

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: P821124

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

Issue Date: 10/29/2020

Test Information

Test Method: LM-79-08
Report Number: P821124
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-D1-830-24VDC-RW-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3000K, 80 CRI LEDS AND RECTANGULAR DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

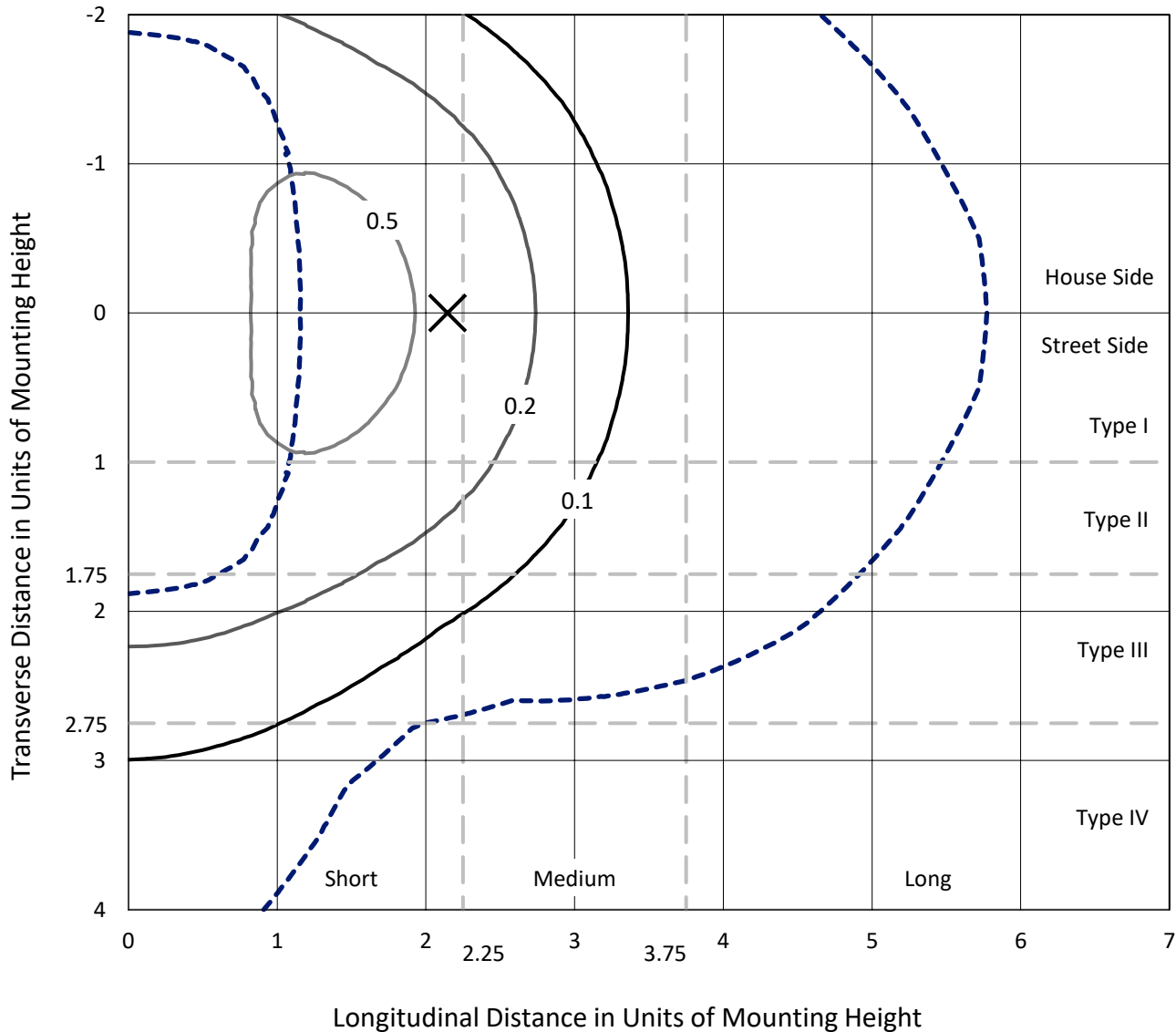
Lumens per Lamp: N/A
Luminaire Lumens: 3592.7 lumens
Efficiency: N/A
Efficacy: 128.3 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type IV - Short
BUG Rating: B2 - U4 - G2

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

REPORT NUMBER: P821124
 CATALOG NUMBER: TT-D1-830-24VDC-RW-UPL

Iso-Footcandle Lines of Horizontal Illumination

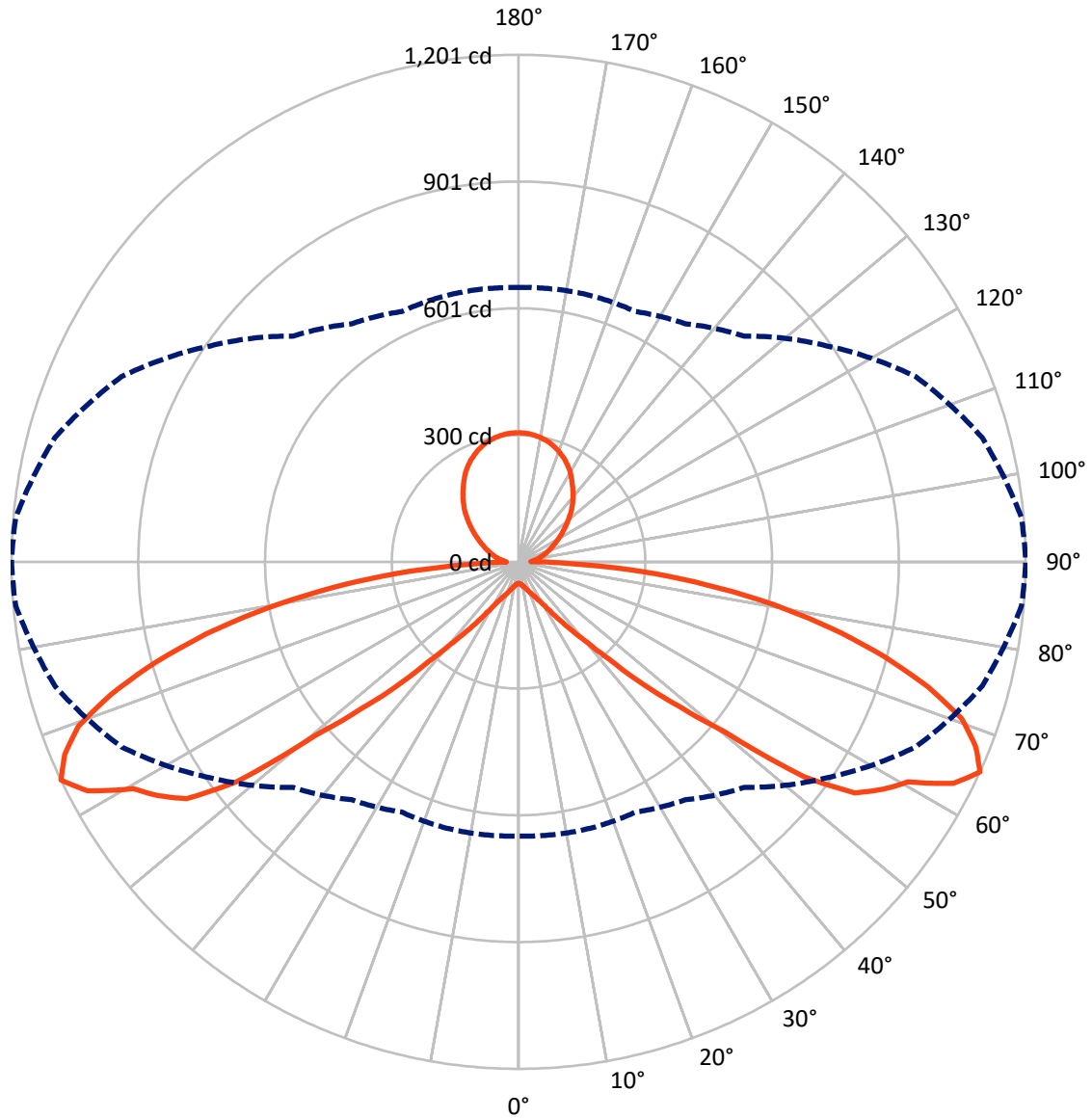
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 0.8 fc
 Type IV - Short - N/A

REPORT NUMBER: P821124
CATALOG NUMBER: TT-D1-830-24VDC-RW-UPL

Luminous Intensity Polar Plot



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

REPORT NUMBER: P821124
 CATALOG NUMBER: TT-D1-830-24VDC-RW-UPL

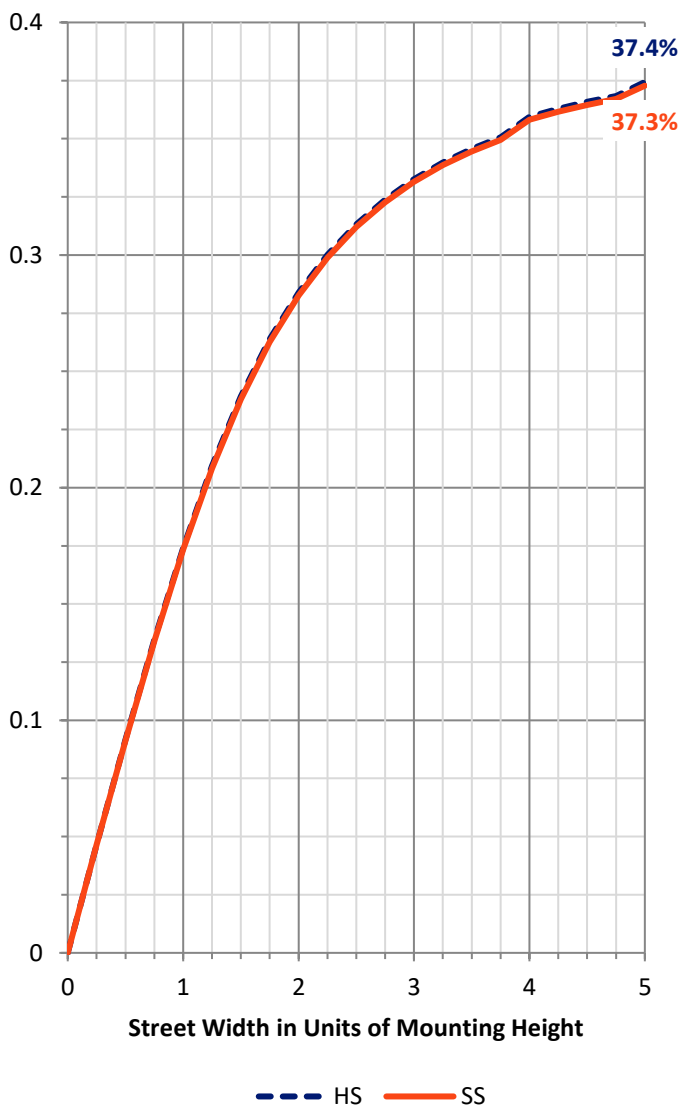
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1380.5	415.9	1796.4
	% Fixture	38.4	11.6	50.0
Street Side	Lumens	1380.5	415.9	1796.4
	% Fixture	38.4	11.6	50.0
Total	Lumens	2761.0	831.7	3592.7
	% Fixture	76.8	23.2	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.3	0.1
10°-20°	19.7	0.5
20°-30°	45.4	1.3
30°-40°	102.7	2.9
40°-50°	250.2	7.0
50°-60°	562.7	15.7
60°-70°	822.3	22.9
70°-80°	716.6	19.9
80°-90°	236.1	6.6
90°-100°	42.6	1.2
100°-110°	66.0	1.8
110°-120°	91.9	2.6
120°-130°	119.0	3.3
130°-140°	138.7	3.9
140°-150°	140.5	3.9
150°-160°	121.9	3.4
160°-170°	82.2	2.3
170°-180°	28.9	0.8
0°-90°	2761.0	76.8
0°-180°	3592.7	100.0

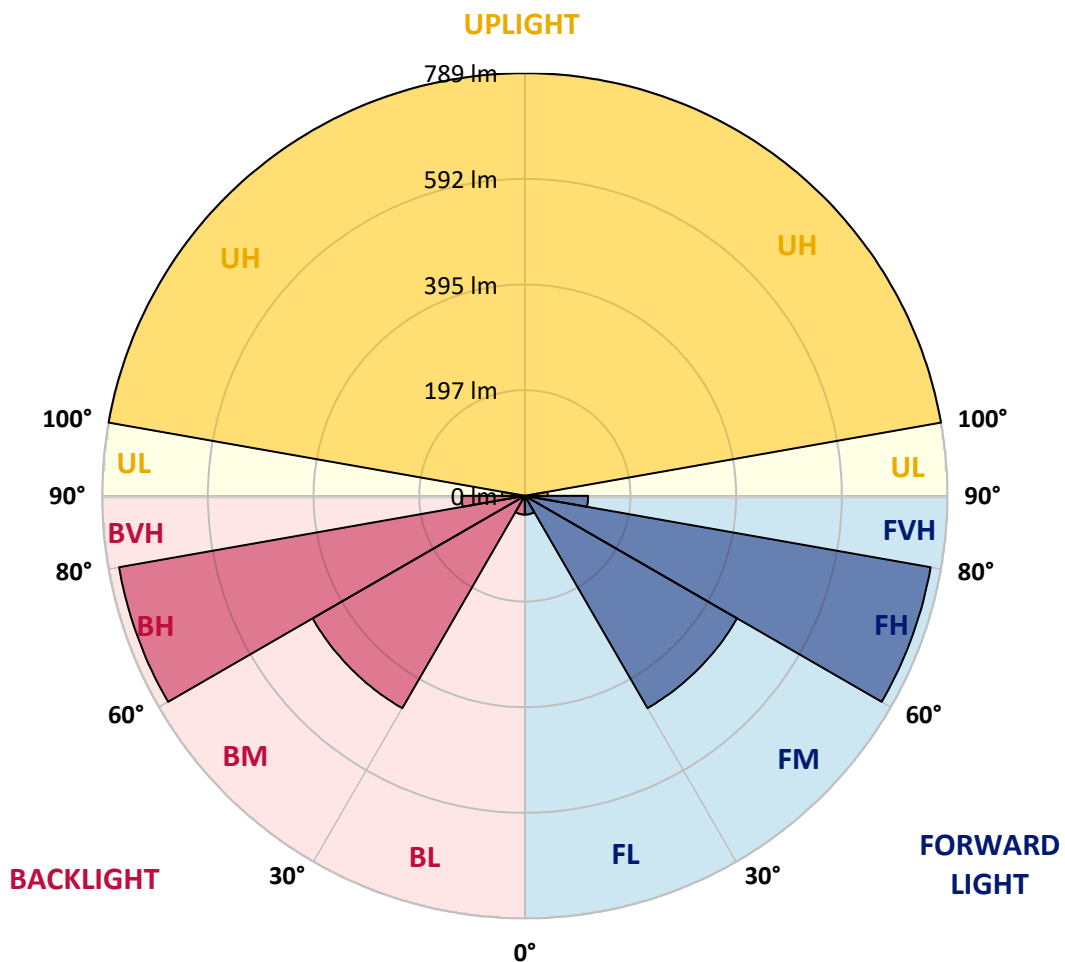


REPORT NUMBER: P821124
 CATALOG NUMBER: TT-D1-830-24VDC-RW-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	35.2	1.0			
FM (30°-60°)	457.8	12.7			
FH (60°-80°)	769.5	21.4			G1/1800
FVH (80°-90°)	118.0	3.3			G2/225
BL (0°-30°)	35.2	1.0	B0/110		
BM (30°-60°)	457.8	12.7	B1/1000		
BH (60°-80°)	769.5	21.4	B2/1000		G2/1000
BVH (80°-90°)	118.0	3.3			G2/225
UL (90°-100°)	42.6	1.2		U2/50	
UH (100°-180°)	789.1	22.0		U4/1000	

BUG Rating: B2-U4-G2
 Type IV Short





REPORT NUMBER: P821124

CATALOG NUMBER: TT-D1-830-24VDC-RW-UPL

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4
2.5°	51.0	51.0	51.7	51.7	51.7	51.7	51.7	51.7	51.7	51.7	51.7
5°	53.0	53.0	53.0	53.0	53.6	53.6	53.0	53.0	53.0	53.0	53.0
7.5°	56.3	55.6	56.3	56.3	56.3	55.6	55.6	55.6	54.9	54.9	54.9
10°	59.5	59.5	60.2	59.5	59.5	58.9	58.9	58.9	58.2	58.2	58.2
12.5°	64.1	64.1	64.1	64.1	63.5	63.5	62.8	62.1	61.5	61.5	61.5
15°	70.0	69.3	69.3	68.7	68.0	67.4	66.7	66.7	66.1	66.1	66.1
17.5°	75.9	75.9	75.2	74.6	73.3	72.6	72.6	72.0	71.3	71.3	71.3
20°	83.1	83.1	82.4	81.1	79.8	79.2	78.5	78.5	77.8	77.8	77.8
22.5°	91.6	90.9	89.6	88.3	87.0	86.3	85.7	85.0	85.0	85.0	85.0
25°	100.7	100.1	99.4	97.5	95.5	94.9	93.5	93.5	92.9	93.5	93.5
27.5°	111.9	111.2	109.9	107.9	105.3	104.0	103.4	103.4	104.0	104.0	104.7
30°	125.6	124.3	123.0	120.4	117.7	115.8	115.8	116.4	118.4	119.7	119.7
32.5°	142.0	141.3	139.3	136.7	132.1	130.8	132.1	136.1	138.7	140.6	142.0
35°	160.9	160.3	157.7	153.1	149.8	149.1	153.1	159.6	168.1	170.7	172.0
37.5°	181.9	182.5	179.2	174.0	170.7	172.0	179.9	192.3	200.8	206.7	208.0
40°	208.0	209.3	205.4	199.5	196.2	201.5	213.9	228.3	243.3	250.5	252.5
42.5°	238.8	240.7	235.5	229.6	227.6	236.2	253.8	277.4	304.2	312.7	316.0
45°	276.7	278.0	271.5	266.2	264.9	280.0	310.1	349.3	391.8	411.5	414.7
47.5°	321.8	321.2	315.3	308.8	310.1	331.7	376.8	429.8	474.9	505.0	511.6
50°	373.5	370.3	365.7	357.8	366.3	397.7	454.6	518.8	594.6	621.5	633.2
52.5°	425.2	419.3	415.4	410.2	425.2	465.8	545.6	657.4	771.9	833.4	845.8
55°	471.7	467.1	465.1	465.8	489.3	547.5	652.2	795.5	906.0	957.0	966.2
57.5°	517.4	514.8	512.9	516.8	554.1	630.0	747.7	881.8	972.7	1010.7	1017.2
60°	560.6	563.2	561.9	573.7	618.8	695.4	797.4	929.6	1017.2	1051.9	1059.1
62.5°	608.4	610.3	610.3	623.4	660.1	727.4	831.4	985.8	1097.0	1148.1	1155.9
65°	649.6	650.9	653.5	654.2	688.2	755.6	891.6	1037.5	1136.9	1195.8	1201.0
67.5°	680.3	681.6	678.4	675.1	701.3	762.1	887.0	1031.0	1119.3	1163.8	1167.7
70°	705.2	699.3	690.1	673.8	682.3	728.1	849.1	978.6	1067.6	1107.5	1113.4
72.5°	708.5	703.2	674.4	637.8	627.3	667.2	782.4	898.8	975.4	1013.3	1014.0
75°	688.8	675.1	627.3	572.4	552.8	590.7	689.5	795.5	857.0	889.0	892.3
77.5°	622.8	609.7	549.5	486.7	464.5	497.2	580.9	666.6	725.5	756.9	758.8
80°	505.7	501.1	446.1	388.6	361.8	380.7	454.0	521.4	569.1	606.4	609.7
82.5°	372.9	368.9	327.1	276.7	255.1	270.8	323.2	372.9	417.4	447.4	449.4
85°	232.9	225.0	198.9	163.5	149.1	159.6	194.3	227.6	267.6	291.1	292.4
87.5°	77.8	74.6	64.1	53.0	44.5	46.4	56.9	69.3	101.4	111.9	118.4
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



REPORT NUMBER: P821124
 CATALOG NUMBER: TT-D1-830-24VDC-RW-UPL

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)