

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: P821213

Luminaire Tested: **TT-D2-735-24VDC-RW-UPL**

Issue Date: 10/29/2020

Test Information

Test Method: LM-79-08
Report Number: P821213
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-D2-735-24VDC-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: 4819.8 lumens
Efficiency: N/A
Efficacy: 126.8 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type IV - Short
BUG Rating: B3 - U4 - G3

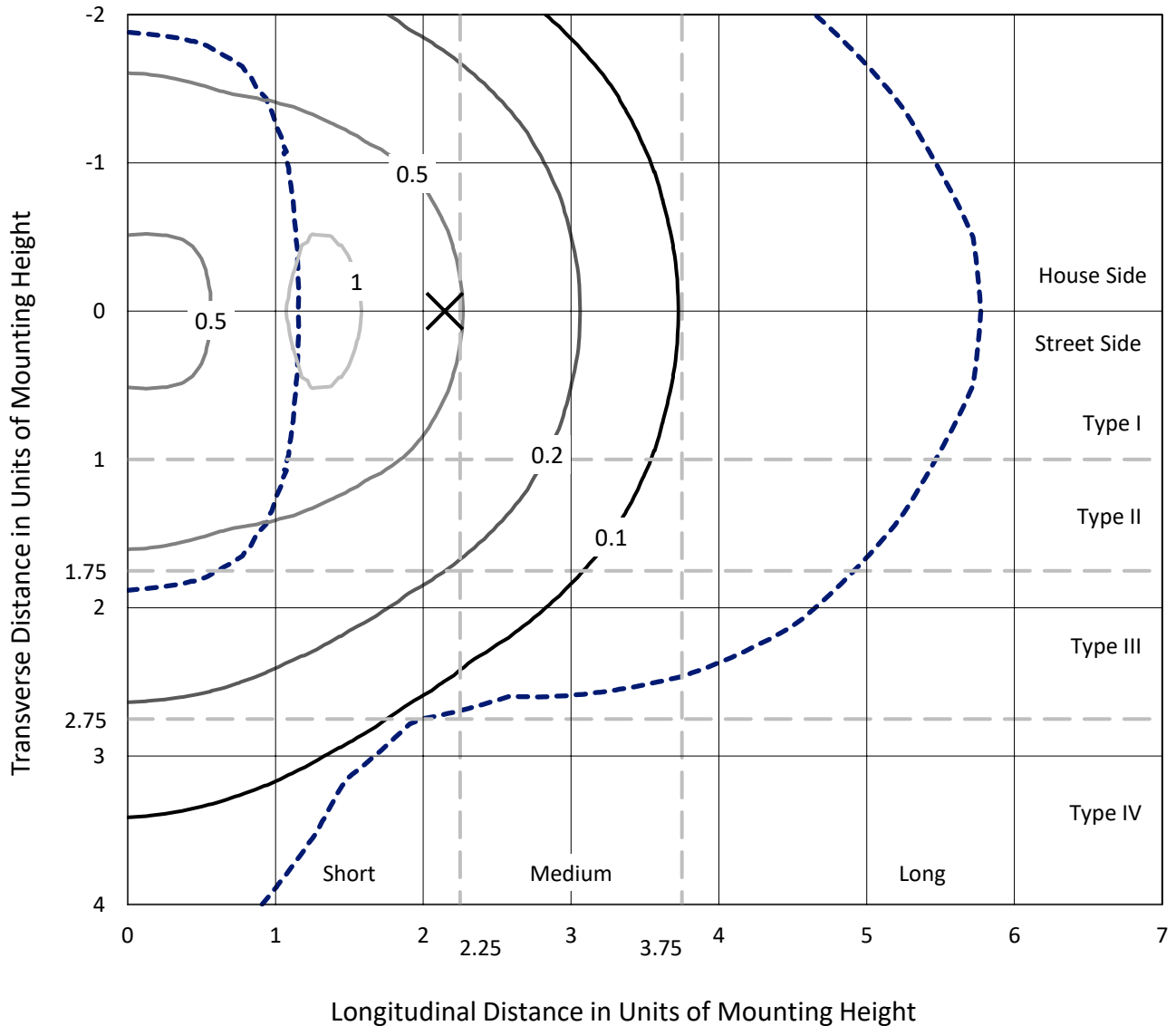
Input Watts (W): 38
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

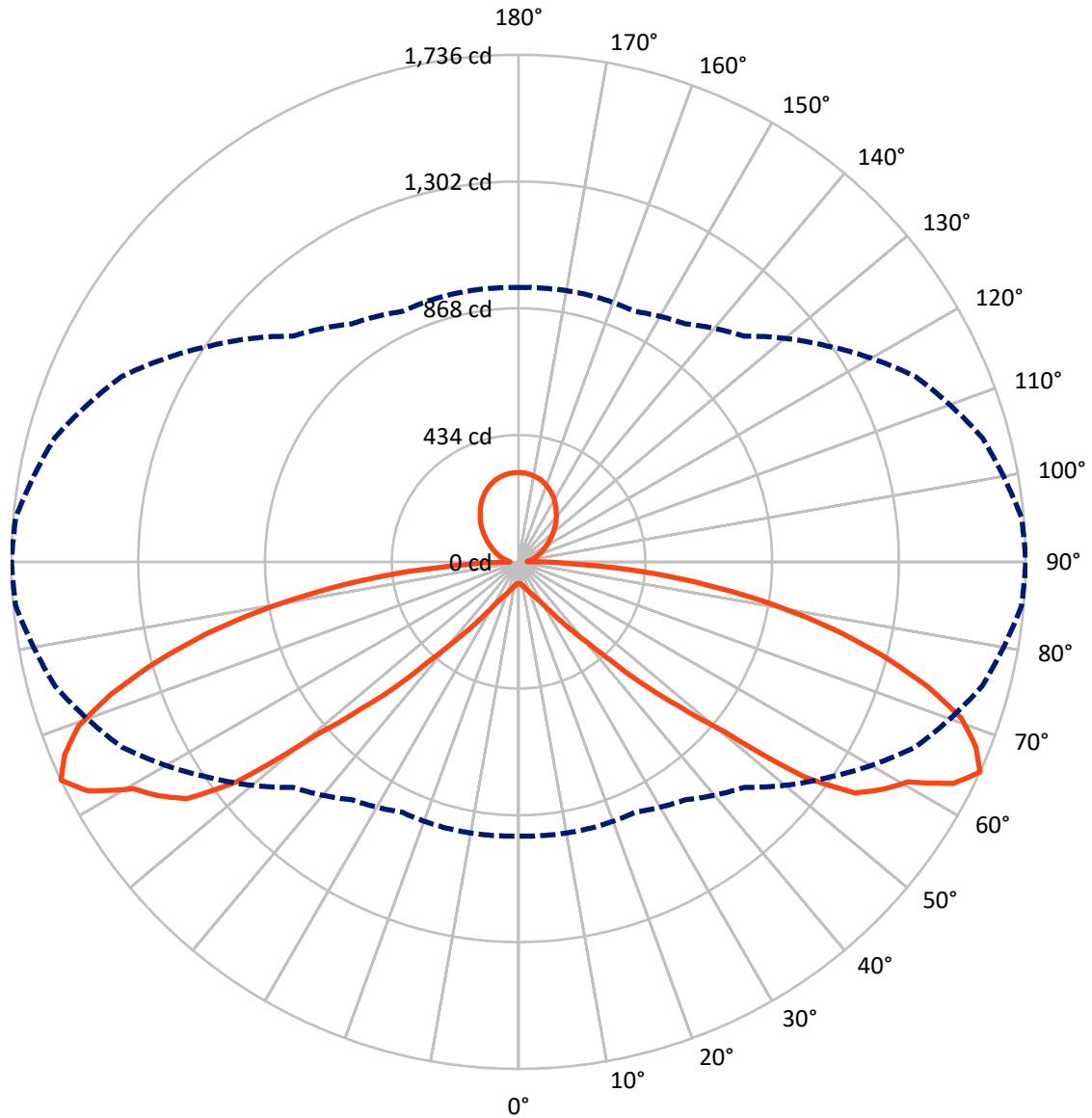
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 1.2 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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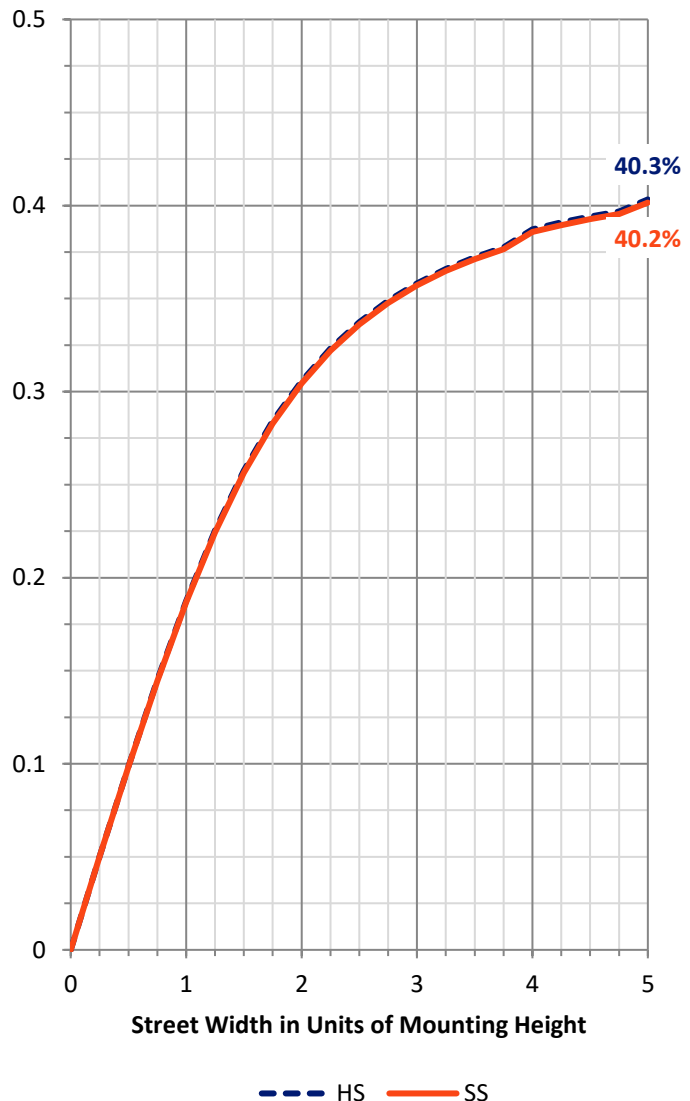
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1994.0	415.9	2409.9
	% Fixture	41.4	8.6	50.0
Street Side	Lumens	1994.0	415.9	2409.9
	% Fixture	41.4	8.6	50.0
Total	Lumens	3988.0	831.7	4819.8
	% Fixture	82.7	17.3	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	7.6	0.2
10°-20°	28.4	0.6
20°-30°	65.7	1.4
30°-40°	148.4	3.1
40°-50°	361.6	7.5
50°-60°	813.1	16.9
60°-70°	1188.3	24.7
70°-80°	1035.5	21.5
80°-90°	339.4	7.0
90°-100°	42.6	0.9
100°-110°	66.0	1.4
110°-120°	91.9	1.9
120°-130°	119.0	2.5
130°-140°	138.7	2.9
140°-150°	140.5	2.9
150°-160°	121.9	2.5
160°-170°	82.2	1.7
170°-180°	28.9	0.6
0°-90°	3988.0	82.7
0°-180°	4819.8	100.0

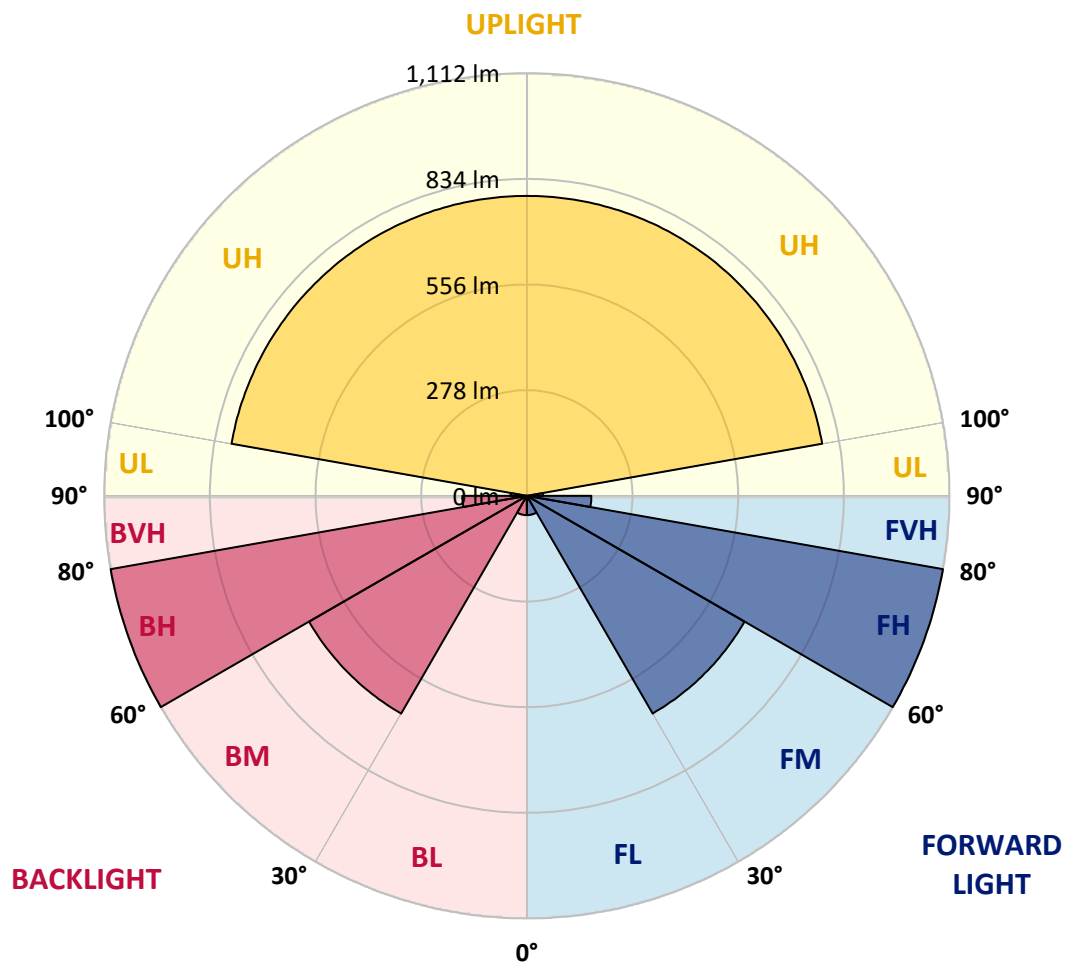


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	50.8	1.1			
FM (30°-60°)	661.6	13.7			
FH (60°-80°)	1111.9	23.1			G1/1800
FVH (80°-90°)	169.7	3.5			G2/225
BL (0°-30°)	50.8	1.1	B0/110		
BM (30°-60°)	661.6	13.7	B1/1000		
BH (60°-80°)	1111.9	23.1	B3/2500		G3/2500
BVH (80°-90°)	169.7	3.5			G2/225
UL (90°-100°)	42.6	0.9		U2/50	
UH (100°-180°)	789.1	16.4		U4/1000	

BUG Rating: B3-U4-G3
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8
2.5°	73.7	73.7	74.7	74.7	74.7	74.7	74.7	74.7	74.7	74.7	74.7
5°	76.6	76.6	76.6	76.6	77.5	77.5	76.6	76.6	76.6	76.6	76.6
7.5°	81.3	80.4	81.3	81.3	81.3	80.4	80.4	80.4	79.4	79.4	79.4
10°	86.0	86.0	87.0	86.0	86.0	85.1	85.1	85.1	84.1	84.1	84.1
12.5°	92.6	92.6	92.6	92.6	91.7	91.7	90.7	89.8	88.9	88.9	88.9
15°	101.1	100.2	100.2	99.3	98.3	97.4	96.4	96.4	95.5	95.5	95.5
17.5°	109.7	109.7	108.7	107.8	105.9	104.9	104.9	104.0	103.0	103.0	103.0
20°	120.1	120.1	119.1	117.2	115.3	114.4	113.4	113.4	112.5	112.5	112.5
22.5°	132.3	131.4	129.5	127.6	125.7	124.8	123.8	122.9	122.9	122.9	122.9
25°	145.6	144.6	143.7	140.9	138.0	137.1	135.2	135.2	134.2	135.2	135.2
27.5°	161.6	160.7	158.8	156.0	152.2	150.3	149.4	149.4	150.3	150.3	151.2
30°	181.5	179.6	177.7	173.9	170.2	167.3	167.3	168.3	171.1	173.0	173.0
32.5°	205.1	204.2	201.3	197.6	191.0	189.1	191.0	196.6	200.4	203.2	205.1
35°	232.5	231.6	227.8	221.2	216.5	215.5	221.2	230.7	242.9	246.7	248.6
37.5°	262.8	263.7	259.0	251.5	246.7	248.6	260.0	277.9	290.2	298.7	300.6
40°	300.6	302.5	296.8	288.3	283.6	291.2	309.1	329.9	351.7	362.1	364.9
42.5°	345.0	347.9	340.3	331.8	329.0	341.3	366.8	400.8	439.6	451.9	456.6
45°	399.9	401.8	392.3	384.7	382.8	404.6	448.1	504.8	566.2	594.6	599.3
47.5°	465.1	464.1	455.6	446.2	448.1	479.3	544.5	621.1	686.3	729.8	739.2
50°	539.8	535.0	528.4	517.1	529.4	574.7	657.0	749.6	859.3	898.0	915.1
52.5°	614.4	605.9	600.3	592.7	614.4	673.1	788.4	950.0	1115.5	1204.3	1222.3
55°	681.6	674.9	672.1	673.1	707.1	791.2	942.5	1149.5	1309.2	1383.0	1396.2
57.5°	747.7	744.0	741.1	746.8	800.7	910.3	1080.5	1274.3	1405.7	1460.5	1469.9
60°	810.1	813.9	812.0	829.0	894.3	1004.9	1152.3	1343.3	1469.9	1520.0	1530.4
62.5°	879.1	882.0	882.0	900.9	953.8	1051.2	1201.5	1424.6	1585.3	1659.0	1670.3
65°	938.7	940.6	944.4	945.3	994.5	1091.8	1288.4	1499.2	1642.9	1728.0	1735.6
67.5°	983.1	985.0	980.3	975.6	1013.4	1101.3	1281.8	1489.8	1617.4	1681.7	1687.4
70°	1019.0	1010.5	997.3	973.7	986.0	1052.1	1227.0	1414.2	1542.7	1600.4	1608.9
72.5°	1023.8	1016.2	974.6	921.7	906.5	964.2	1130.6	1298.8	1409.4	1464.3	1465.2
75°	995.4	975.6	906.5	827.1	798.8	853.6	996.3	1149.5	1238.3	1284.7	1289.4
77.5°	899.9	881.0	794.1	703.3	671.2	718.4	839.4	963.3	1048.3	1093.7	1096.6
80°	730.7	724.1	644.7	561.5	522.8	550.2	656.0	753.4	822.4	876.3	881.0
82.5°	538.8	533.2	472.7	399.9	368.7	391.4	467.0	538.8	603.1	646.6	649.4
85°	336.5	325.2	287.4	236.3	215.5	230.7	280.8	329.0	386.6	420.7	422.6
87.5°	112.5	107.8	92.6	76.6	64.3	67.1	82.2	100.2	146.5	161.6	171.1
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)