

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: P821346

Luminaire Tested: **TT-D1-750-24VDC-RW-UPL**

Issue Date: 10/29/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P821346  
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-1) AND  
Test Lab: INNOVATION CENTER  
Issue Date: 10/29/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: TT-D1-750-24VDC-RW-UPL  
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT  
5000K, 70 CRI LEDS AND RECTANGULAR DISTRIBUTION  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

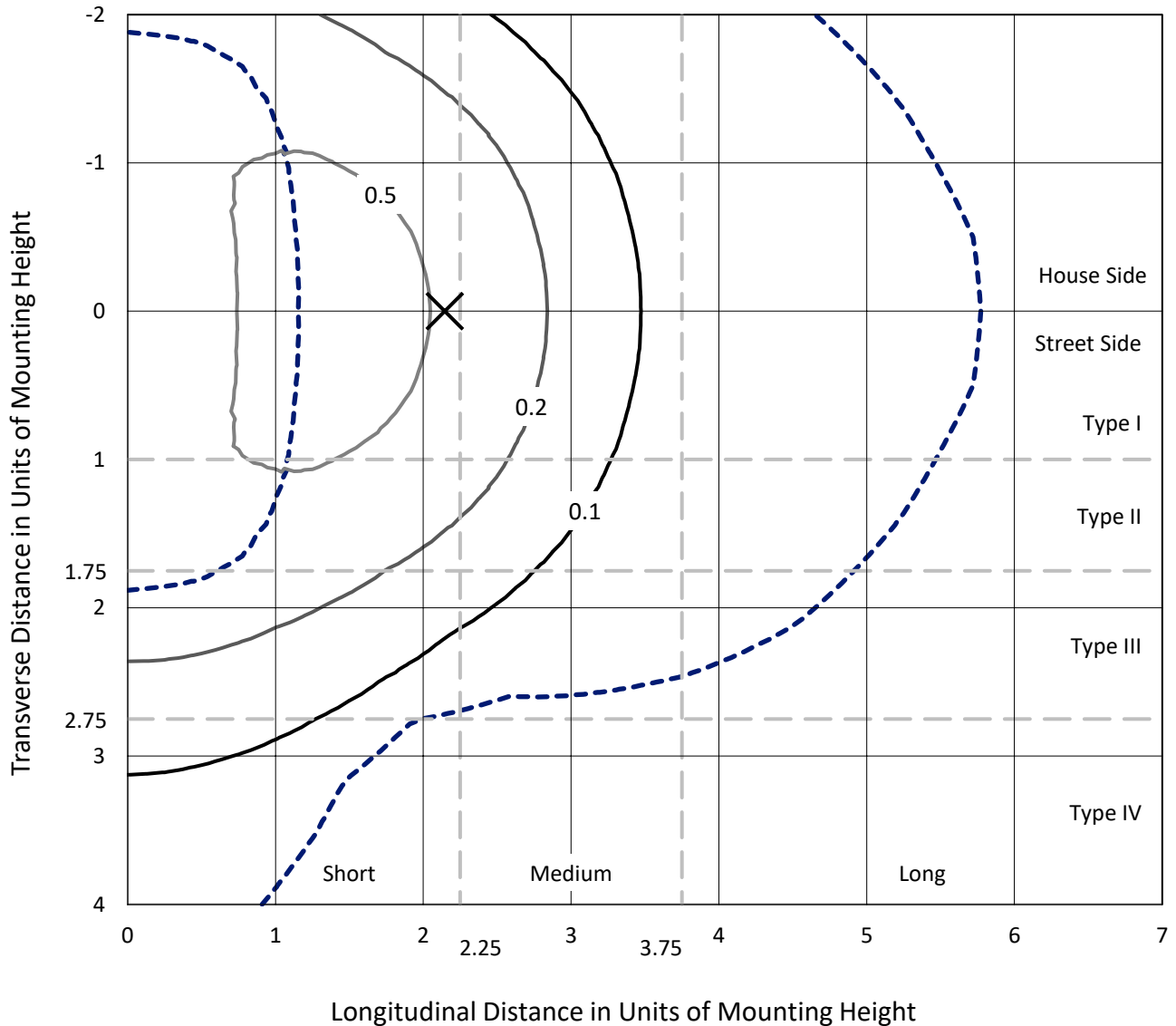
Lumens per Lamp: N/A  
Luminaire Lumens: 3986.7 lumens  
Efficiency: N/A  
Efficacy: 142.4 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U4 - G2

Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

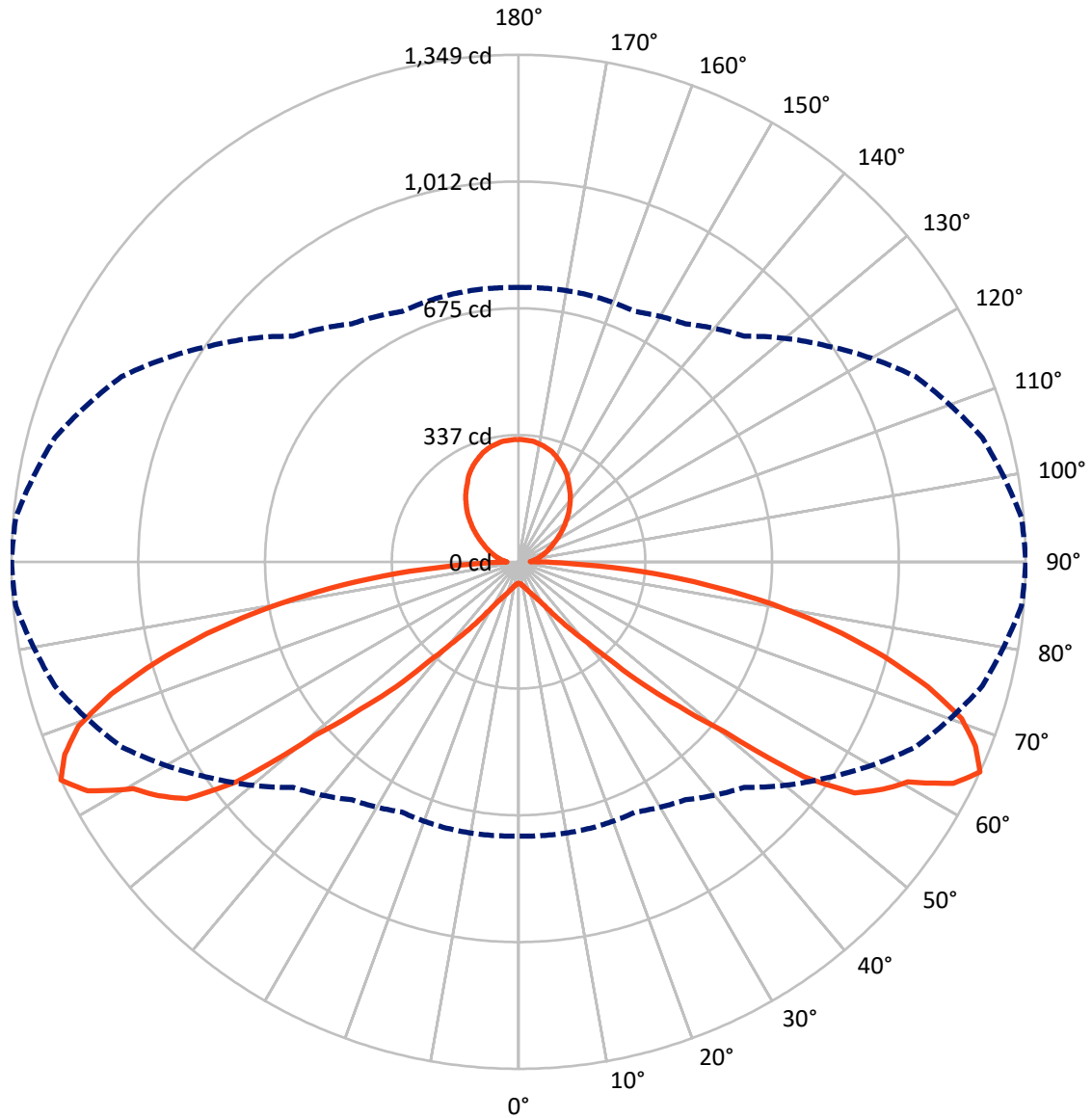
× Max cd  
 - - - 1/2 Max cd



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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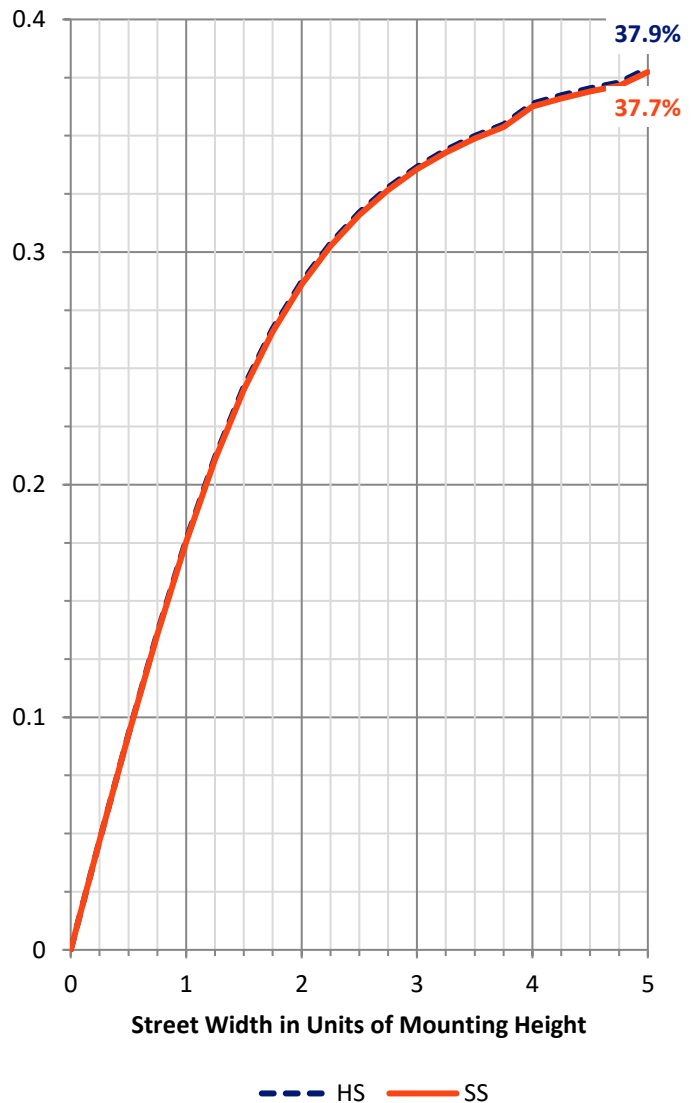
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1550.6	442.7	1993.4
	% Fixture	38.9	11.1	50.0
<b>Street Side</b>	Lumens	1550.6	442.7	1993.4
	% Fixture	38.9	11.1	50.0
<b>Total</b>	Lumens	3101.3	885.5	3986.7
	% Fixture	77.8	22.2	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	5.9	0.1
10°-20°	22.1	0.6
20°-30°	51.0	1.3
30°-40°	115.4	2.9
40°-50°	281.1	7.1
50°-60°	632.1	15.9
60°-70°	923.8	23.2
70°-80°	804.9	20.2
80°-90°	265.0	6.6
90°-100°	45.4	1.1
100°-110°	70.3	1.8
110°-120°	97.7	2.5
120°-130°	126.6	3.2
130°-140°	147.6	3.7
140°-150°	149.5	3.8
150°-160°	129.8	3.3
160°-170°	87.7	2.2
170°-180°	30.8	0.8
0°-90°	3101.3	77.8
0°-180°	3986.7	100.0

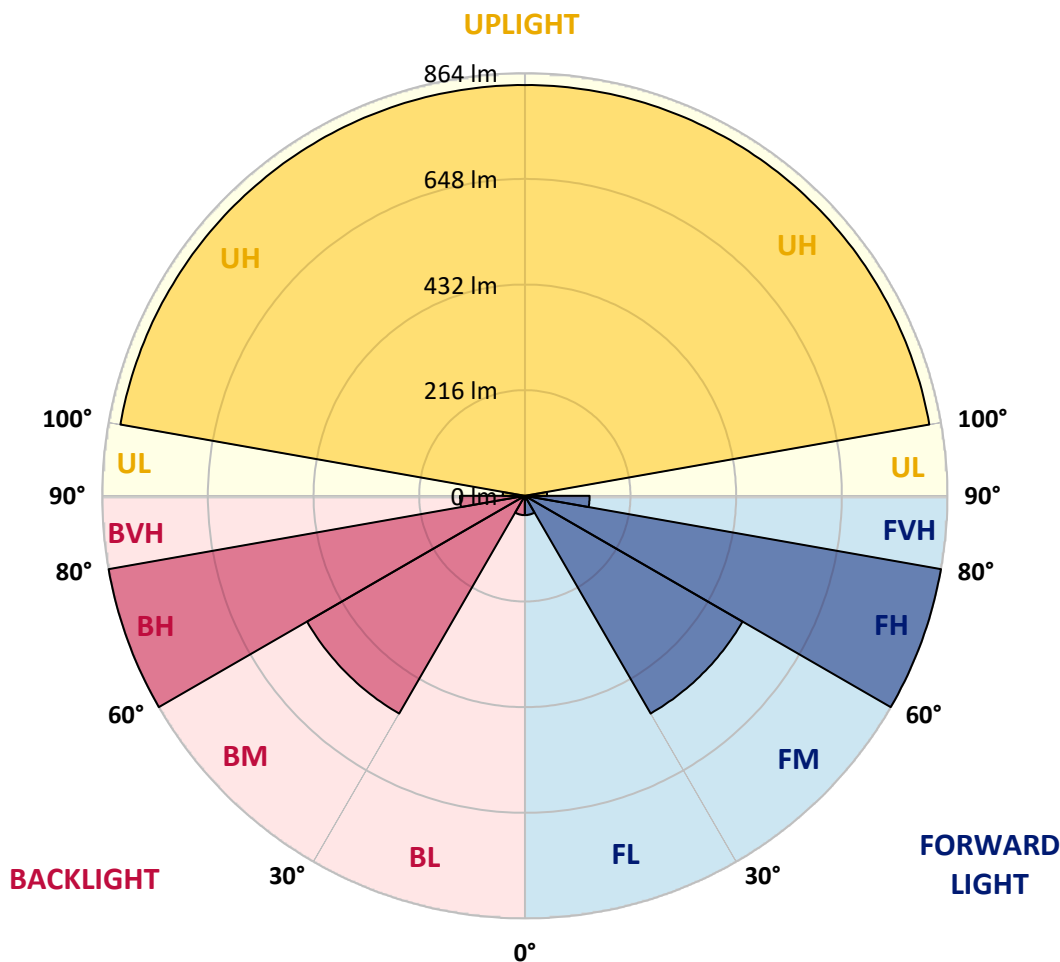


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	39.5	1.0			
FM (30°-60°)	514.3	12.9			
FH (60°-80°)	864.3	21.7			G1/1800
FVH (80°-90°)	132.5	3.3			G2/225
BL (0°-30°)	39.5	1.0	B0/110		
BM (30°-60°)	514.3	12.9	B1/1000		
BH (60°-80°)	864.3	21.7	B2/1000		G2/1000
BVH (80°-90°)	132.5	3.3			G2/225
UL (90°-100°)	45.4	1.1		U2/50	
UH (100°-180°)	840.1	21.1		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°	56.6	56.6	56.6	56.6	56.6	56.6	56.6	56.6	56.6	56.6	56.6
2.5°	57.3	57.3	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1
5°	59.5	59.5	59.5	59.5	60.3	60.3	59.5	59.5	59.5	59.5	59.5
7.5°	63.2	62.5	63.2	63.2	63.2	62.5	62.5	62.5	61.7	61.7	61.7
10°	66.9	66.9	67.6	66.9	66.9	66.1	66.1	66.1	65.4	65.4	65.4
12.5°	72.0	72.0	72.0	72.0	71.3	71.3	70.5	69.8	69.1	69.1	69.1
15°	78.6	77.9	77.9	77.2	76.4	75.7	75.0	75.0	74.2	74.2	74.2
17.5°	85.2	85.2	84.5	83.8	82.3	81.6	81.6	80.8	80.1	80.1	80.1
20°	93.3	93.3	92.6	91.1	89.7	88.9	88.2	88.2	87.4	87.4	87.4
22.5°	102.9	102.1	100.7	99.2	97.7	97.0	96.3	95.5	95.5	95.5	95.5
25°	113.2	112.4	111.7	109.5	107.3	106.6	105.1	105.1	104.3	105.1	105.1
27.5°	125.7	124.9	123.5	121.2	118.3	116.8	116.1	116.1	116.8	116.8	117.6
30°	141.1	139.6	138.1	135.2	132.3	130.1	130.1	130.8	133.0	134.5	134.5
32.5°	159.5	158.7	156.5	153.6	148.4	147.0	148.4	152.8	155.8	158.0	159.5
35°	180.8	180.0	177.1	172.0	168.3	167.5	172.0	179.3	188.9	191.8	193.3
37.5°	204.3	205.0	201.3	195.5	191.8	193.3	202.1	216.0	225.6	232.2	233.7
40°	233.7	235.1	230.7	224.1	220.5	226.3	240.3	256.5	273.4	281.4	283.6
42.5°	268.2	270.4	264.5	257.9	255.7	265.3	285.1	311.6	341.7	351.3	354.9
45°	310.8	312.3	305.0	299.1	297.6	314.5	348.3	392.4	440.2	462.2	465.9
47.5°	361.5	360.8	354.2	346.8	348.3	372.6	423.3	482.8	533.5	567.3	574.6
50°	419.6	415.9	410.8	402.0	411.5	446.8	510.7	582.7	668.0	698.1	711.3
52.5°	477.6	471.0	466.6	460.7	477.6	523.2	612.9	738.5	867.1	936.2	950.1
55°	529.8	524.7	522.5	523.2	549.7	615.1	732.6	893.6	1017.8	1075.1	1085.4
57.5°	581.3	578.3	576.1	580.5	622.4	707.7	839.9	990.6	1092.7	1135.3	1142.7
60°	629.8	632.7	631.2	644.5	695.2	781.1	895.8	1044.2	1142.7	1181.6	1189.7
62.5°	683.4	685.6	685.6	700.3	741.5	817.1	934.0	1107.4	1232.3	1289.6	1298.5
65°	729.7	731.2	734.1	734.8	773.1	848.7	1001.6	1165.5	1277.2	1343.3	1349.2
67.5°	764.2	765.7	762.0	758.4	787.7	856.1	996.4	1158.1	1257.3	1307.3	1311.7
70°	792.2	785.5	775.3	756.9	766.4	817.9	953.8	1099.3	1199.3	1244.1	1250.7
72.5°	795.8	790.0	757.6	716.5	704.7	749.5	878.9	1009.7	1095.6	1138.3	1139.0
75°	773.8	758.4	704.7	643.0	620.9	663.6	774.5	893.6	962.6	998.6	1002.3
77.5°	699.6	684.9	617.3	546.7	521.7	558.5	652.5	748.8	814.9	850.2	852.4
80°	568.0	562.9	501.2	436.5	406.4	427.7	510.0	585.7	639.3	681.2	684.9
82.5°	418.9	414.4	367.4	310.8	286.6	304.2	363.0	418.9	468.8	502.6	504.8
85°	261.6	252.8	223.4	183.7	167.5	179.3	218.2	255.7	300.5	327.0	328.5
87.5°	87.4	83.8	72.0	59.5	50.0	52.2	63.9	77.9	113.9	125.7	133.0
90°	32.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0
92.5°	37.0	37.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0
95°	42.0	42.0	42.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0
97.5°	48.0	48.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0
100°	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0
102.5°	60.0	59.0	60.0	60.0	59.0	59.0	59.0	60.0	60.0	60.0	59.0
105°	66.0	66.0	66.0	66.0	66.0	66.0	66.0	67.0	66.0	66.0	66.0
107.5°	73.0	73.0	73.0	74.0	74.0	74.0	74.0	74.0	73.0	74.0	73.0
110°	80.0	80.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	89.0	89.0	89.0	89.0	89.0	90.0	90.0	90.0	90.0	90.0	89.0
115°	97.0	97.0	98.0	98.0	98.0	98.0	99.0	99.0	98.0	98.0	98.0
117.5°	107.0	107.0	107.0	107.0	107.0	108.0	108.0	108.0	108.0	108.0	107.0
120°	117.0	117.0	117.0	118.0	118.0	118.0	119.0	119.0	118.0	118.0	118.0
122.5°	129.0	128.0	129.0	129.0	129.0	129.0	130.0	130.0	130.0	130.0	129.0
125°	140.0	140.0	141.0	141.0	141.0	141.0	142.0	142.0	142.0	142.0	141.0
127.5°	153.0	153.0	153.0	153.0	153.0	154.0	154.0	154.0	154.0	154.0	154.0
130°	165.0	165.0	166.0	166.0	166.0	166.0	167.0	167.0	167.0	167.0	166.0
132.5°	179.0	178.0	179.0	178.0	178.0	179.0	179.0	180.0	179.0	180.0	179.0
135°	191.0	191.0	191.0	191.0	191.0	192.0	192.0	192.0	192.0	192.0	192.0
137.5°	204.0	203.0	204.0	203.0	203.0	204.0	204.0	204.0	204.0	204.0	204.0
140°	216.0	215.0	216.0	215.0	216.0	216.0	216.0	216.0	216.0	216.0	216.0
142.5°	228.0	227.0	228.0	227.0	227.0	228.0	228.0	228.0	228.0	228.0	228.0
145°	239.0	239.0	239.0	238.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
147.5°	250.0	249.0	250.0	249.0	249.0	250.0	250.0	250.0	250.0	250.0	250.0
150°	263.0	262.0	263.0	262.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0
152.5°	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0
155°	282.0	282.0	283.0	282.0	282.0	282.0	283.0	282.0	282.0	282.0	282.0
157.5°	290.0	290.0	290.0	290.0	290.0	290.0	291.0	291.0	290.0	291.0	290.0
160°	298.0	298.0	299.0	298.0	298.0	298.0	299.0	298.0	298.0	298.0	298.0
162.5°	306.0	305.0	306.0	305.0	306.0	306.0	306.0	306.0	306.0	306.0	306.0
165°	311.0	311.0	312.0	311.0	311.0	311.0	312.0	311.0	311.0	311.0	311.0
167.5°	316.0	315.0	316.0	316.0	316.0	316.0	316.0	316.0	316.0	316.0	316.0
170°	319.0	319.0	320.0	319.0	319.0	319.0	320.0	319.0	319.0	319.0	319.0
172.5°	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0
175°	324.0	324.0	325.0	324.0	325.0	324.0	325.0	324.0	324.0	324.0	324.0
177.5°	325.0	325.0	326.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0
180°	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0

(END OF REPORT)