

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: P821121

Luminaire Tested: **TT-D1-830-24VDC-MQ-UPL**

Issue Date: 7/23/2020

Test Information

Test Method: LM-79-08
Report Number: P821121
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-D1-830-24VDC-MQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3000K, 80 CRI LEDS AND MEDIUM DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

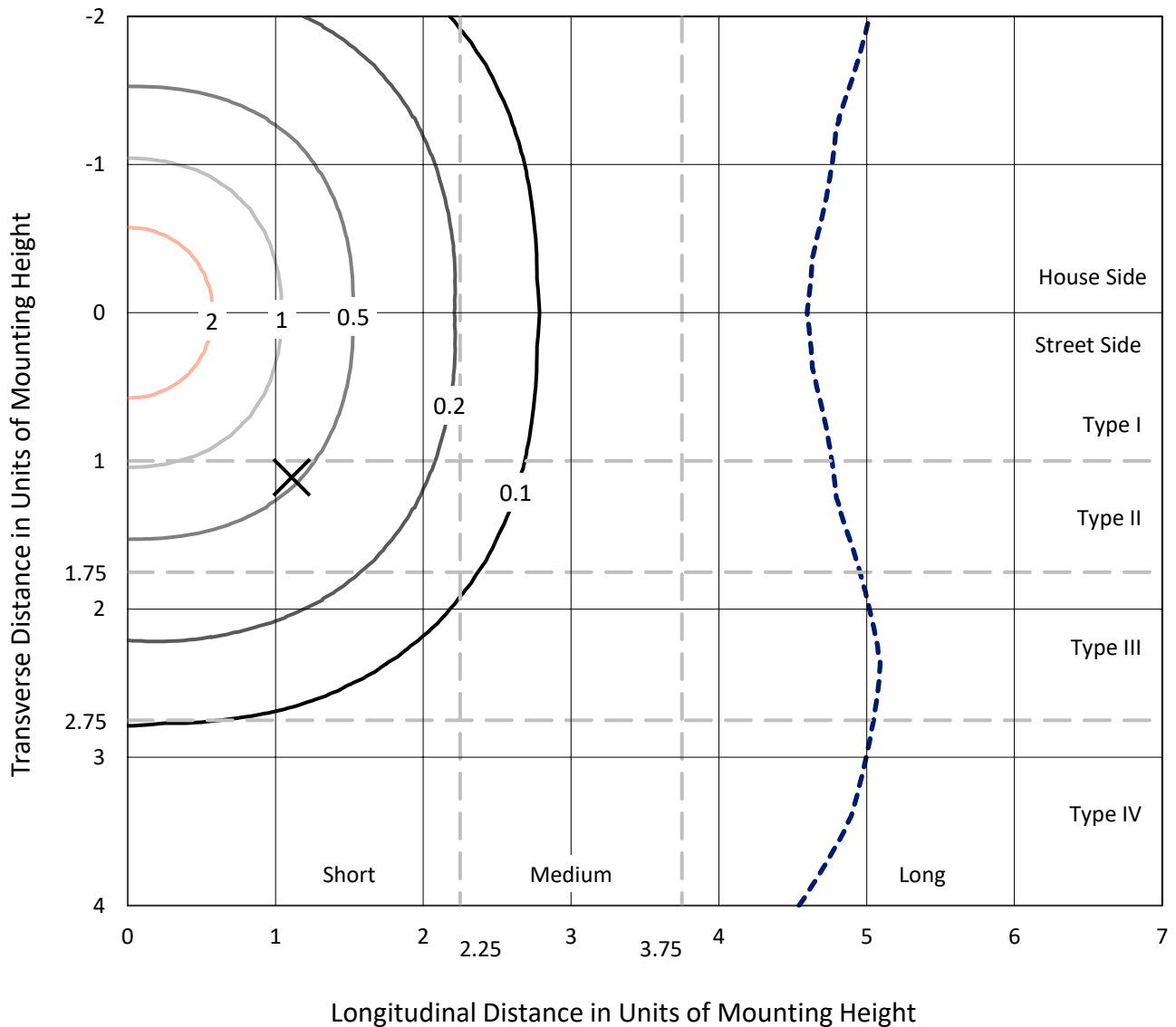
Lumens per Lamp: N/A
Luminaire Lumens: 4482.7 lumens
Efficiency: N/A
Efficacy: 160.1 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B2 - U4 - G1

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

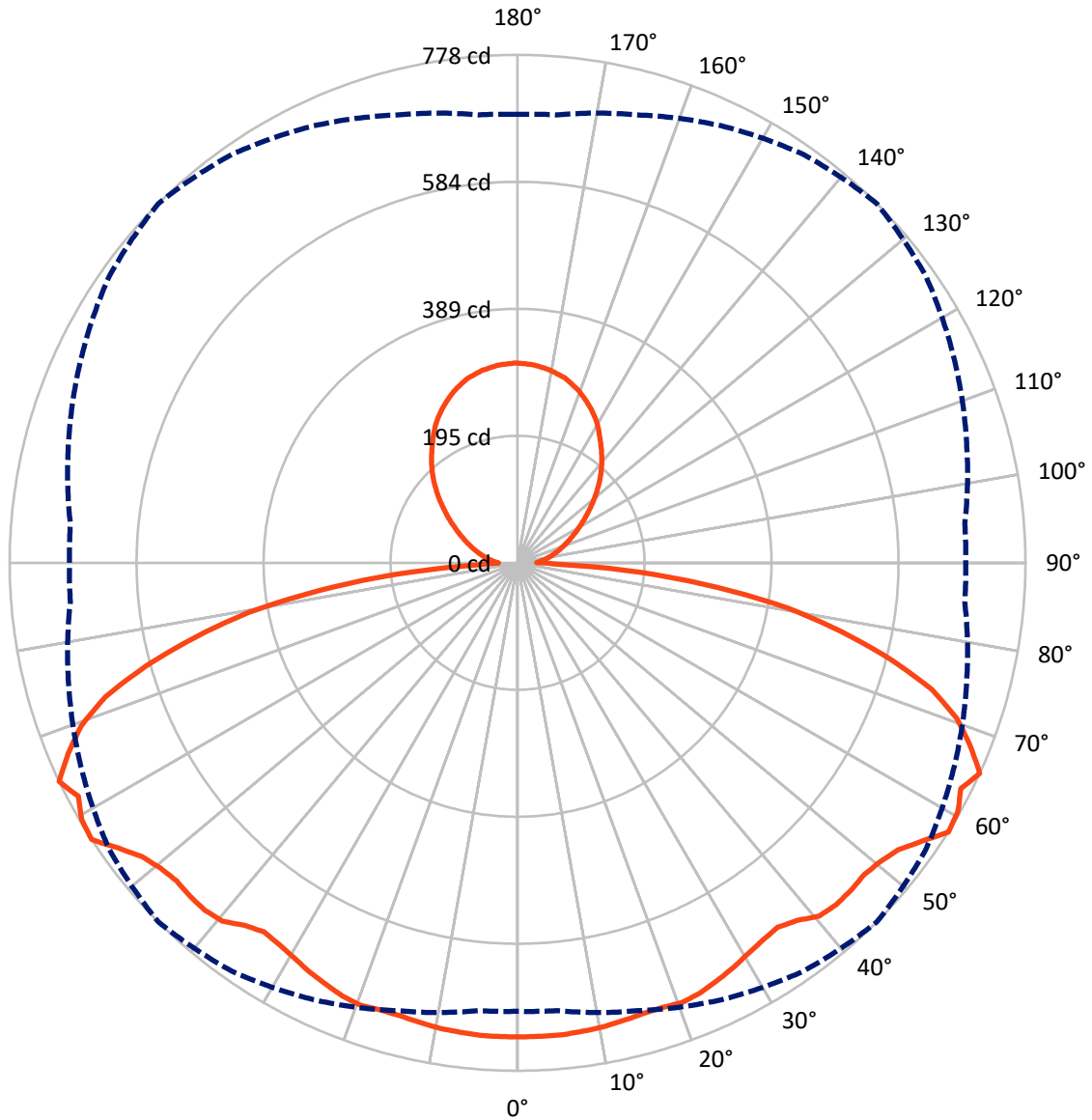
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 3.2 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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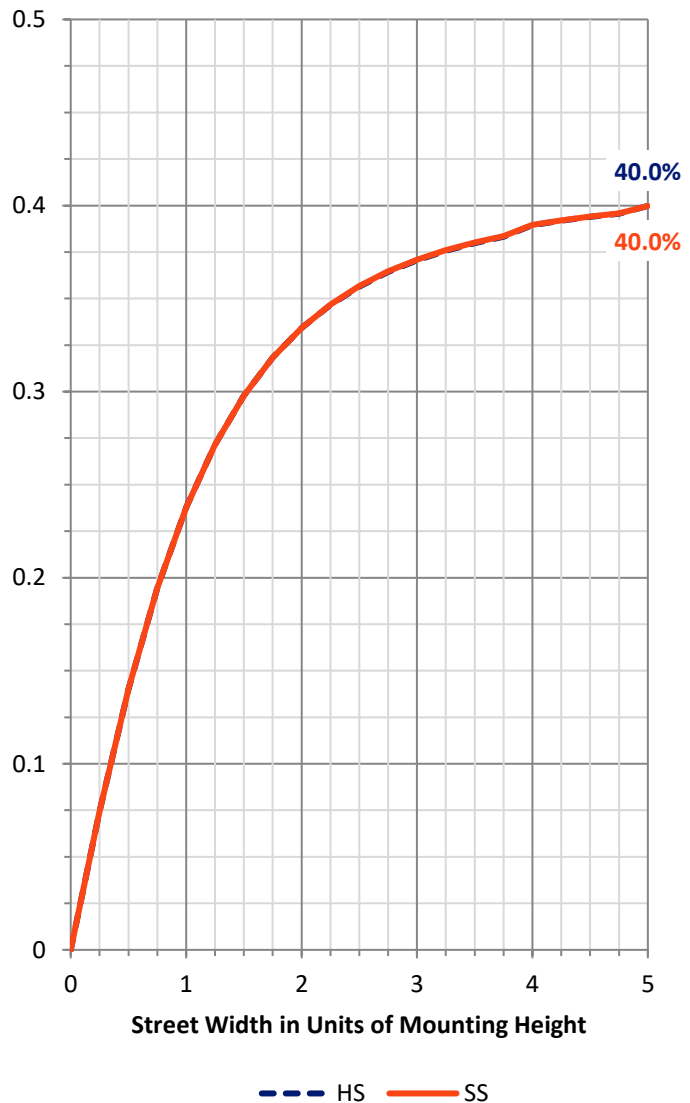
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1825.5	415.9	2241.4
	% Fixture	40.7	9.3	50.0
Street Side	Lumens	1825.5	415.9	2241.4
	% Fixture	40.7	9.3	50.0
Total	Lumens	3651.0	831.7	4482.7
	% Fixture	81.4	18.6	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.2	1.5
10°-20°	203.6	4.5
20°-30°	327.1	7.3
30°-40°	431.9	9.6
40°-50°	540.3	12.1
50°-60°	642.7	14.3
60°-70°	697.0	15.5
70°-80°	554.8	12.4
80°-90°	184.3	4.1
90°-100°	42.6	1.0
100°-110°	66.0	1.5
110°-120°	91.9	2.0
120°-130°	119.0	2.7
130°-140°	138.7	3.1
140°-150°	140.5	3.1
150°-160°	121.9	2.7
160°-170°	82.2	1.8
170°-180°	28.9	0.6
0°-90°	3651.0	81.4
0°-180°	4482.7	100.0

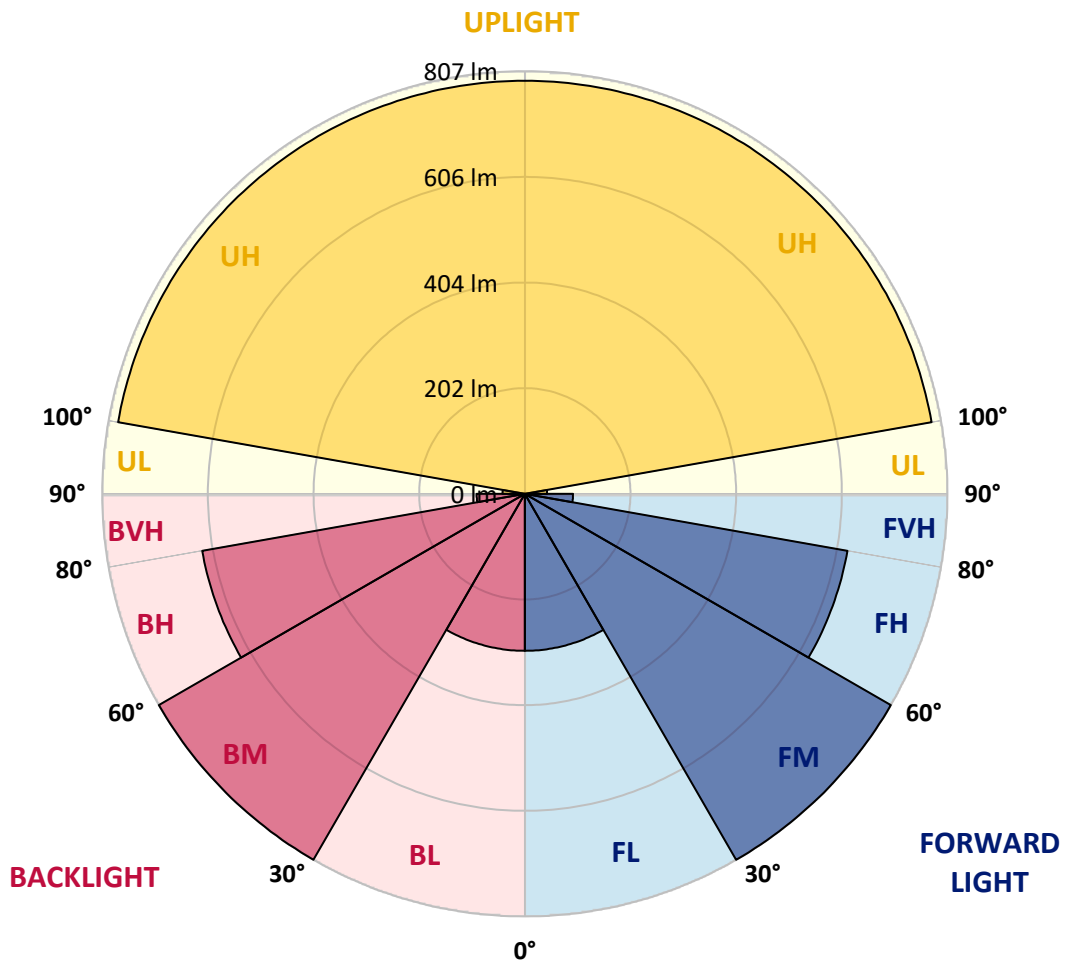


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	300.0	6.7			
FM (30°-60°)	807.4	18.0			
FH (60°-80°)	625.9	14.0			G0/660
FVH (80°-90°)	92.2	2.1			G1/100
BL (0°-30°)	300.0	6.7	B1/500		
BM (30°-60°)	807.4	18.0	B1/1000		
BH (60°-80°)	625.9	14.0	B2/1000		G0/660
BVH (80°-90°)	92.2	2.1			G1/100
UL (90°-100°)	42.6	1.0		U2/50	
UH (100°-180°)	789.1	17.6		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°	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4
2.5°	727.5	726.9	727.5	726.9	726.9	726.4	726.9	726.9	726.9	726.9	726.9
5°	726.9	726.4	726.4	726.9	726.4	726.4	726.4	726.4	726.4	726.4	726.4
7.5°	724.7	724.7	725.3	724.7	724.7	724.7	724.7	724.7	724.7	725.3	725.3
10°	723.1	722.6	723.1	723.1	722.6	723.1	722.6	723.1	723.1	723.1	723.1
12.5°	720.9	720.4	720.9	720.9	720.4	719.9	720.4	720.4	720.9	720.9	720.9
15°	717.1	717.1	718.2	717.7	717.7	717.1	718.2	717.7	717.1	717.7	717.7
17.5°	714.4	714.4	715.5	716.6	716.6	716.6	716.6	716.1	715.0	715.5	714.4
20°	715.0	715.5	716.1	717.7	718.8	719.3	719.3	717.7	716.1	716.6	716.1
22.5°	713.4	712.8	713.4	714.4	716.1	716.1	716.1	713.9	713.4	712.8	712.8
25°	706.8	706.8	707.9	709.0	710.1	709.6	710.1	709.0	707.9	706.8	706.8
27.5°	699.2	699.2	700.9	702.0	703.0	703.0	702.5	701.4	700.9	699.8	699.2
30°	691.7	691.7	693.3	694.4	696.0	695.4	695.4	693.8	692.2	691.1	691.1
32.5°	683.5	683.0	684.6	687.3	689.5	689.5	689.5	686.2	684.1	683.0	682.4
35°	676.5	676.5	678.6	683.5	686.2	686.2	685.1	683.0	678.1	676.5	676.5
37.5°	674.3	675.9	681.9	688.9	694.4	695.4	693.8	687.9	681.3	676.5	674.8
40°	681.3	683.0	690.6	702.0	710.1	711.7	710.1	701.4	690.0	682.4	681.9
42.5°	682.4	683.5	692.7	705.8	713.4	716.1	713.4	704.7	692.2	683.0	682.4
45°	678.6	679.2	690.0	703.6	712.8	716.1	712.8	702.5	689.5	679.2	678.6
47.5°	673.7	674.8	686.8	700.9	712.3	714.4	711.7	700.3	685.7	675.4	673.7
50°	670.0	673.2	684.1	699.8	713.4	719.9	713.4	698.2	683.5	672.1	670.0
52.5°	672.1	673.2	687.3	709.6	728.0	730.7	727.5	709.6	686.2	673.2	671.6
55°	678.6	683.5	698.7	730.7	747.5	752.4	745.4	729.6	699.2	683.5	678.6
57.5°	687.3	688.9	710.6	738.8	763.8	778.4	764.3	738.3	712.3	687.9	686.8
60°	680.3	675.4	702.5	735.6	769.2	775.2	767.1	736.1	701.4	674.8	679.7
62.5°	661.3	664.5	686.8	732.3	755.7	762.2	753.5	732.3	685.7	667.2	659.6
65°	646.1	665.6	690.0	722.6	760.0	778.4	760.5	721.5	691.1	662.4	644.5
67.5°	624.9	628.7	665.1	705.2	738.8	748.1	738.3	705.8	661.8	626.0	628.7
70°	589.1	583.7	620.6	667.2	699.2	713.9	700.3	665.1	619.0	582.6	587.5
72.5°	530.0	533.2	567.4	616.8	649.9	664.0	650.4	613.0	566.3	536.5	533.2
75°	468.2	472.0	505.0	550.1	583.7	589.7	585.9	547.4	506.1	471.4	468.2
77.5°	397.6	401.4	428.6	477.9	498.0	507.2	499.1	480.6	427.5	400.9	396.5
80°	319.5	318.4	342.3	384.6	409.6	419.9	409.6	385.7	341.2	320.6	313.5
82.5°	228.4	229.5	251.7	281.0	304.9	308.1	303.2	283.7	249.5	232.2	222.4
85°	126.9	131.8	148.1	169.8	185.5	191.0	182.8	164.4	147.6	134.0	129.7
87.5°	30.4	33.1	38.5	48.8	54.8	60.2	54.8	51.0	36.3	33.1	30.4
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	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)