

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: P821322

Luminaire Tested: **TT-D5-740-24VDC-CQ-HSS**

Issue Date: 12/2/2020

Test Information

Test Method: LM-79-08
Report Number: P821322
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-3)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D5-740-24VDC-CQ-HSS
Description: TOPTIER LED PARKING GARAGE LUMINAIRE
4000K, 70 CRI LEDS AND CONCENTRATED DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

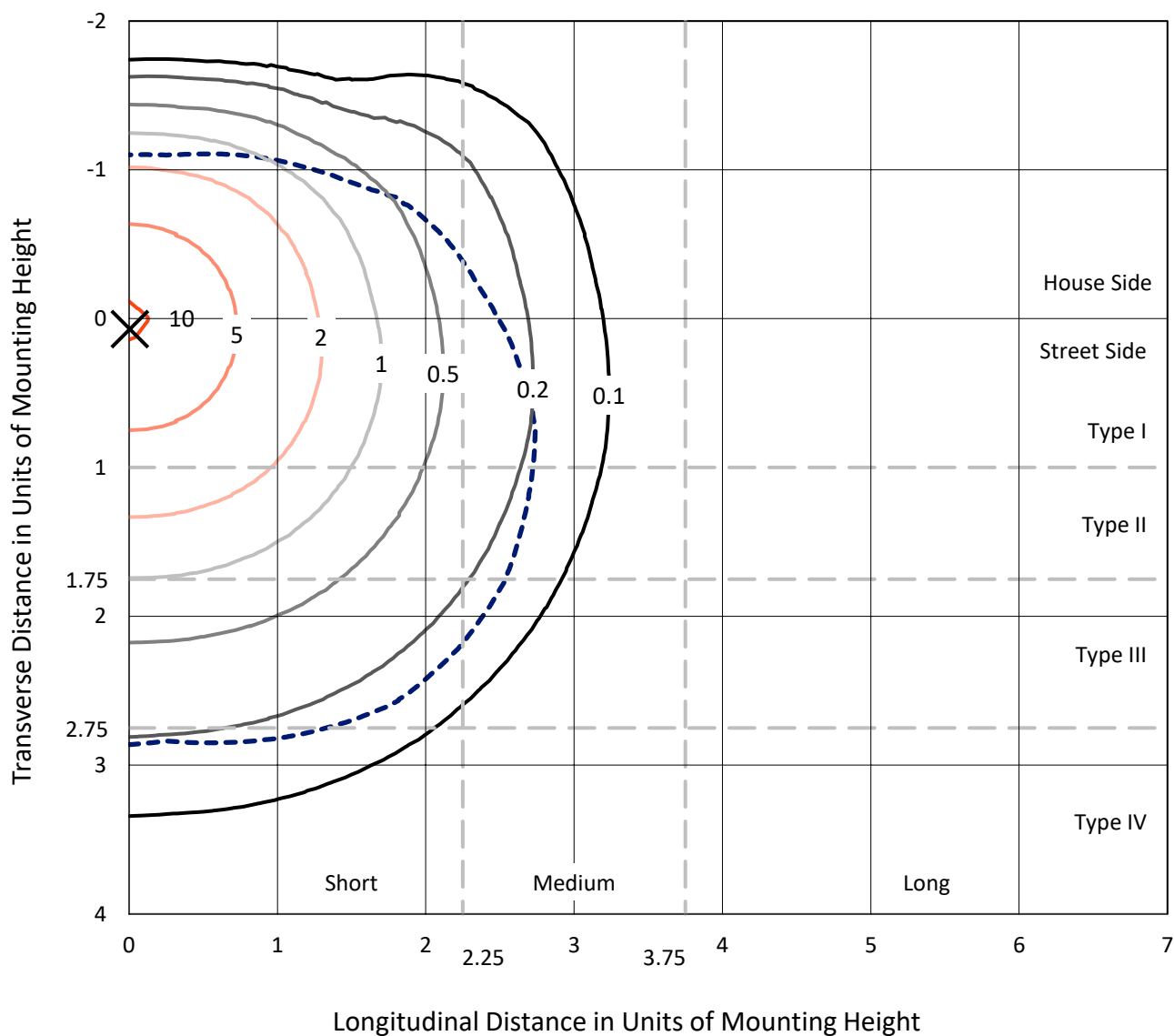
Lumens per Lamp: N/A
Luminaire Lumens: 7967 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Luminous Opening: Circular (Dia: 1.12' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U2 - G1

Input Watts (W): 73
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

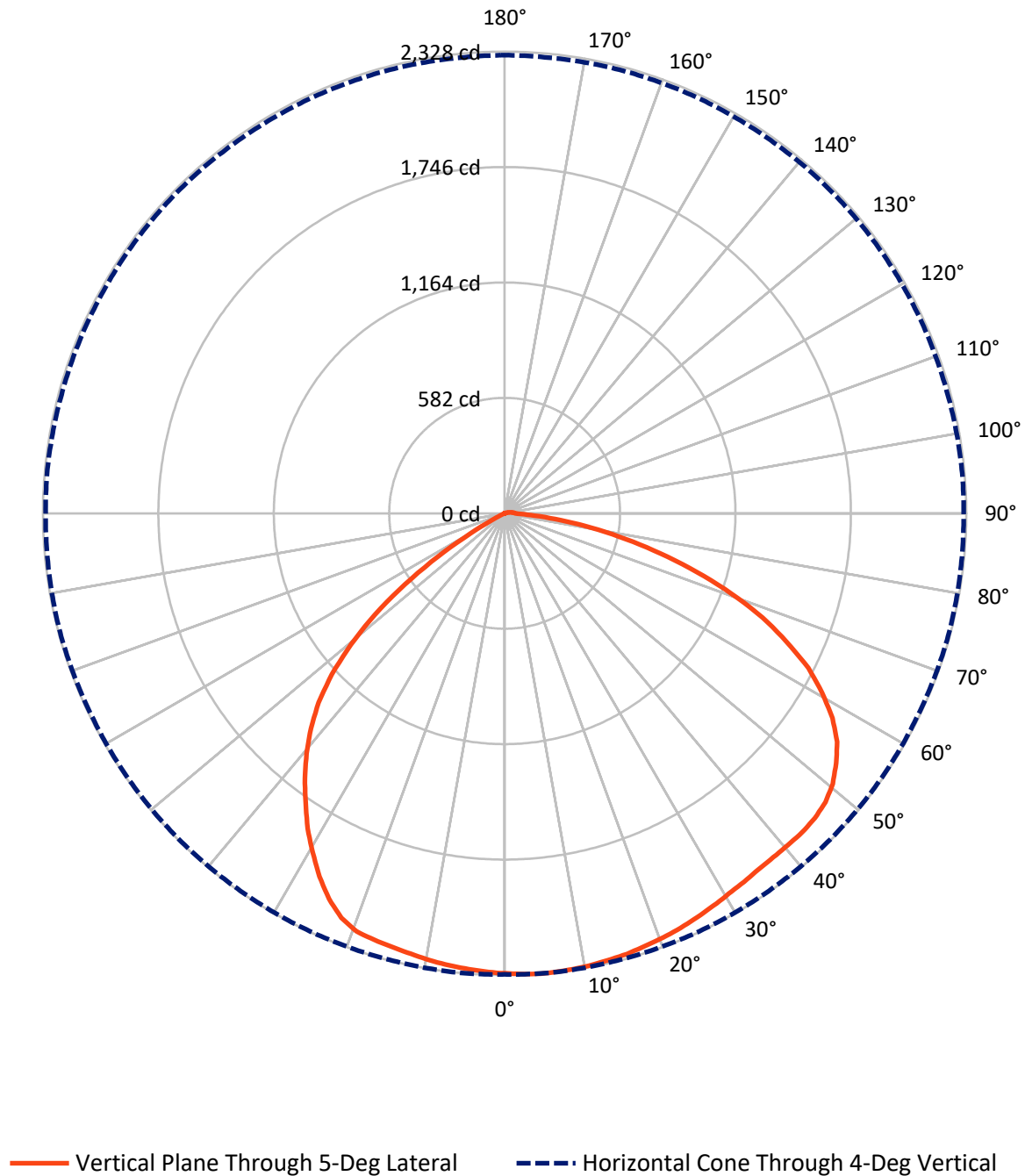
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 10.3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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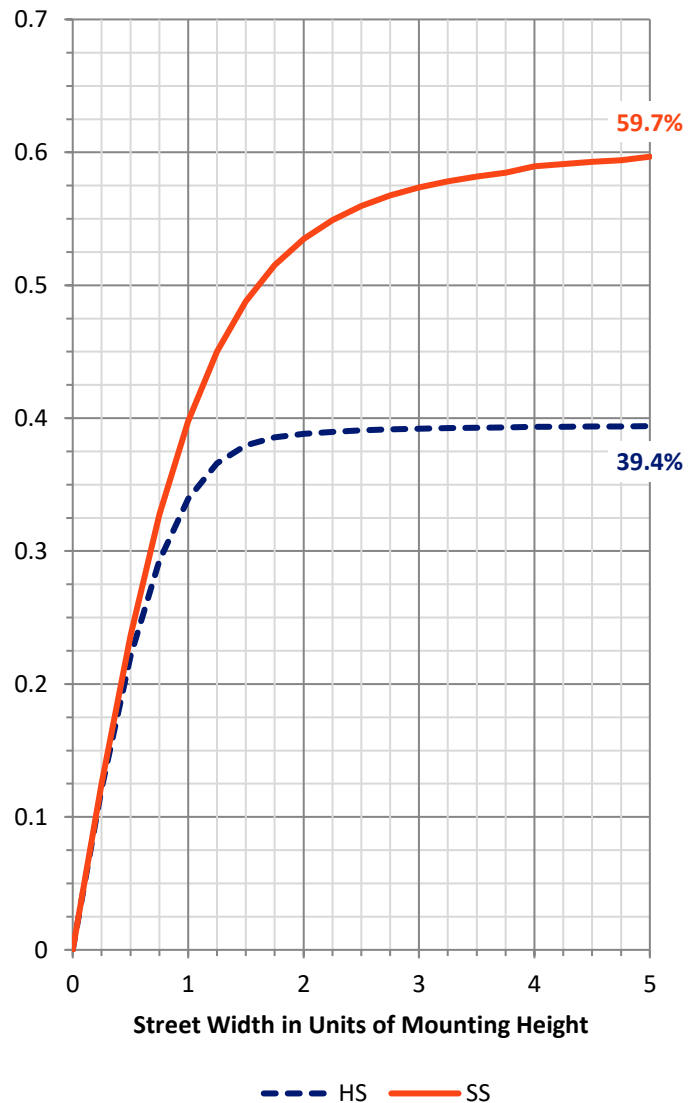
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3157.3	4.1	3161.3
	% Fixture	39.6	0.1	39.7
Street Side	Lumens	4783.5	22.2	4805.7
	% Fixture	60.0	0.3	60.3
Total	Lumens	7940.7	26.3	7967.0
	% Fixture	99.7	0.3	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.5	2.8
10°-20°	645.8	8.1
20°-30°	1017.6	12.8
30°-40°	1295.0	16.3
40°-50°	1495.8	18.8
50°-60°	1464.6	18.4
60°-70°	1090.8	13.7
70°-80°	590.8	7.4
80°-90°	119.8	1.5
90°-100°	15.2	0.2
100°-110°	5.9	0.1
110°-120°	1.7	0.0
120°-130°	1.2	0.0
130°-140°	1.0	0.0
140°-150°	0.6	0.0
150°-160°	0.4	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-90°	7940.7	99.7
0°-180°	7967.0	100.0

Coefficient of Utilization



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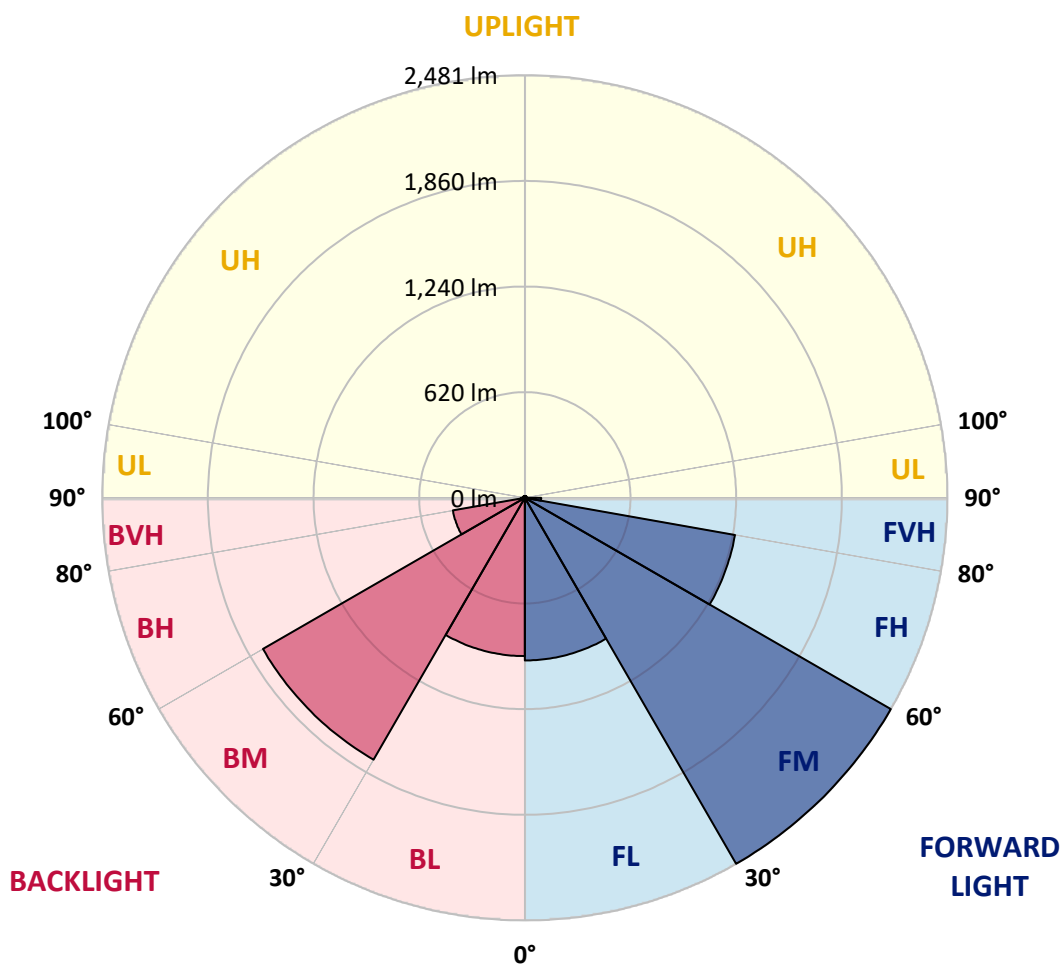
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	954.6	12.0			
FM	(30°-60°)	2480.6	31.1			
FH	(60°-80°)	1252.6	15.7			G1/1800
FVH	(80°-90°)	95.6	1.2			G1/100
BL	(0°-30°)	929.2	11.7	B2/1000		
BM	(30°-60°)	1774.8	22.3	B2/2500		
BH	(60°-80°)	429.0	5.4	B1/500		G1/500
BVH	(80°-90°)	24.1	0.3			G1/100
UL	(90°-100°)	15.2	0.2		U2/50	
UH	(100°-180°)	11.1	0.1		U2/50	

BUG Rating: B2-U2-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2320.4	2320.4	2320.4	2320.4	2320.4	2320.4	2320.4	2320.4	2320.4	2320.4	2320.4
2.5°	2323.4	2326.4	2324.9	2324.9	2321.9	2323.4	2321.9	2321.9	2320.4	2318.9	2318.9
4°	2324.9	2327.9	2324.9	2324.9	2323.4	2323.4	2321.9	2318.9	2320.4	2316.0	2314.5
5°	2326.4	2327.9	2326.4	2326.4	2323.4	2321.9	2318.9	2318.9	2317.4	2314.5	2314.5
7.5°	2323.4	2324.9	2324.9	2323.4	2320.4	2317.4	2316.0	2314.5	2313.0	2308.5	2308.5
10°	2317.4	2320.4	2317.4	2317.4	2316.0	2313.0	2308.5	2307.0	2302.5	2299.5	2298.0
12.5°	2311.5	2313.0	2311.5	2311.5	2308.5	2304.0	2302.5	2299.5	2293.5	2289.0	2289.0
15°	2302.5	2305.5	2304.0	2302.5	2301.0	2296.5	2292.0	2287.5	2283.0	2278.5	2278.5
17.5°	2292.0	2293.5	2295.0	2293.5	2290.5	2287.5	2283.0	2277.0	2272.5	2268.0	2266.5
20°	2280.0	2283.0	2283.0	2283.0	2280.0	2277.0	2271.0	2265.0	2262.0	2256.0	2254.5
22.5°	2268.0	2271.0	2269.5	2271.0	2269.5	2265.0	2259.0	2253.0	2247.0	2242.5	2239.6
25°	2256.0	2256.0	2256.0	2256.0	2256.0	2250.0	2244.0	2236.6	2230.6	2223.1	2223.1
27.5°	2241.0	2241.0	2242.5	2242.5	2241.0	2236.6	2229.1	2220.1	2211.1	2203.6	2200.6
30°	2227.6	2226.1	2229.1	2232.1	2230.6	2226.1	2217.1	2206.6	2193.1	2182.6	2173.6
32.5°	2211.1	2215.6	2218.6	2224.6	2226.1	2220.1	2209.6	2196.1	2182.6	2163.2	2146.7
35°	2205.1	2205.1	2212.6	2221.6	2224.6	2221.6	2206.6	2191.6	2172.1	2143.7	2124.2
37.5°	2199.1	2200.6	2212.6	2226.1	2230.6	2230.6	2214.1	2194.6	2167.6	2127.2	2103.2
40°	2196.1	2199.1	2214.1	2233.6	2245.5	2244.0	2224.6	2200.6	2167.6	2115.2	2085.3
42.5°	2193.1	2199.1	2215.6	2242.5	2260.5	2259.0	2238.1	2206.6	2164.7	2100.2	2065.8
45°	2188.6	2193.1	2215.6	2250.0	2274.0	2278.5	2254.5	2214.1	2164.7	2086.8	2041.8
47.5°	2175.1	2176.6	2206.6	2247.0	2283.0	2289.0	2265.0	2217.1	2158.7	2064.3	2011.9
50°	2139.2	2143.7	2178.1	2232.1	2274.0	2283.0	2262.0	2209.6	2143.7	2026.8	1963.9
52.5°	2092.7	2092.7	2134.7	2194.6	2245.5	2260.5	2241.0	2182.6	2106.2	1971.4	1899.5
55°	2023.8	2034.3	2077.8	2140.7	2196.1	2217.1	2190.1	2133.2	2044.8	1901.0	1821.6
57.5°	1945.9	1948.9	1993.9	2068.8	2125.7	2139.2	2116.7	2049.3	1963.9	1817.1	1722.7
60°	1833.6	1839.6	1896.5	1962.4	2023.8	2041.8	2013.3	1945.9	1856.1	1709.2	1613.4
62.5°	1709.2	1718.2	1769.2	1836.6	1895.0	1923.5	1889.0	1818.6	1730.2	1580.4	1496.5
65°	1559.4	1562.4	1617.9	1694.3	1752.7	1763.2	1733.2	1664.3	1575.9	1432.1	1357.2
67.5°	1387.2	1402.2	1456.1	1513.0	1563.9	1575.9	1555.0	1475.6	1405.2	1277.8	1204.4
70°	1220.9	1213.4	1258.3	1315.3	1361.7	1372.2	1348.2	1274.8	1208.9	1089.1	1032.1
72.5°	1020.2	1014.2	1062.1	1105.5	1150.5	1144.5	1120.5	1062.1	1005.2	903.3	850.9
75°	817.9	811.9	849.4	886.8	909.3	912.3	895.8	852.4	791.0	711.6	671.1
77.5°	620.2	626.2	642.7	674.1	695.1	704.1	675.6	632.2	593.2	531.8	501.8
80°	441.9	443.4	449.4	471.9	486.9	486.9	473.4	438.9	395.5	352.0	337.1
82.5°	278.6	284.6	284.6	307.1	307.1	295.1	289.1	266.6	244.2	209.7	188.8
85°	152.8	149.8	158.8	160.3	158.8	149.8	140.8	127.3	112.4	88.4	79.4
87.5°	67.4	65.9	65.9	65.9	64.4	58.4	49.4	38.9	27.0	16.5	12.0
90°	52.4	52.4	50.9	47.9	43.4	38.9	31.5	24.0	15.0	6.0	3.0
92.5°	47.9	47.9	46.4	44.9	40.4	36.0	28.5	21.0	13.5	6.0	3.0
95°	41.9	40.4	40.4	37.5	34.5	30.0	25.5	18.0	12.0	4.5	3.0
97.5°	34.5	33.0	33.0	31.5	28.5	24.0	21.0	15.0	10.5	4.5	3.0
100°	25.5	27.0	25.5	24.0	22.5	19.5	16.5	12.0	7.5	3.0	3.0
102.5°	19.5	19.5	18.0	18.0	16.5	15.0	12.0	9.0	6.0	3.0	1.5
105°	13.5	13.5	13.5	12.0	12.0	10.5	9.0	6.0	4.5	3.0	1.5
107.5°	7.5	7.5	7.5	7.5	7.5	7.5	6.0	4.5	3.0	1.5	1.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	4.5	4.5	4.5	4.5	4.5	4.5	3.0	3.0	1.5	1.5	1.5
112.5°	1.5	1.5	3.0	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5
115°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
117.5°	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
120°	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
122.5°	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
125°	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
127.5°	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
130°	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
132.5°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
135°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
137.5°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
140°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
142.5°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
145°	1.5	1.5	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
147.5°	1.5	1.5	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
150°	1.5	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
152.5°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
155°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
157.5°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
160°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
162.5°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
165°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
167.5°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
170°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
172.5°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
175°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
177.5°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
180°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2320.4	2320.4	2320.4	2320.4	2320.4	2320.4	2320.4	2320.4	2320.4	2320.4
2.5°	2317.4	2313.0	2316.0	2314.5	2316.0	2313.0	2313.0	2313.0	2314.5	2311.5
4°	2316.0	2313.0	2313.0	2313.0	2313.0	2310.0	2310.0	2310.0	2308.5	2310.0
5°	2313.0	2311.5	2310.0	2308.5	2310.0	2307.0	2305.5	2305.5	2305.5	2307.0
7.5°	2307.0	2302.5	2302.5	2298.0	2299.5	2298.0	2296.5	2298.0	2296.5	2296.5
10°	2296.5	2293.5	2292.0	2289.0	2289.0	2286.0	2284.5	2284.5	2284.5	2283.0
12.5°	2286.0	2283.0	2281.5	2278.5	2277.0	2274.0	2272.5	2274.0	2271.0	2271.0
15°	2274.0	2271.0	2269.5	2269.5	2266.5	2263.5	2262.0	2259.0	2259.0	2259.0
17.5°	2263.5	2260.5	2262.0	2259.0	2257.5	2254.5	2254.5	2248.5	2248.5	2247.0
20°	2253.0	2250.0	2250.0	2248.5	2248.5	2245.5	2241.0	2238.1	2236.6	2236.6
22.5°	2239.6	2235.1	2227.6	2217.1	2211.1	2206.6	2205.1	2200.6	2199.1	2196.1
25°	2218.6	2206.6	2190.1	2172.1	2154.2	2145.2	2142.2	2136.2	2136.2	2136.2
27.5°	2193.1	2170.6	2148.2	2121.2	2094.2	2076.3	2064.3	2058.3	2055.3	2055.3
30°	2160.2	2131.7	2100.2	2065.8	2035.8	2002.9	1981.9	1969.9	1963.9	1965.4
32.5°	2130.2	2094.2	2058.3	2014.8	1974.4	1935.5	1899.5	1881.5	1874.0	1871.0
35°	2100.2	2059.8	2016.3	1969.9	1917.5	1860.6	1812.6	1785.6	1770.7	1772.2
37.5°	2077.8	2029.8	1981.9	1925.0	1865.0	1796.1	1734.7	1691.3	1673.3	1676.3
40°	2053.8	1999.9	1947.4	1881.5	1811.1	1728.7	1649.3	1590.9	1569.9	1565.4
42.5°	2031.3	1968.4	1908.5	1838.1	1749.7	1656.8	1559.4	1490.5	1459.1	1454.6
45°	2002.9	1932.5	1868.0	1787.1	1689.8	1574.4	1460.6	1370.7	1337.7	1324.3
47.5°	1965.4	1887.5	1815.6	1722.7	1616.4	1486.0	1343.7	1232.9	1190.9	1180.4
50°	1910.0	1820.1	1746.7	1641.8	1513.0	1369.2	1210.4	1074.1	1018.7	1011.2
52.5°	1836.6	1745.2	1662.8	1543.0	1385.7	1216.4	1036.6	895.8	831.4	826.9
55°	1748.2	1649.3	1559.4	1424.6	1240.4	1044.1	856.9	678.6	615.7	608.2
57.5°	1644.8	1543.0	1445.6	1279.3	1066.6	847.9	630.7	459.9	400.0	385.0
60°	1531.0	1426.1	1316.8	1114.5	832.9	600.7	382.0	244.2	199.2	184.3
62.5°	1420.1	1306.3	1190.9	918.3	570.7	343.0	173.8	70.4	44.9	43.4
65°	1289.8	1181.9	1063.6	740.0	361.0	154.3	50.9	1.5	0.0	0.0
67.5°	1138.5	1047.1	942.3	662.1	319.1	134.8	43.4	1.5	0.0	0.0
70°	976.7	904.8	811.9	569.3	274.1	113.9	37.5	0.0	0.0	0.0
72.5°	805.9	744.5	675.6	473.4	227.7	94.4	30.0	0.0	0.0	0.0
75°	632.2	593.2	531.8	374.5	176.8	71.9	22.5	0.0	0.0	0.0
77.5°	468.9	437.4	392.5	275.6	133.3	52.4	16.5	0.0	0.0	0.0
80°	316.1	292.1	266.6	187.3	89.9	34.5	10.5	0.0	0.0	0.0
82.5°	184.3	166.3	149.8	106.4	49.4	19.5	4.5	0.0	0.0	0.0
85°	74.9	68.9	65.9	44.9	19.5	6.0	1.5	0.0	0.0	0.0
87.5°	9.0	7.5	7.5	4.5	1.5	0.0	0.0	0.0	0.0	0.0
90°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
95°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0
97.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.0
100°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
102.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
105°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
107.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
112.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
115°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
117.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
120°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
122.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
125°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
127.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
130°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
132.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
135°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
137.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0
140°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0
142.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0
145°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0
147.5°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	1.5
150°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
152.5°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
155°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
157.5°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
160°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
162.5°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
165°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
167.5°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
170°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
172.5°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
175°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
177.5°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
180°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

(END OF REPORT)