

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: LUMARK

Report Number: P188106

Luminaire Tested: **QDCAST1B (4PANELS 45°TILT)**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P188106  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P22248)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: QDCAST1B (4PANELS 45°TILT)  
Description: LUMARK QUADCAST PARKING GARAGE/CANOPY FIXTURE W/4 ROTATING OPTICAL LIGHT PANELS  
Light Source: (4) 4000K SMT LED OPTICAL PANELS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5123.4 lumens  
Efficiency: N/A  
Efficacy: 94.9 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 1.23' x L: 1.23' x H: 0.08')  
IES Classification: Type V - Long - Non-Cutoff  
BUG Rating: B2 - U4 - G3

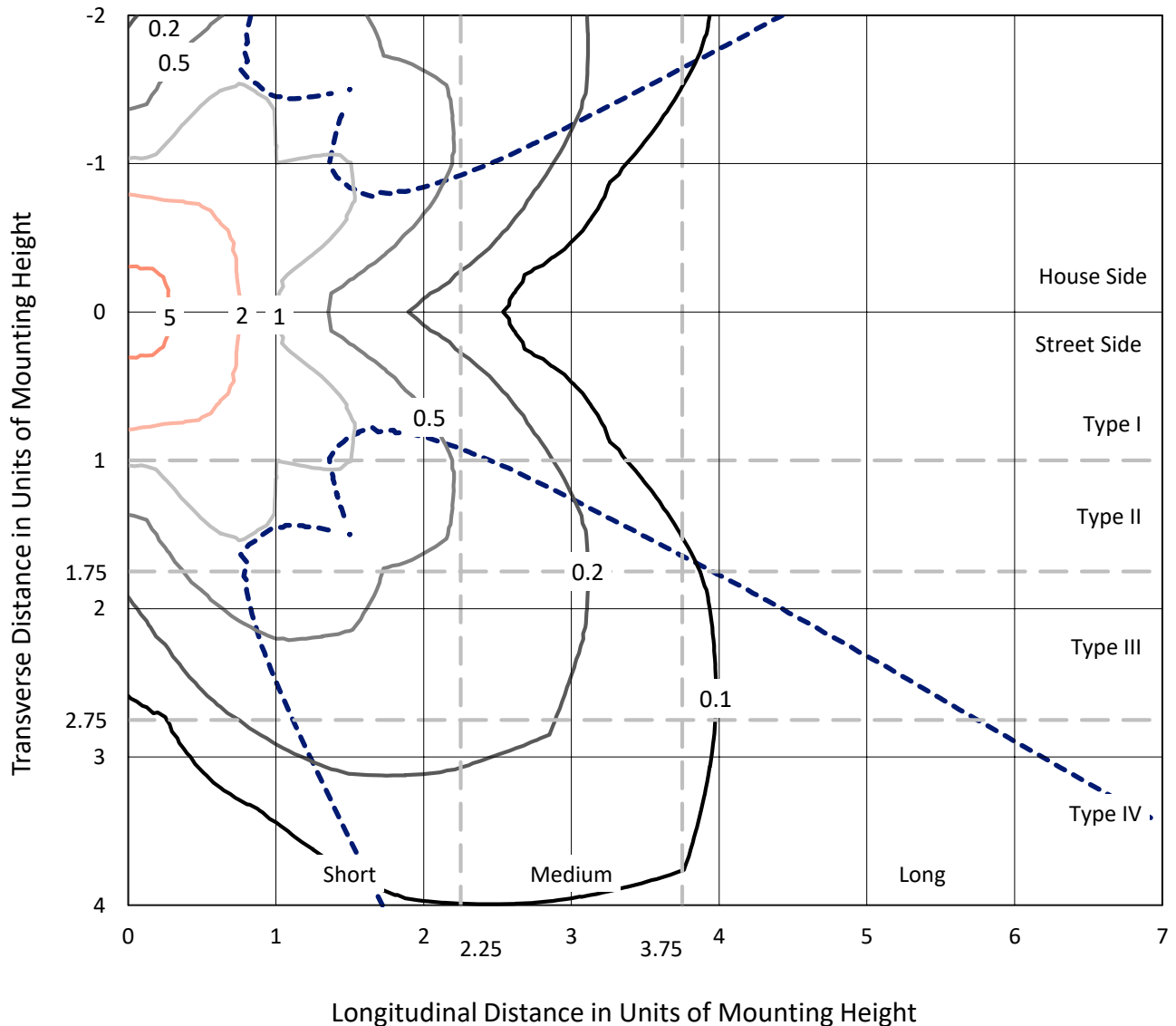
Input Watts (W): 54  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

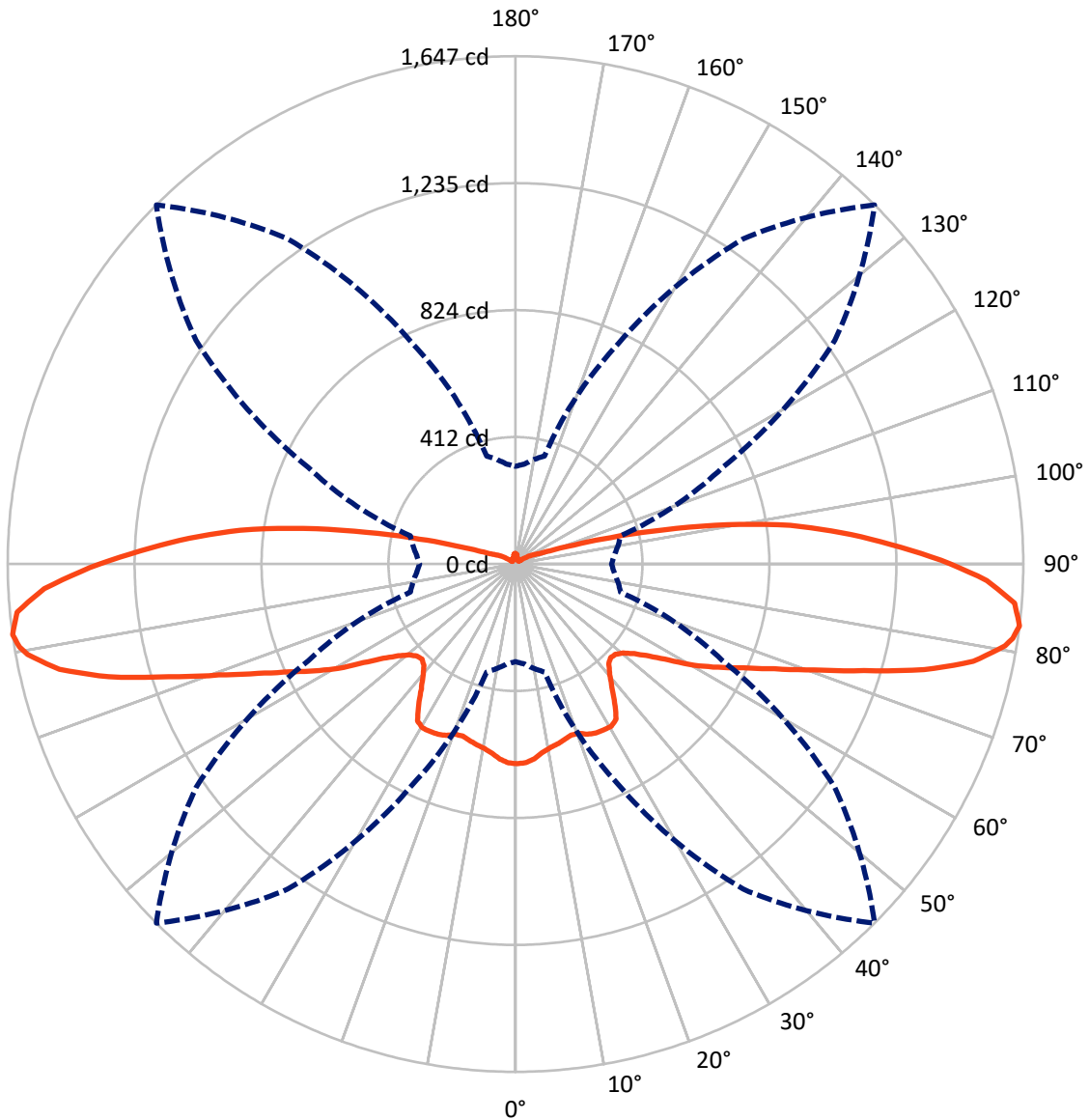
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.5 fc  
 Type V - Long - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 82.5-Deg Vertical

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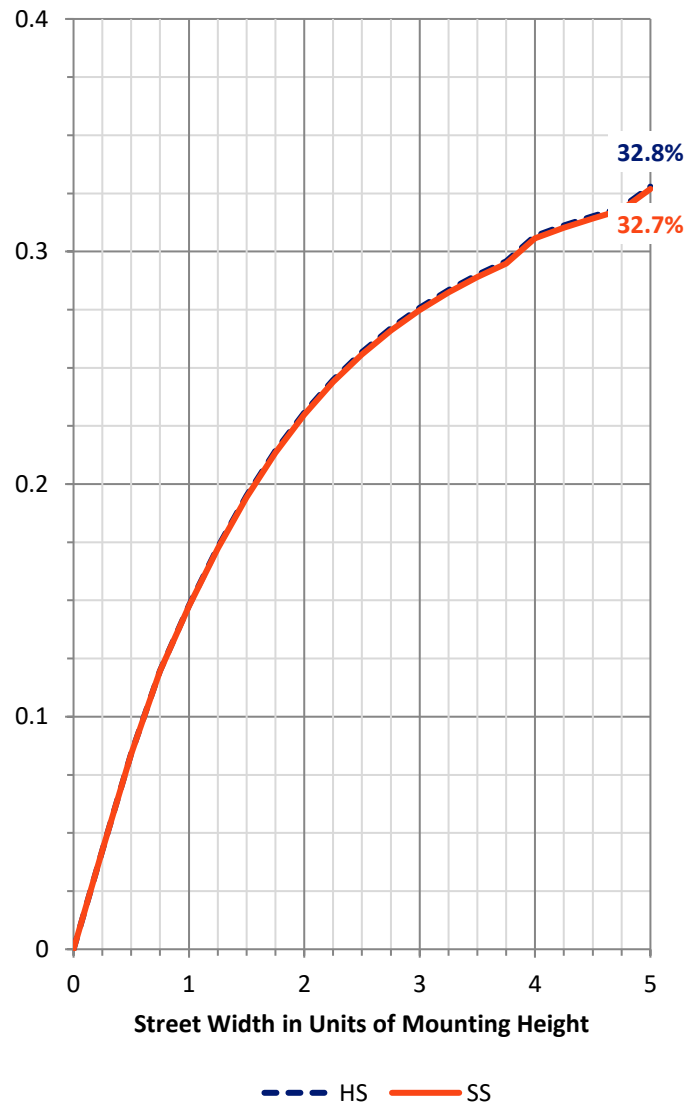
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1961.1	600.6	2561.7
	% Fixture	38.3	11.7	50.0
<b>Street Side</b>	Lumens	1961.1	600.6	2561.7
	% Fixture	38.3	11.7	50.0
<b>Total</b>	Lumens	3922.2	1201.2	5123.4
	% Fixture	76.6	23.4	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.6	1.2
10°-20°	165.0	3.2
20°-30°	259.3	5.1
30°-40°	307.2	6.0
40°-50°	301.6	5.9
50°-60°	448.7	8.8
60°-70°	673.3	13.1
70°-80°	804.8	15.7
80°-90°	902.5	17.6
90°-100°	770.9	15.0
100°-110°	302.0	5.9
110°-120°	60.7	1.2
120°-130°	27.7	0.5
130°-140°	12.7	0.2
140°-150°	10.1	0.2
150°-160°	8.3	0.2
160°-170°	6.1	0.1
170°-180°	2.7	0.1
0°-90°	3922.2	76.6
0°-180°	5123.4	100.0



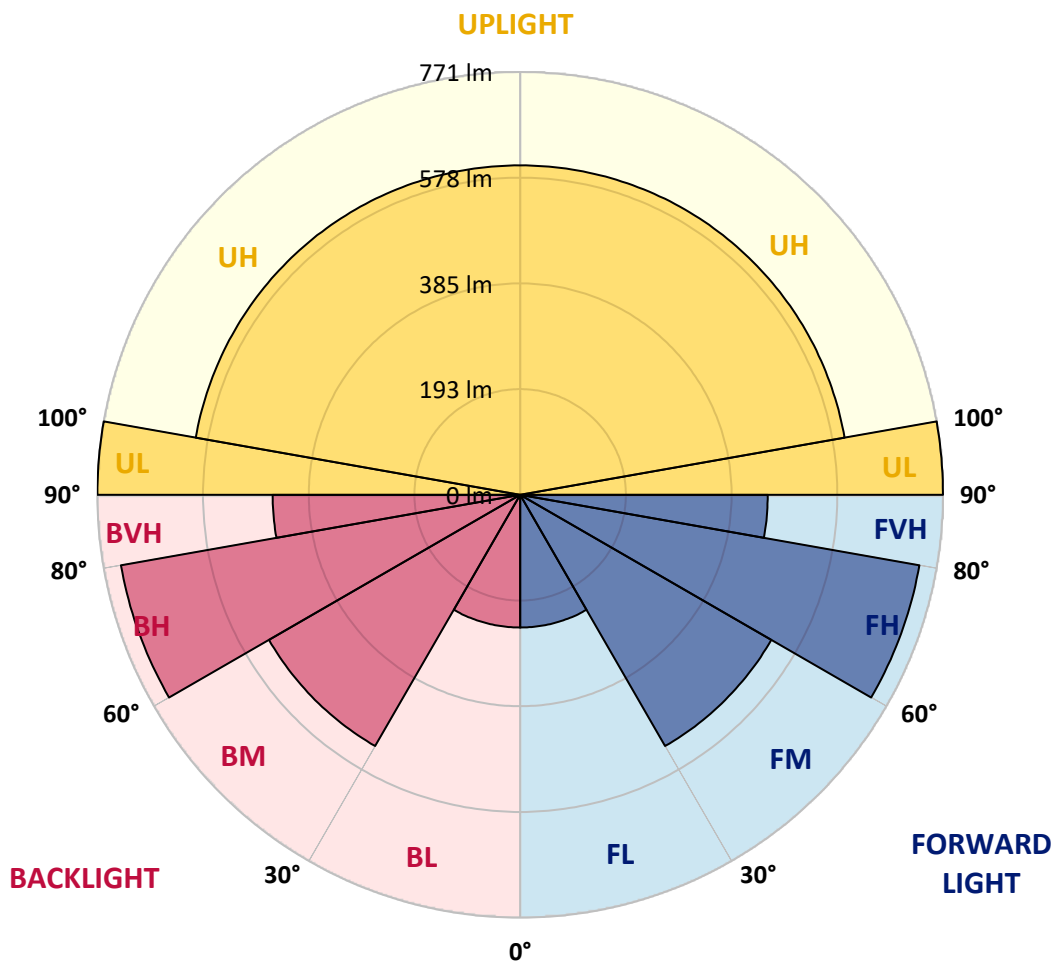
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	242.0	4.7			
FM (30°-60°)	528.8	10.3			
FH (60°-80°)	739.1	14.4			G1/1800
FVH (80°-90°)	451.3	8.8			G3/500
BL (0°-30°)	242.0	4.7	B1/500		
BM (30°-60°)	528.8	10.3	B1/1000		
BH (60°-80°)	739.1	14.4	B2/1000		G1/1800
BVH (80°-90°)	451.3	8.8			G3/500
UL (90°-100°)	770.9	15.0		U4/1000	
UH (100°-180°)	600.6	11.7		U4/1000	

**BUG Rating: B2-U4-G3**

Type V Long





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	647.6	647.6	647.6	647.6	647.6	647.6	647.6	647.6	647.6	647.6	647.6
2.5°	646.5	646.5	647.6	644.1	647.6	645.3	645.3	643.0	644.1	643.0	643.0
5°	634.8	637.1	635.9	632.4	633.6	634.8	634.8	631.3	632.4	631.3	632.4
7.5°	624.2	625.4	624.2	619.6	620.7	618.4	617.2	614.9	617.2	617.2	617.2
10°	613.7	613.7	614.9	610.2	609.1	606.7	604.4	603.2	604.4	605.5	604.4
12.5°	596.2	596.2	598.5	596.2	598.5	599.7	597.4	591.5	588.0	584.5	583.3
15°	584.5	585.7	589.2	586.8	591.5	591.5	583.3	572.8	569.3	565.8	564.6
17.5°	568.1	572.8	579.8	582.2	590.3	583.3	575.2	567.0	557.6	552.9	551.8
20°	554.1	558.8	569.3	581.0	590.3	585.7	576.3	561.1	547.1	540.1	537.7
22.5°	543.6	547.1	557.6	575.2	595.0	599.7	583.3	557.6	531.9	524.9	522.5
25°	530.7	533.1	549.4	574.0	602.0	606.7	591.5	558.8	522.5	507.3	506.2
27.5°	516.7	521.4	541.2	577.5	603.2	609.1	593.9	563.5	516.7	495.7	494.5
30°	509.7	508.5	531.9	578.7	607.9	611.4	596.2	557.6	507.3	485.1	484.0
32.5°	498.0	494.5	510.9	567.0	603.2	599.7	586.8	535.4	481.6	468.8	471.1
35°	468.8	465.3	465.3	526.1	560.0	554.1	540.1	494.5	434.9	440.7	445.4
37.5°	427.9	425.5	410.3	475.8	510.9	507.3	492.2	446.6	383.4	402.1	405.6
40°	382.3	377.6	365.9	430.2	472.3	471.1	452.4	404.5	340.2	358.9	361.2
42.5°	337.8	330.8	337.8	408.0	450.1	443.1	431.4	390.4	314.5	319.1	325.0
45°	303.9	300.4	337.8	413.8	444.2	432.5	433.7	403.3	319.1	291.1	294.6
47.5°	279.4	282.9	362.4	450.1	452.4	437.2	451.2	445.4	340.2	274.7	272.4
50°	263.0	271.2	396.3	519.0	478.1	453.6	485.1	519.0	369.4	260.7	257.2
52.5°	251.3	261.9	425.5	598.5	527.2	482.8	549.4	598.5	402.1	250.2	243.2
55°	233.8	250.2	445.4	679.2	595.0	526.1	638.3	668.7	426.7	239.6	229.1
57.5°	222.1	247.8	469.9	736.5	687.4	586.8	741.1	722.4	447.7	230.3	211.6
60°	206.9	251.3	496.8	789.1	792.6	666.3	854.5	776.2	477.0	231.5	199.9
62.5°	201.1	263.0	523.7	840.5	900.1	737.6	956.2	831.2	499.2	246.7	195.2
65°	203.4	268.9	538.9	889.6	998.3	811.3	1041.6	881.4	520.2	257.2	198.7
67.5°	206.9	252.5	549.4	921.2	1075.5	906.0	1096.5	909.5	524.9	240.8	199.9
70°	218.6	240.8	549.4	920.0	1130.4	1027.6	1142.1	917.7	512.0	224.4	206.9
72.5°	229.1	237.3	519.0	914.2	1172.5	1181.9	1172.5	909.5	461.8	230.3	226.8
75°	243.2	245.5	439.5	910.7	1193.6	1368.9	1186.5	888.4	391.6	242.0	242.0
77.5°	263.0	264.2	371.7	888.4	1209.9	1518.5	1206.4	856.9	329.7	261.9	259.5
80°	287.6	289.9	343.7	842.9	1239.1	1609.7	1229.8	805.4	326.2	289.9	285.2
81°	299.3	303.9	348.4	820.6	1255.5	1630.8	1245.0	779.7	335.5	302.8	296.9
82.5°	316.8	325.0	362.4	789.1	1287.1	1647.1	1264.9	741.1	353.0	321.5	311.0
85°	402.1	411.5	436.0	765.7	1337.3	1623.7	1309.3	709.6	417.3	389.3	381.1
87.5°	505.0	515.5	536.6	769.2	1352.5	1530.2	1312.8	740.0	557.6	543.6	534.2
90°	598.5	606.7	638.3	782.1	1282.4	1380.6	1232.1	743.5	637.1	604.4	595.0
92.5°	579.8	585.7	631.3	728.3	1135.1	1218.1	1089.5	692.1	627.8	581.0	574.0
95°	533.1	535.4	584.5	639.4	949.2	1061.5	904.8	610.2	574.0	530.7	526.1
97.5°	481.6	487.5	527.2	548.3	769.2	900.1	735.3	529.6	515.5	481.6	475.8
100°	432.5	438.4	461.8	469.9	605.5	697.9	579.8	460.6	458.2	434.9	429.0
102.5°	348.4	353.0	377.6	383.4	443.1	492.2	426.7	385.8	376.4	348.4	341.3
105°	242.0	238.5	244.3	250.2	279.4	321.5	278.2	267.7	260.7	250.2	249.0
107.5°	146.1	142.6	140.3	159.0	180.0	199.9	181.2	173.0	163.7	164.8	166.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	70.1	67.8	71.3	100.5	122.7	126.3	122.7	106.4	81.8	76.0	77.2
112.5°	52.6	51.4	51.4	71.3	91.2	90.0	91.2	71.3	52.6	53.8	54.9
115°	47.9	45.6	44.4	56.1	72.5	72.5	71.3	56.1	43.3	44.4	46.8
117.5°	43.3	42.1	42.1	49.1	56.1	62.0	54.9	47.9	39.7	40.9	42.1
120°	38.6	37.4	37.4	42.1	44.4	49.1	43.3	40.9	36.2	37.4	37.4
122.5°	35.1	35.1	35.1	35.1	38.6	35.1	38.6	33.9	33.9	33.9	33.9
125°	30.4	30.4	31.6	31.6	30.4	23.4	29.2	31.6	30.4	29.2	29.2
127.5°	28.1	28.1	31.6	28.1	22.2	17.5	21.0	25.7	31.6	26.9	28.1
130°	30.4	29.2	28.1	19.9	16.4	15.2	16.4	18.7	25.7	28.1	30.4
132.5°	23.4	23.4	21.0	14.0	14.0	12.9	14.0	14.0	19.9	21.0	21.0
135°	18.7	18.7	16.4	12.9	14.0	12.9	14.0	12.9	16.4	17.5	17.5
137.5°	17.5	17.5	15.2	11.7	12.9	14.0	14.0	12.9	15.2	16.4	16.4
140°	18.7	18.7	15.2	12.9	14.0	15.2	14.0	12.9	15.2	17.5	17.5
142.5°	19.9	18.7	16.4	12.9	15.2	15.2	15.2	12.9	15.2	17.5	18.7
145°	18.7	18.7	16.4	14.0	17.5	15.2	16.4	14.0	16.4	17.5	18.7
147.5°	19.9	19.9	16.4	15.2	16.4	15.2	16.4	15.2	16.4	18.7	18.7
150°	19.9	19.9	17.5	15.2	16.4	16.4	16.4	15.2	17.5	18.7	18.7
152.5°	19.9	19.9	17.5	15.2	17.5	18.7	17.5	15.2	17.5	19.9	18.7
155°	18.7	18.7	17.5	16.4	18.7	19.9	18.7	16.4	17.5	18.7	18.7
157.5°	19.9	19.9	17.5	16.4	18.7	19.9	18.7	16.4	17.5	18.7	19.9
160°	21.0	21.0	18.7	16.4	18.7	19.9	18.7	17.5	18.7	21.0	22.2
162.5°	22.2	23.4	19.9	17.5	18.7	18.7	19.9	18.7	19.9	23.4	23.4
165°	23.4	23.4	23.4	18.7	18.7	18.7	18.7	18.7	23.4	25.7	24.5
167.5°	25.7	25.7	25.7	22.2	22.2	21.0	22.2	23.4	26.9	28.1	28.1
170°	26.9	26.9	26.9	25.7	29.2	30.4	29.2	26.9	26.9	26.9	26.9
172.5°	24.5	25.7	24.5	25.7	28.1	29.2	29.2	25.7	24.5	24.5	24.5
175°	29.2	29.2	28.1	26.9	30.4	31.6	31.6	29.2	29.2	30.4	30.4
177.5°	29.2	29.2	30.4	29.2	31.6	33.9	32.7	29.2	30.4	30.4	30.4
180°	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4

(END OF REPORT)