

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: P821195

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

Issue Date: 7/23/2020



Test Information

Test Method: LM-79-08
Report Number: P821195
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-MQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3500K, 70 CRI LEDS AND MEDIUM DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

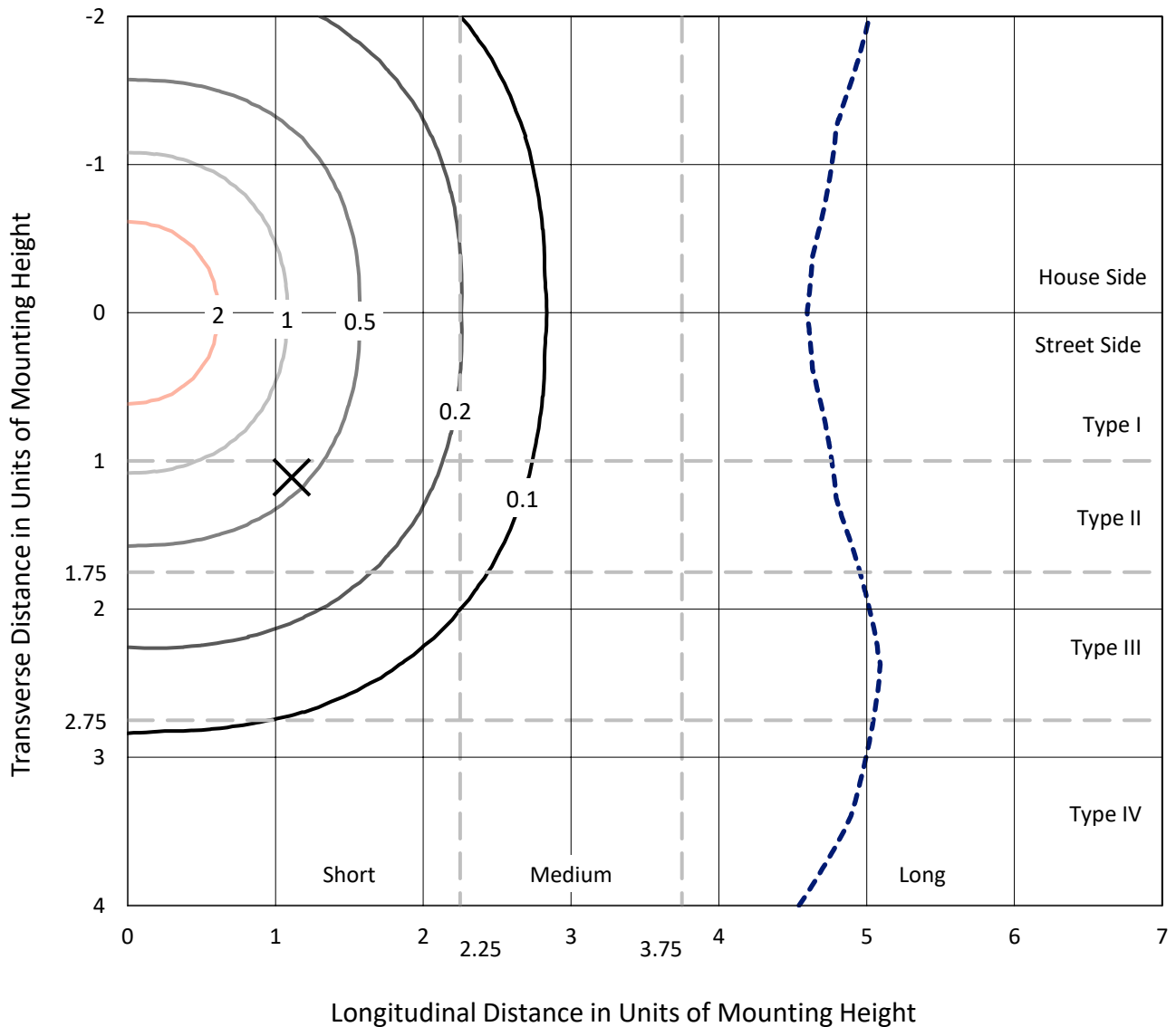
Lumens per Lamp: N/A
Luminaire Lumens: 4706.7 lumens
Efficiency: N/A
Efficacy: 168.1 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B2 - U4 - G1

Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): 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

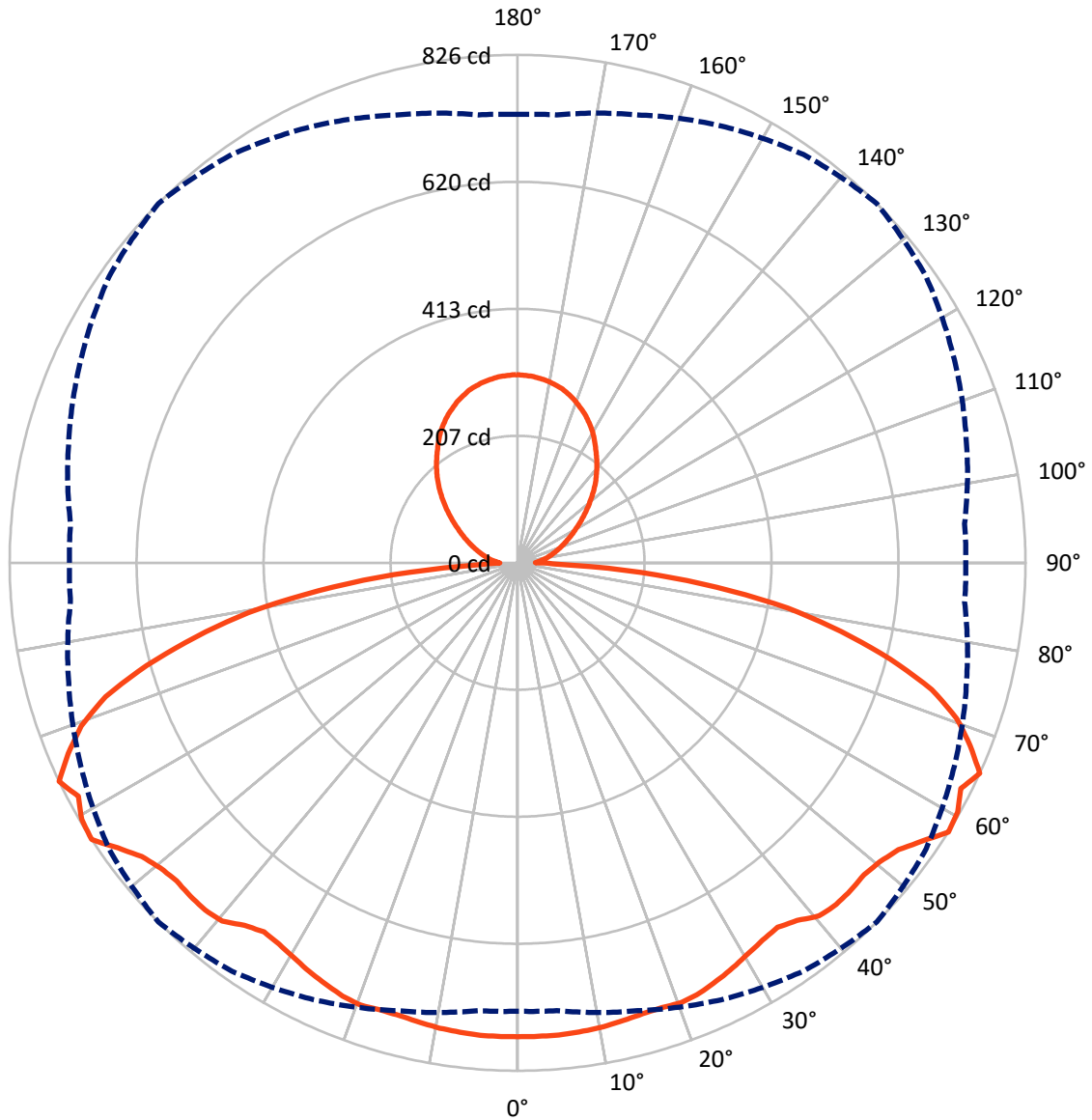
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 3.4 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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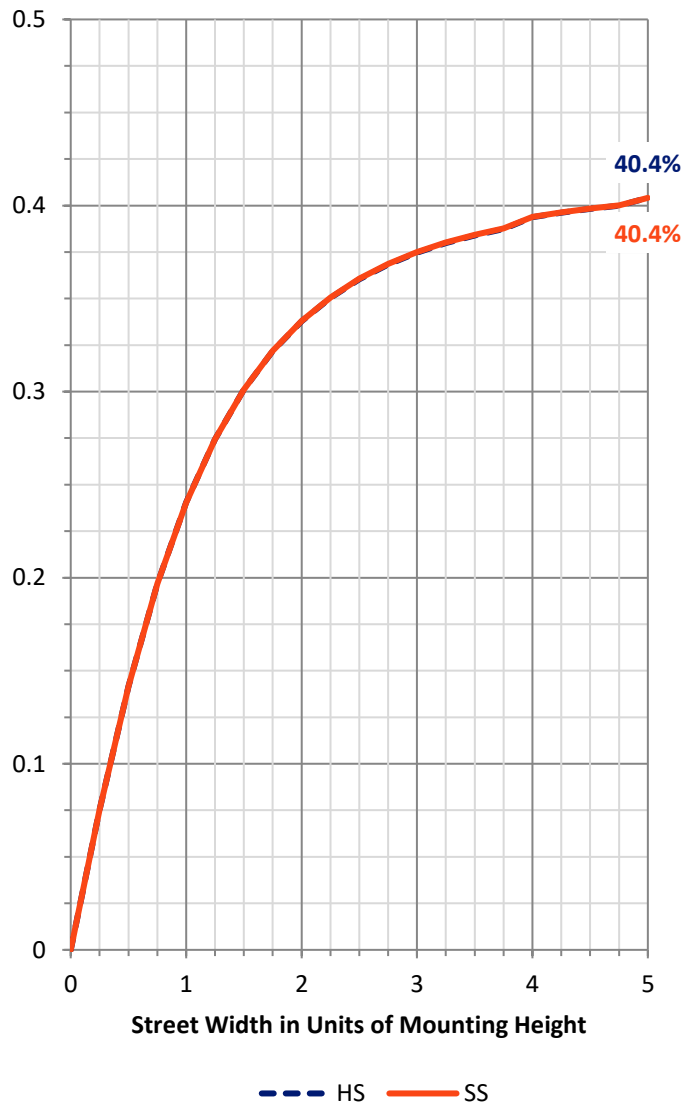
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1937.5	415.9	2353.4
	% Fixture	41.2	8.8	50.0
Street Side	Lumens	1937.5	415.9	2353.4
	% Fixture	41.2	8.8	50.0
Total	Lumens	3875.0	831.7	4706.7
	% Fixture	82.3	17.7	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.5	1.6
10°-20°	216.1	4.6
20°-30°	347.2	7.4
30°-40°	458.4	9.7
40°-50°	573.5	12.2
50°-60°	682.1	14.5
60°-70°	739.9	15.7
70°-80°	588.9	12.5
80°-90°	195.4	4.2
90°-100°	42.6	0.9
100°-110°	66.0	1.4
110°-120°	91.9	2.0
120°-130°	119.0	2.5
130°-140°	138.7	2.9
140°-150°	140.5	3.0
150°-160°	121.9	2.6
160°-170°	82.2	1.7
170°-180°	28.9	0.6
0°-90°	3875.0	82.3
0°-180°	4706.7	100.0

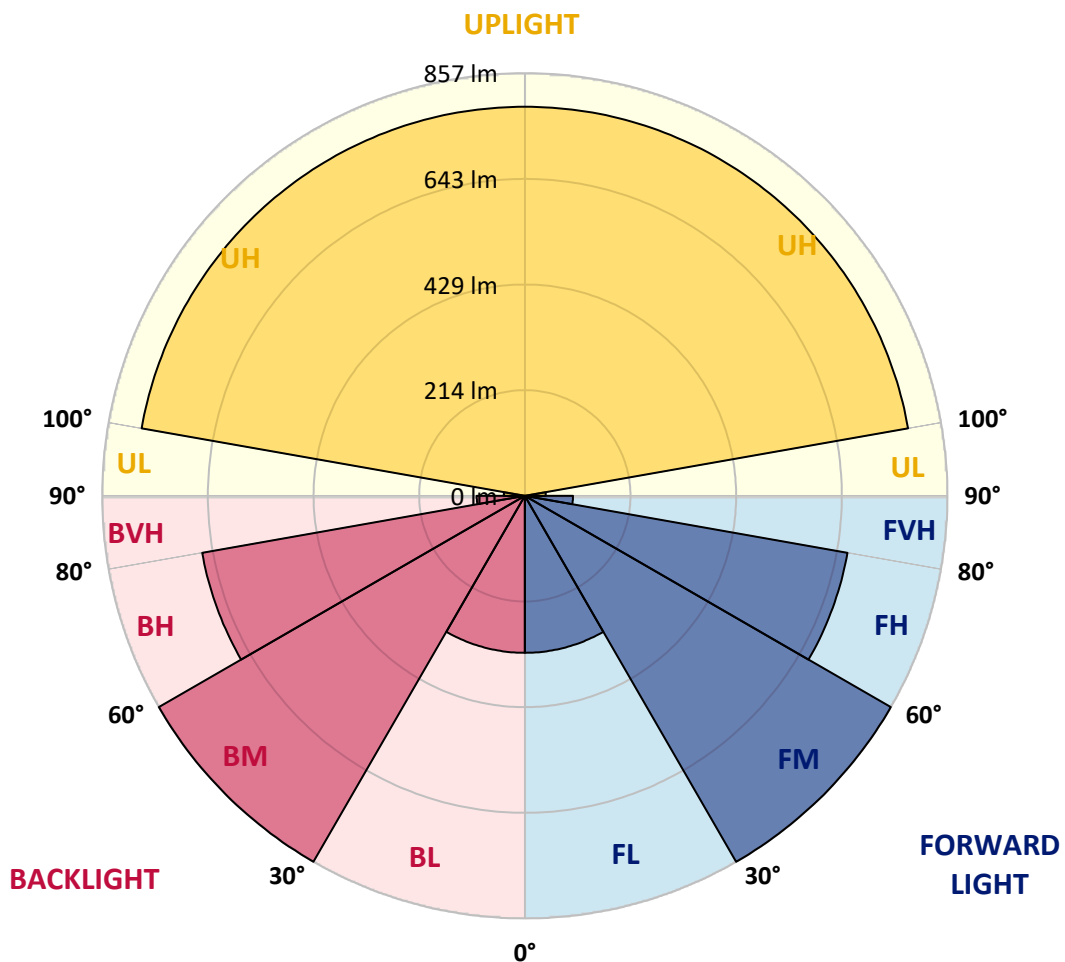


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	318.4	6.8			
FM (30°-60°)	857.0	18.2			
FH (60°-80°)	664.4	14.1			G1/1800
FVH (80°-90°)	97.7	2.1			G1/100
BL (0°-30°)	318.4	6.8	B1/500		
BM (30°-60°)	857.0	18.2	B1/1000		
BH (60°-80°)	664.4	14.1	B2/1000		G1/1800
BVH (80°-90°)	97.7	2.1			G1/100
UL (90°-100°)	42.6	0.9		U2/50	
UH (100°-180°)	789.1	16.8		U4/1000	

BUG Rating: B2-U4-G1
 Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	771.0	771.0	771.0	771.0	771.0	771.0	771.0	771.0	771.0	771.0	771.0
2.5°	772.1	771.6	772.1	771.6	771.6	771.0	771.6	771.6	771.6	771.6	771.6
5°	771.6	771.0	771.0	771.6	771.0	771.0	771.0	771.0	771.0	771.0	771.0
7.5°	769.3	769.3	769.8	769.3	769.3	769.3	769.3	769.3	769.3	769.8	769.8
10°	767.5	767.0	767.5	767.5	767.0	767.5	767.0	767.5	767.5	767.5	767.5
12.5°	765.2	764.6	765.2	765.2	764.6	764.1	764.6	764.6	765.2	765.2	765.2
15°	761.2	761.2	762.3	761.8	761.8	761.2	762.3	761.8	761.2	761.8	761.8
17.5°	758.3	758.3	759.5	760.6	760.6	760.6	760.6	760.0	758.9	759.5	758.3
20°	758.9	759.5	760.0	761.8	762.9	763.5	763.5	761.8	760.0	760.6	760.0
22.5°	757.2	756.6	757.2	758.3	760.0	760.0	760.0	757.7	757.2	756.6	756.6
25°	750.3	750.3	751.4	752.6	753.7	753.1	753.7	752.6	751.4	750.3	750.3
27.5°	742.2	742.2	743.9	745.1	746.2	746.2	745.6	744.5	743.9	742.8	742.2
30°	734.1	734.1	735.9	737.0	738.7	738.2	738.2	736.4	734.7	733.6	733.6
32.5°	725.5	724.9	726.6	729.5	731.8	731.8	731.8	728.4	726.1	724.9	724.3
35°	718.0	718.0	720.3	725.5	728.4	728.4	727.2	724.9	719.7	718.0	718.0
37.5°	715.7	717.4	723.8	731.3	737.0	738.2	736.4	730.1	723.2	718.0	716.3
40°	723.2	724.9	733.0	745.1	753.7	755.4	753.7	744.5	732.4	724.3	723.8
42.5°	724.3	725.5	735.3	749.1	757.2	760.0	757.2	748.0	734.7	724.9	724.3
45°	720.3	720.9	732.4	746.8	756.6	760.0	756.6	745.6	731.8	720.9	720.3
47.5°	715.1	716.3	729.0	743.9	756.0	758.3	755.4	743.3	727.8	716.9	715.1
50°	711.1	714.6	726.1	742.8	757.2	764.1	757.2	741.0	725.5	713.4	711.1
52.5°	713.4	714.6	729.5	753.1	772.7	775.6	772.1	753.1	728.4	714.6	712.8
55°	720.3	725.5	741.6	775.6	793.4	798.6	791.1	774.4	742.2	725.5	720.3
57.5°	729.5	731.3	754.3	784.2	810.7	826.3	811.3	783.7	756.0	730.1	729.0
60°	722.0	716.9	745.6	780.8	816.5	822.8	814.2	781.3	744.5	716.3	721.5
62.5°	701.9	705.3	729.0	777.3	802.1	809.0	799.8	777.3	727.8	708.2	700.2
65°	685.8	706.5	732.4	767.0	806.7	826.3	807.3	765.8	733.6	703.0	684.0
67.5°	663.3	667.3	705.9	748.5	784.2	794.0	783.7	749.1	702.5	664.5	667.3
70°	625.3	619.6	658.7	708.2	742.2	757.7	743.3	705.9	657.0	618.4	623.6
72.5°	562.5	566.0	602.3	654.7	689.8	704.8	690.4	650.6	601.1	569.5	566.0
75°	496.9	500.9	536.1	583.9	619.6	625.9	621.9	581.0	537.2	500.4	496.9
77.5°	422.1	426.1	454.9	507.3	528.6	538.4	529.7	510.2	453.7	425.5	420.9
80°	339.1	338.0	363.3	408.2	434.7	445.7	434.7	409.4	362.2	340.3	332.8
82.5°	242.4	243.6	267.2	298.3	323.6	327.0	321.9	301.1	264.9	246.4	236.1
85°	134.7	139.9	157.2	180.2	196.9	202.7	194.0	174.5	156.6	142.2	137.6
87.5°	32.2	35.1	40.9	51.8	58.2	63.9	58.2	54.1	38.6	35.1	32.2
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	167.6	168.6	168.6	168.6	168.6	168.1
135°	179.4	179.4	179.4	179.4	179.4	179.4	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)