

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: P821198

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

Issue Date: 10/29/2020



Test Information

Test Method: LM-79-08
Report Number: P821198
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-2) AND
Test Lab: INNOVATION CENTER
Issue Date: 10/29/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D1-735-24VDC-RW-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3500K, 70 CRI LEDS AND RECTANGULAR DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

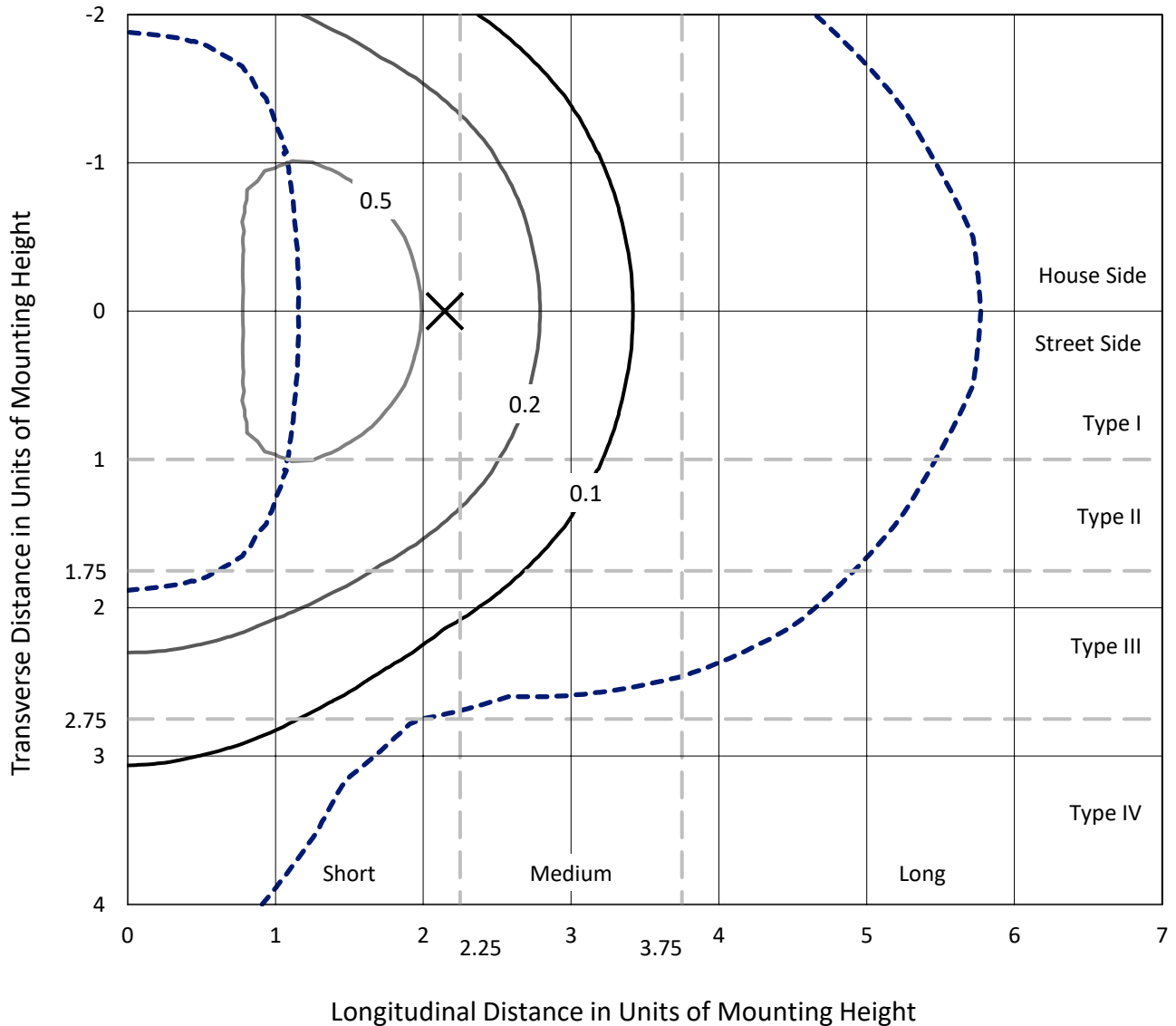
Lumens per Lamp: N/A
Luminaire Lumens: 3762.7 lumens
Efficiency: N/A
Efficacy: 134.4 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type IV - Short
BUG Rating: B2 - U4 - G2

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

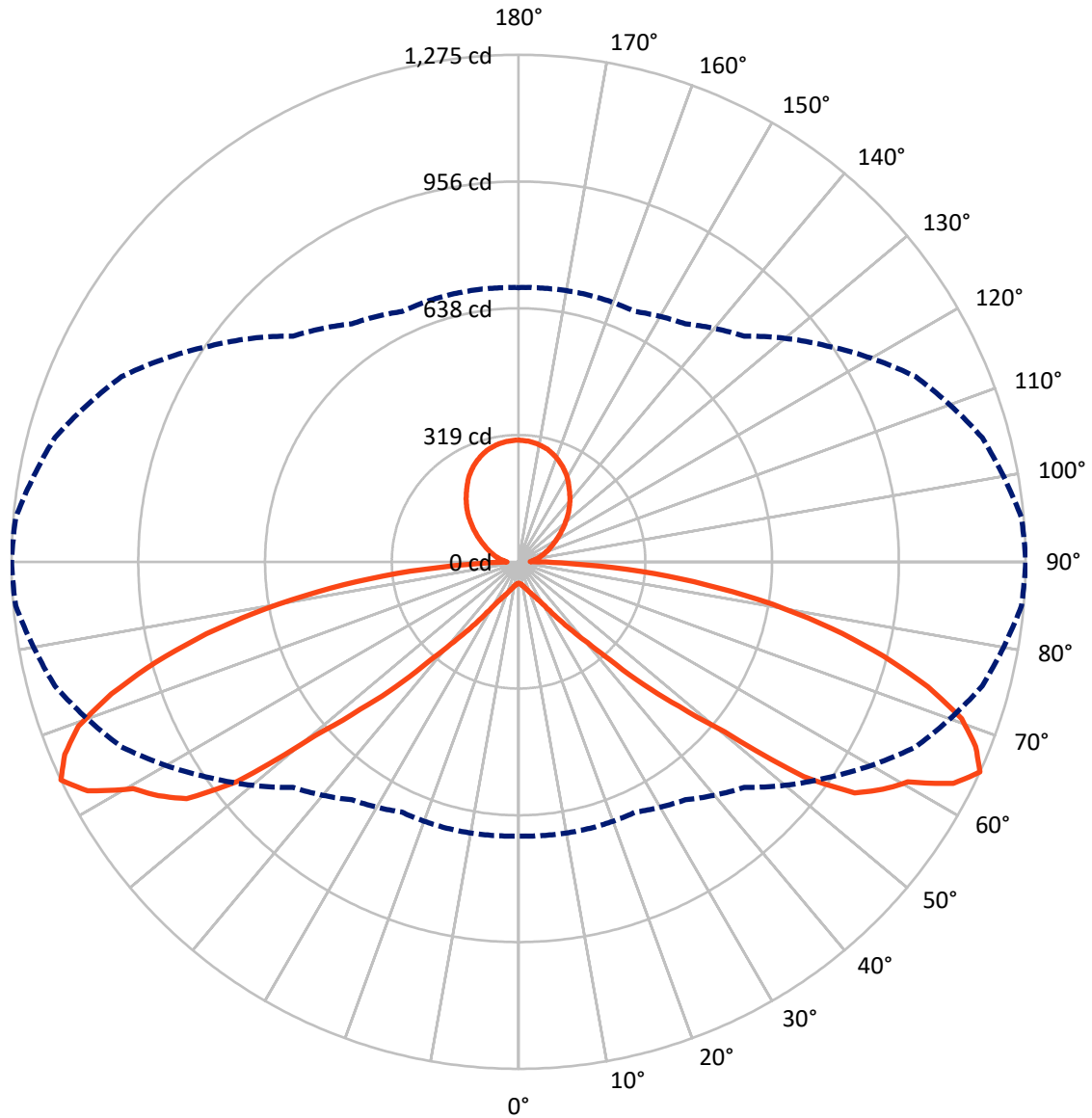
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 0.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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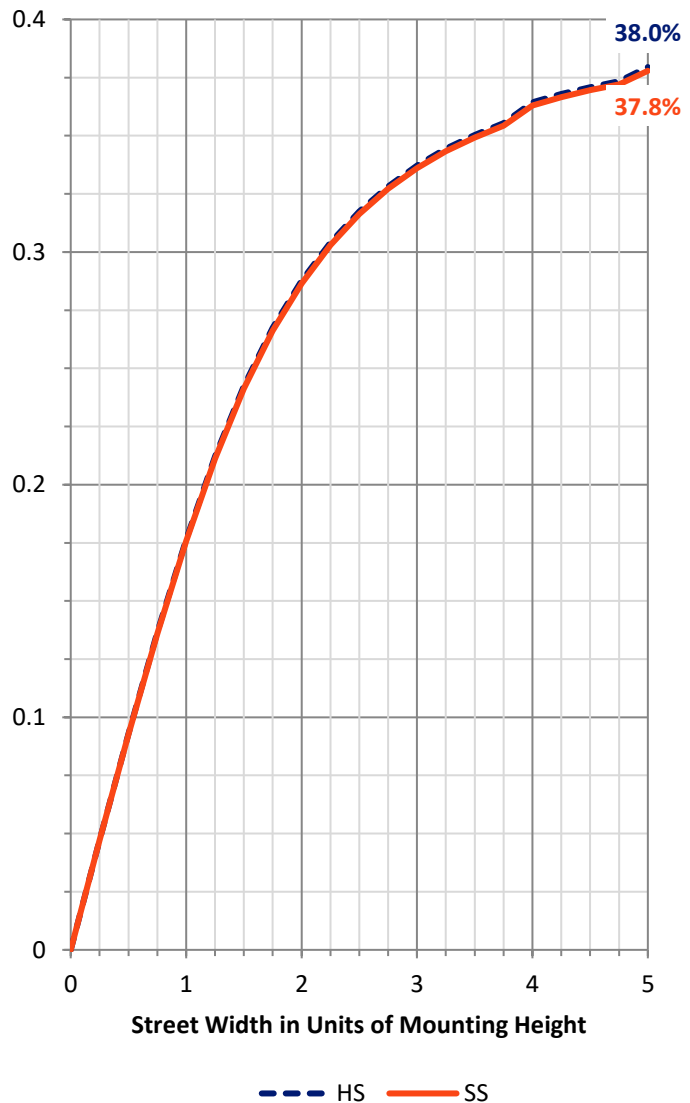
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1465.5	415.9	1881.4
	% Fixture	38.9	11.1	50.0
Street Side	Lumens	1465.5	415.9	1881.4
	% Fixture	38.9	11.1	50.0
Total	Lumens	2931.0	831.7	3762.7
	% Fixture	77.9	22.1	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.6	0.1
10°-20°	20.9	0.6
20°-30°	48.2	1.3
30°-40°	109.1	2.9
40°-50°	265.7	7.1
50°-60°	597.4	15.9
60°-70°	873.1	23.2
70°-80°	760.7	20.2
80°-90°	250.4	6.7
90°-100°	42.6	1.1
100°-110°	66.0	1.8
110°-120°	91.9	2.4
120°-130°	119.0	3.2
130°-140°	138.7	3.7
140°-150°	140.5	3.7
150°-160°	121.9	3.2
160°-170°	82.2	2.2
170°-180°	28.9	0.8
0°-90°	2931.0	77.9
0°-180°	3762.7	100.0

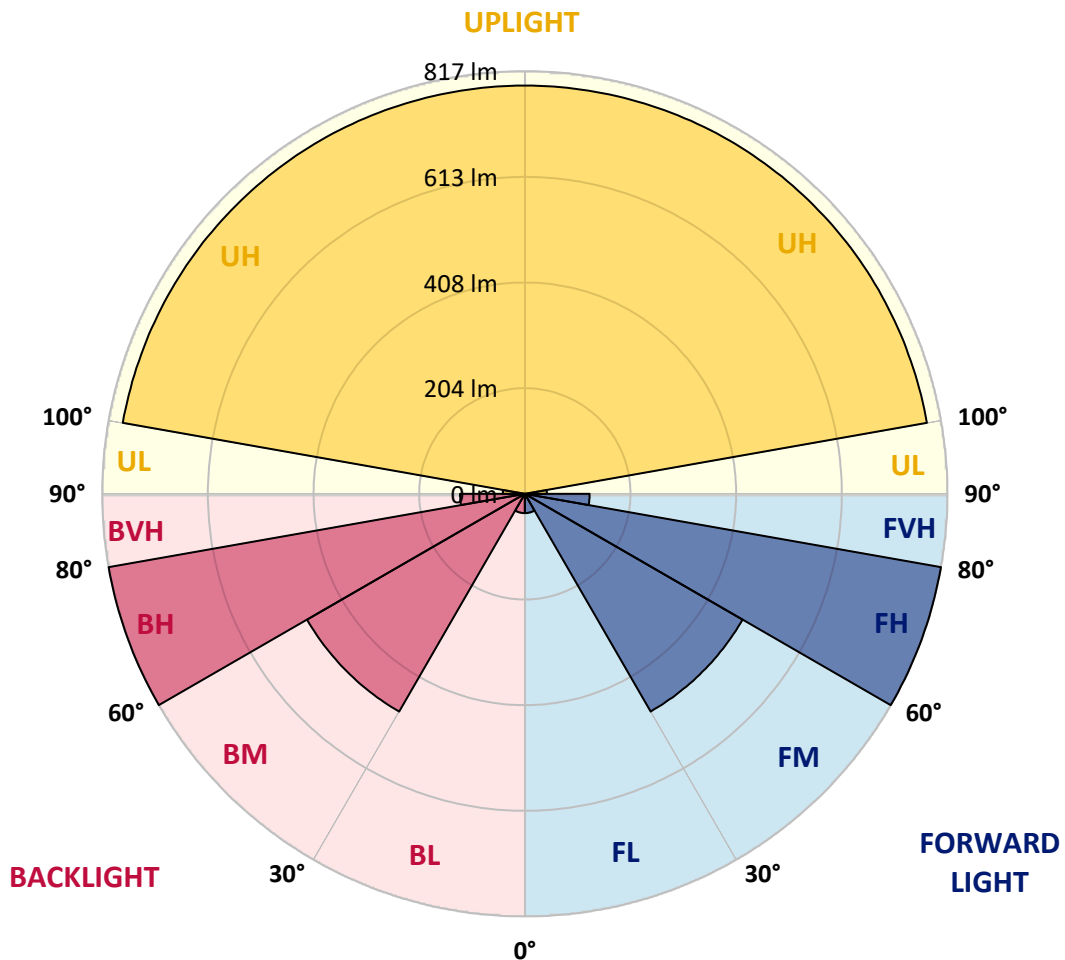


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	37.3	1.0			
FM (30°-60°)	486.1	12.9			
FH (60°-80°)	816.9	21.7			G1/1800
FVH (80°-90°)	125.2	3.3			G2/225
BL (0°-30°)	37.3	1.0	B0/110		
BM (30°-60°)	486.1	12.9	B1/1000		
BH (60°-80°)	816.9	21.7	B2/1000		G2/1000
BVH (80°-90°)	125.2	3.3			G2/225
UL (90°-100°)	42.6	1.1		U2/50	
UH (100°-180°)	789.1	21.0		U4/1000	

BUG Rating: B2-U4-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	53.5	53.5	53.5	53.5	53.5	53.5	53.5	53.5	53.5	53.5	53.5
2.5°	54.2	54.2	54.9	54.9	54.9	54.9	54.9	54.9	54.9	54.9	54.9
5°	56.3	56.3	56.3	56.3	56.9	56.9	56.3	56.3	56.3	56.3	56.3
7.5°	59.7	59.0	59.7	59.7	59.7	59.0	59.0	59.0	58.3	58.3	58.3
10°	63.2	63.2	63.9	63.2	63.2	62.5	62.5	62.5	61.8	61.8	61.8
12.5°	68.1	68.1	68.1	68.1	67.4	67.4	66.7	66.0	65.3	65.3	65.3
15°	74.3	73.6	73.6	72.9	72.2	71.5	70.8	70.8	70.1	70.1	70.1
17.5°	80.6	80.6	79.9	79.2	77.8	77.1	77.1	76.4	75.7	75.7	75.7
20°	88.2	88.2	87.5	86.1	84.7	84.0	83.3	83.3	82.6	82.6	82.6
22.5°	97.2	96.5	95.1	93.8	92.4	91.7	91.0	90.3	90.3	90.3	90.3
25°	107.0	106.3	105.6	103.5	101.4	100.7	99.3	99.3	98.6	99.3	99.3
27.5°	118.8	118.1	116.7	114.6	111.8	110.4	109.7	109.7	110.4	110.4	111.1
30°	133.3	132.0	130.6	127.8	125.0	122.9	122.9	123.6	125.7	127.1	127.1
32.5°	150.7	150.0	147.9	145.2	140.3	138.9	140.3	144.5	147.2	149.3	150.7
35°	170.8	170.2	167.4	162.5	159.0	158.3	162.5	169.5	178.5	181.3	182.7
37.5°	193.1	193.8	190.3	184.7	181.3	182.7	191.0	204.2	213.2	219.5	220.9
40°	220.9	222.2	218.1	211.8	208.4	213.9	227.1	242.4	258.4	266.0	268.1
42.5°	253.5	255.6	250.0	243.8	241.7	250.7	269.5	294.5	322.9	332.0	335.4
45°	293.8	295.2	288.2	282.7	281.3	297.2	329.2	370.9	416.0	436.8	440.3
47.5°	341.7	341.0	334.8	327.8	329.2	352.1	400.0	456.3	504.2	536.2	543.1
50°	396.6	393.1	388.2	379.9	388.9	422.3	482.7	550.7	631.3	659.8	672.3
52.5°	451.4	445.2	441.0	435.5	451.4	494.5	579.2	698.0	819.5	884.8	898.0
55°	500.7	495.9	493.8	494.5	519.5	581.3	692.4	844.5	961.9	1016.1	1025.8
57.5°	549.4	546.6	544.5	548.7	588.2	668.8	793.8	936.2	1032.7	1073.0	1080.0
60°	595.2	598.0	596.6	609.1	657.0	738.3	846.6	986.9	1080.0	1116.8	1124.4
62.5°	645.9	648.0	648.0	661.9	700.8	772.3	882.7	1046.6	1164.7	1218.9	1227.2
65°	689.6	691.0	693.8	694.5	730.6	802.2	946.6	1101.5	1207.0	1269.6	1275.1
67.5°	722.3	723.7	720.2	716.7	744.5	809.1	941.7	1094.5	1188.3	1235.5	1239.7
70°	748.7	742.4	732.7	715.3	724.4	773.0	901.5	1039.0	1133.4	1175.8	1182.0
72.5°	752.1	746.6	716.0	677.1	666.0	708.4	830.6	954.2	1035.5	1075.8	1076.5
75°	731.3	716.7	666.0	607.7	586.9	627.1	732.0	844.5	909.8	943.8	947.3
77.5°	661.2	647.3	583.4	516.7	493.1	527.8	616.7	707.7	770.2	803.5	805.6
80°	536.9	532.0	473.7	412.5	384.1	404.2	482.0	553.5	604.2	643.8	647.3
82.5°	395.9	391.7	347.3	293.8	270.9	287.5	343.1	395.9	443.1	475.0	477.1
85°	247.2	238.9	211.1	173.6	158.3	169.5	206.3	241.7	284.1	309.1	310.4
87.5°	82.6	79.2	68.1	56.3	47.2	49.3	60.4	73.6	107.6	118.8	125.7
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)