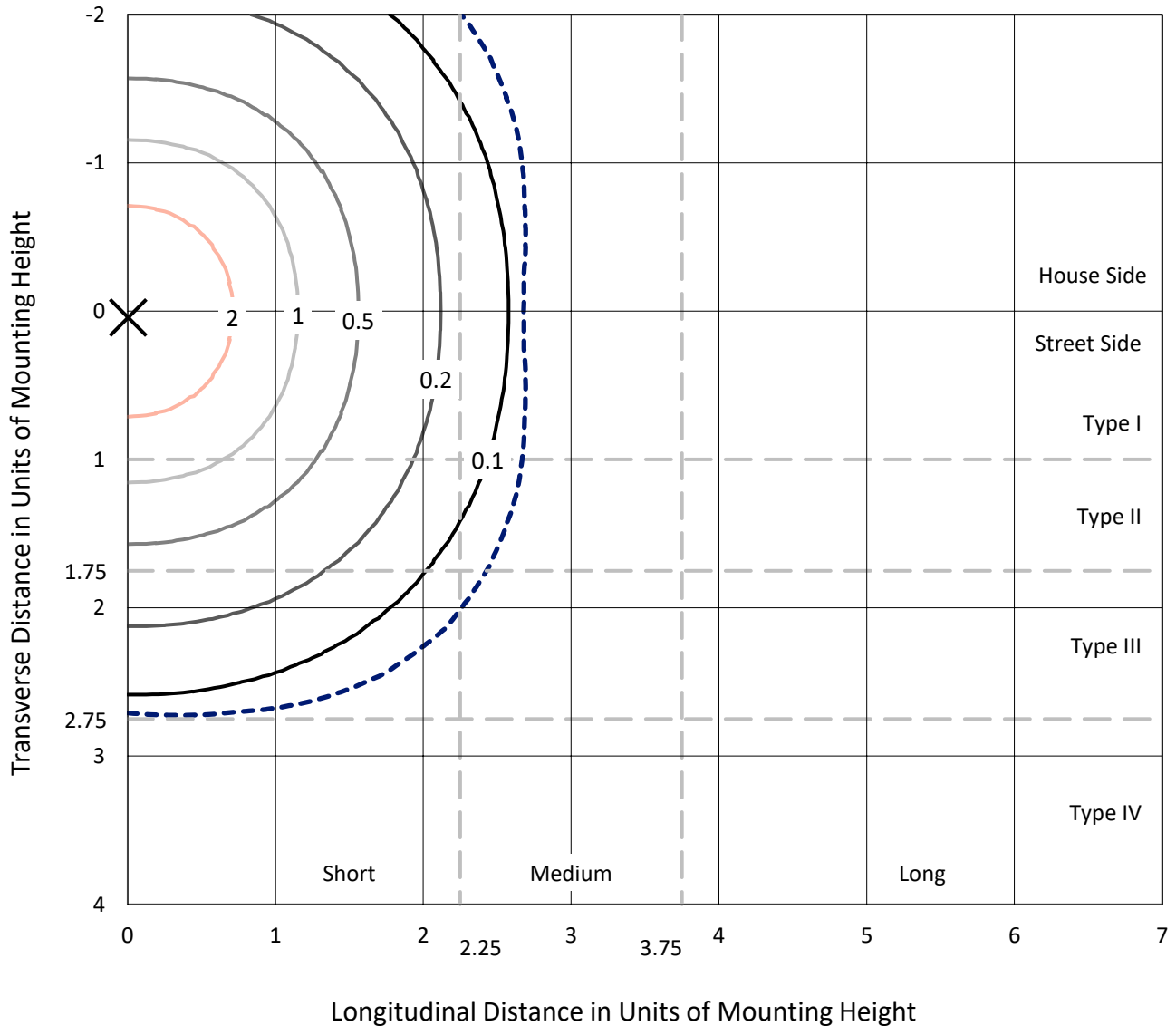
Lumens per Lamp: N/A  
Luminaire Lumens: 4454.7 lumens  
Efficiency: N/A  
Efficacy: 159.1 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')  
IES Classification: Type V - Short  
BUG Rating: B1 - U4 - G1

Input Watts (W): 28  
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

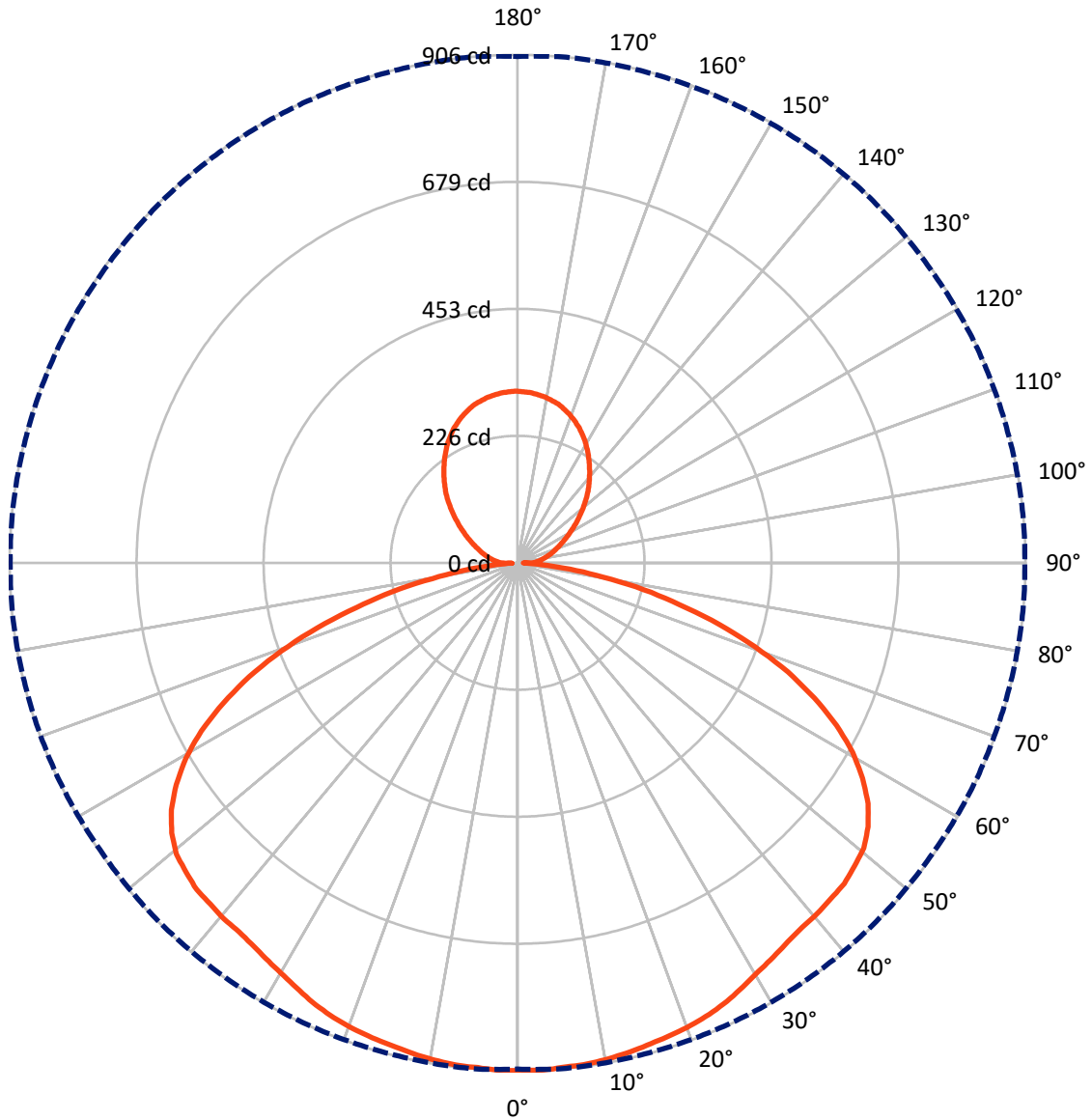
✕ Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 4 fc  
 Type V - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral      - - - Horizontal Cone Through 2.5-Deg Vertical

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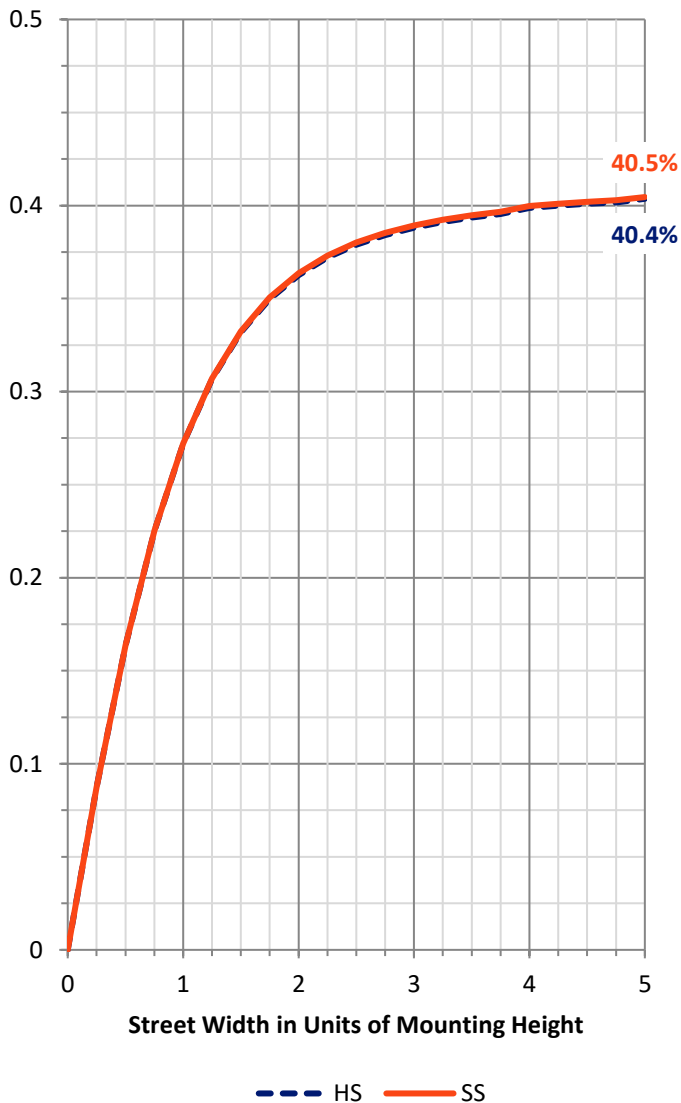
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1811.5	415.9	2227.4
	% Fixture	40.7	9.3	50.0
<b>Street Side</b>	Lumens	1811.5	415.9	2227.4
	% Fixture	40.7	9.3	50.0
<b>Total</b>	Lumens	3623.0	831.7	4454.7
	% Fixture	81.3	18.7	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.1	1.9
10°-20°	252.2	5.7
20°-30°	401.0	9.0
30°-40°	527.6	11.8
40°-50°	645.7	14.5
50°-60°	699.4	15.7
60°-70°	601.7	13.5
70°-80°	338.3	7.6
80°-90°	71.1	1.6
90°-100°	42.6	1.0
100°-110°	66.0	1.5
110°-120°	91.9	2.1
120°-130°	119.0	2.7
130°-140°	138.7	3.1
140°-150°	140.5	3.2
150°-160°	121.9	2.7
160°-170°	82.2	1.8
170°-180°	28.9	0.6
0°-90°	3623.0	81.3
0°-180°	4454.7	100.0

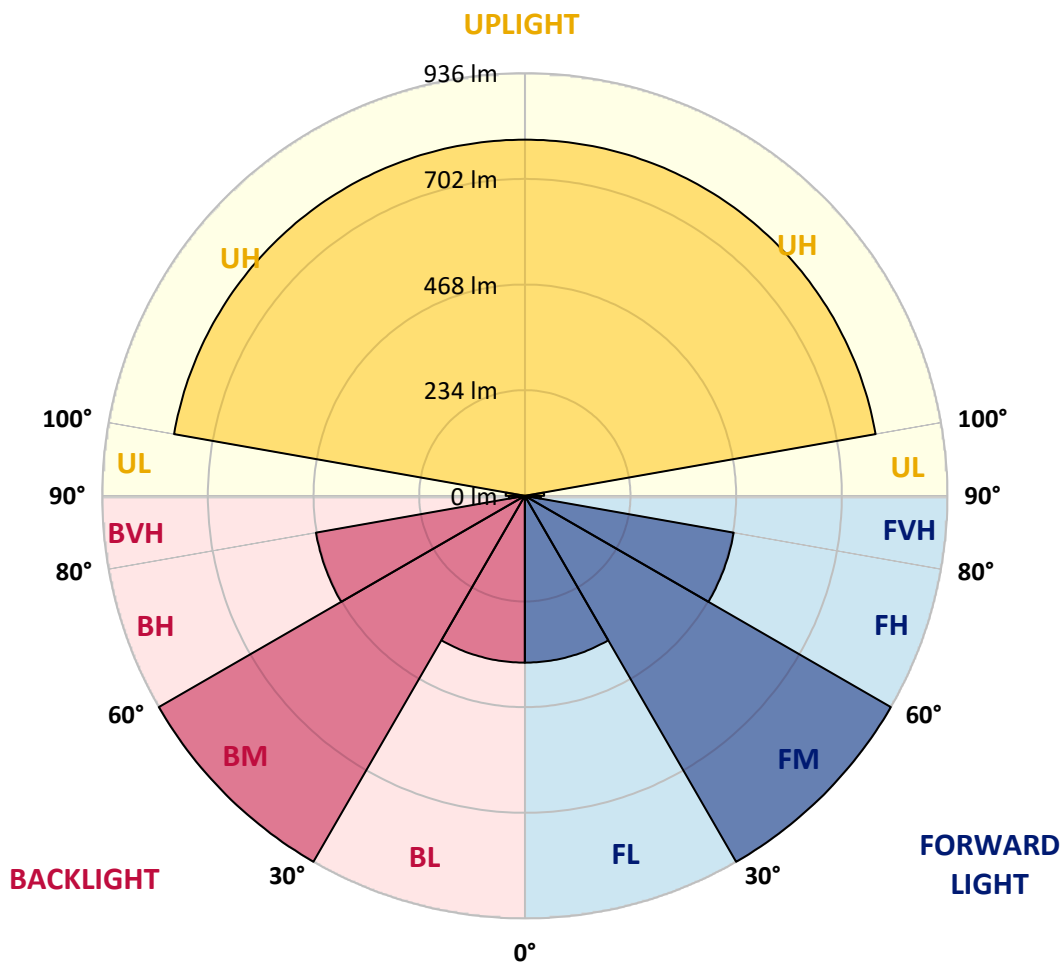


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	369.7	8.3			
FM (30°-60°)	936.3	21.0			
FH (60°-80°)	470.0	10.6			G0/660
FVH (80°-90°)	35.5	0.8			G1/100
BL (0°-30°)	369.7	8.3	B1/500		
BM (30°-60°)	936.3	21.0	B1/1000		
BH (60°-80°)	470.0	10.6	B1/500		G0/660
BVH (80°-90°)	35.5	0.8			G1/100
UL (90°-100°)	42.6	1.0		U2/50	
UH (100°-180°)	789.1	17.7		U4/1000	

**BUG Rating: B1-U4-G1**  
 Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	905.4	905.4	905.4	905.4	905.4	905.4	905.4	905.4	905.4	905.4	905.4
2.5°	903.1	905.9	904.8	904.8	904.8	904.8	903.6	904.8	904.8	905.4	904.8
5°	903.6	903.1	903.1	903.6	903.6	904.2	903.1	903.6	904.2	904.2	904.8
7.5°	901.9	902.5	901.3	902.5	901.3	901.9	901.9	902.5	901.9	902.5	903.6
10°	898.5	899.0	898.5	898.5	898.5	899.6	897.3	899.0	898.5	899.0	898.5
12.5°	892.1	895.0	893.8	895.0	895.0	895.0	893.3	894.4	895.0	895.0	895.0
15°	889.2	889.8	888.1	890.4	891.0	891.5	889.2	890.4	890.4	891.0	891.5
17.5°	882.9	885.8	885.2	886.9	886.4	888.1	887.5	886.9	886.4	887.5	886.4
20°	878.3	881.2	880.6	882.3	882.9	884.6	882.9	882.9	881.2	881.8	883.5
22.5°	873.7	874.8	874.8	876.6	876.6	878.3	876.6	876.0	876.0	875.4	877.1
25°	866.2	866.8	866.2	867.9	869.1	870.2	869.7	868.5	867.9	867.9	867.4
27.5°	854.1	856.4	857.6	859.9	860.4	862.2	859.9	859.9	858.7	857.6	858.1
30°	844.9	846.0	846.0	851.2	851.2	854.1	851.2	850.7	850.1	849.5	848.4
32.5°	836.3	838.0	839.7	843.7	846.6	847.8	846.0	844.9	842.0	840.3	839.7
35°	829.3	829.9	833.4	839.1	842.6	845.5	843.2	840.3	836.3	833.4	835.7
37.5°	824.2	824.7	829.9	837.4	843.7	846.0	842.6	838.0	831.6	828.2	827.0
40°	819.6	823.0	828.8	839.1	846.0	849.5	846.6	840.3	831.1	824.2	823.6
42.5°	817.2	819.0	827.6	839.7	849.5	854.1	850.1	841.4	829.9	821.9	821.3
45°	811.5	816.7	824.7	840.3	851.2	857.0	851.2	840.3	826.5	817.2	815.5
47.5°	806.9	808.6	821.3	839.1	852.4	857.0	851.2	837.4	820.1	808.0	806.9
50°	795.9	800.0	812.6	831.6	847.2	851.8	844.9	826.5	806.9	793.6	791.3
52.5°	779.2	782.7	797.7	821.3	836.3	841.4	831.1	811.5	788.5	772.3	772.3
55°	753.3	758.5	774.1	798.2	817.2	821.9	809.8	789.0	763.1	747.0	746.4
57.5°	722.2	725.7	742.4	768.9	787.3	794.2	782.1	759.1	733.2	714.2	712.4
60°	681.9	686.5	704.4	729.7	748.7	754.5	744.1	721.1	694.6	674.4	674.4
62.5°	633.5	638.7	656.6	682.5	702.1	710.7	696.3	674.4	646.8	627.2	625.5
65°	577.1	581.7	597.8	624.9	645.0	651.4	640.4	617.4	590.9	572.5	570.8
67.5°	513.7	520.1	536.2	559.2	576.5	584.6	577.7	556.9	529.3	510.3	508.5
70°	445.2	449.8	462.5	483.8	503.4	509.1	498.8	484.9	459.0	441.7	439.4
72.5°	372.1	376.1	386.5	406.6	420.4	427.9	422.2	404.3	383.6	369.2	371.5
75°	298.3	297.8	309.3	323.7	336.3	341.5	337.5	326.0	307.0	294.9	294.3
77.5°	224.6	230.4	234.4	246.5	256.9	260.9	255.1	245.9	231.5	221.7	223.5
80°	157.8	154.4	161.8	169.3	176.2	180.3	176.8	171.6	161.8	154.4	153.2
82.5°	96.8	93.9	97.3	104.2	108.9	110.0	110.6	104.2	100.2	94.5	95.6
85°	42.6	43.2	46.1	50.7	51.3	51.8	51.8	50.7	46.1	45.5	44.3
87.5°	10.4	10.4	10.9	12.7	12.7	13.2	13.2	11.5	10.9	9.8	10.4
90°	30.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
92.5°	34.8	34.2	34.2	33.8	33.8	33.8	33.8	33.8	33.8	33.8	33.8
95°	39.4	39.4	39.4	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
97.5°	44.6	44.6	44.6	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2
100°	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8
102.5°	55.9	55.9	55.9	55.9	55.9	55.9	55.9	56.4	55.9	55.9	55.9
105°	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.9	62.0	62.0	62.0
107.5°	68.6	68.6	69.0	69.0	69.0	69.0	69.0	69.5	69.0	69.0	69.0
110°	75.1	75.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	83.1	83.1	84.0	84.0	84.0	84.0	84.6	84.6	84.0	84.0	84.0
115°	91.1	91.1	92.0	92.0	92.0	92.0	93.0	93.0	92.0	92.0	92.0
117.5°	100.5	100.5	101.0	101.4	101.4	101.4	102.4	102.4	101.4	101.4	101.4
120°	109.9	109.9	109.9	110.8	110.8	110.8	111.8	111.8	110.8	110.8	110.8
122.5°	120.7	120.7	121.2	121.6	121.6	121.6	122.6	122.6	122.1	122.1	121.6
125°	131.5	131.5	132.4	132.4	132.4	132.4	133.4	133.4	133.4	133.4	132.4
127.5°	143.2	143.2	144.2	144.2	144.2	144.2	145.1	145.1	145.1	145.1	144.2
130°	155.0	155.0	155.9	155.9	155.9	155.9	156.8	156.8	156.8	156.8	155.9
132.5°	167.2	167.2	167.6	167.6	167.6	168.1	168.6	168.6	168.6	168.6	168.1
135°	179.4	179.4	179.4	179.4	179.4	180.3	180.3	180.3	180.3	180.3	180.3
137.5°	191.2	190.6	191.2	190.6	191.2	191.6	191.6	191.6	191.6	191.6	191.6
140°	202.9	201.9	202.9	201.9	202.9	202.9	202.9	202.9	202.9	202.9	202.9
142.5°	213.7	213.2	213.7	212.7	213.7	213.7	213.7	213.7	213.7	213.7	213.7
145°	224.5	224.5	224.5	223.5	224.5	224.5	224.5	224.5	224.5	224.5	224.5
147.5°	235.8	235.3	235.8	234.8	235.8	235.8	235.8	235.8	235.8	235.8	235.8
150°	247.0	246.1	247.0	246.1	247.0	247.0	247.0	247.0	247.0	247.0	247.0
152.5°	256.0	255.5	256.4	255.5	256.0	256.0	256.4	256.0	256.0	256.0	256.0
155°	264.9	264.9	265.8	264.9	264.9	264.9	265.8	264.9	264.9	264.9	264.9
157.5°	272.4	272.4	273.3	272.4	272.4	272.4	273.3	272.4	272.4	272.4	272.4
160°	279.9	279.9	280.8	279.9	279.9	279.9	280.8	279.9	279.9	279.9	279.9
162.5°	286.0	286.0	286.9	286.0	286.0	286.0	286.9	286.0	286.0	286.0	286.0
165°	292.1	292.1	293.0	292.1	292.1	292.1	293.0	292.1	292.1	292.1	292.1
167.5°	295.8	295.8	296.8	295.8	295.8	295.8	296.8	295.8	295.8	295.8	295.8
170°	299.6	299.6	300.5	299.6	299.6	299.6	300.5	299.6	299.6	299.6	299.6
172.5°	302.0	302.0	302.8	302.0	302.4	302.0	302.8	302.0	302.0	302.0	302.0
175°	304.3	304.3	305.2	304.3	305.2	304.3	305.2	304.3	304.3	304.3	304.3
177.5°	305.2	305.2	305.7	305.2	305.7	305.2	305.7	305.2	305.2	305.2	305.2
180°	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2

(END OF REPORT)