

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: P197036

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-8030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197036
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-SL2-8030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8894 lumens
Efficiency: N/A
Efficacy: 68.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 129
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

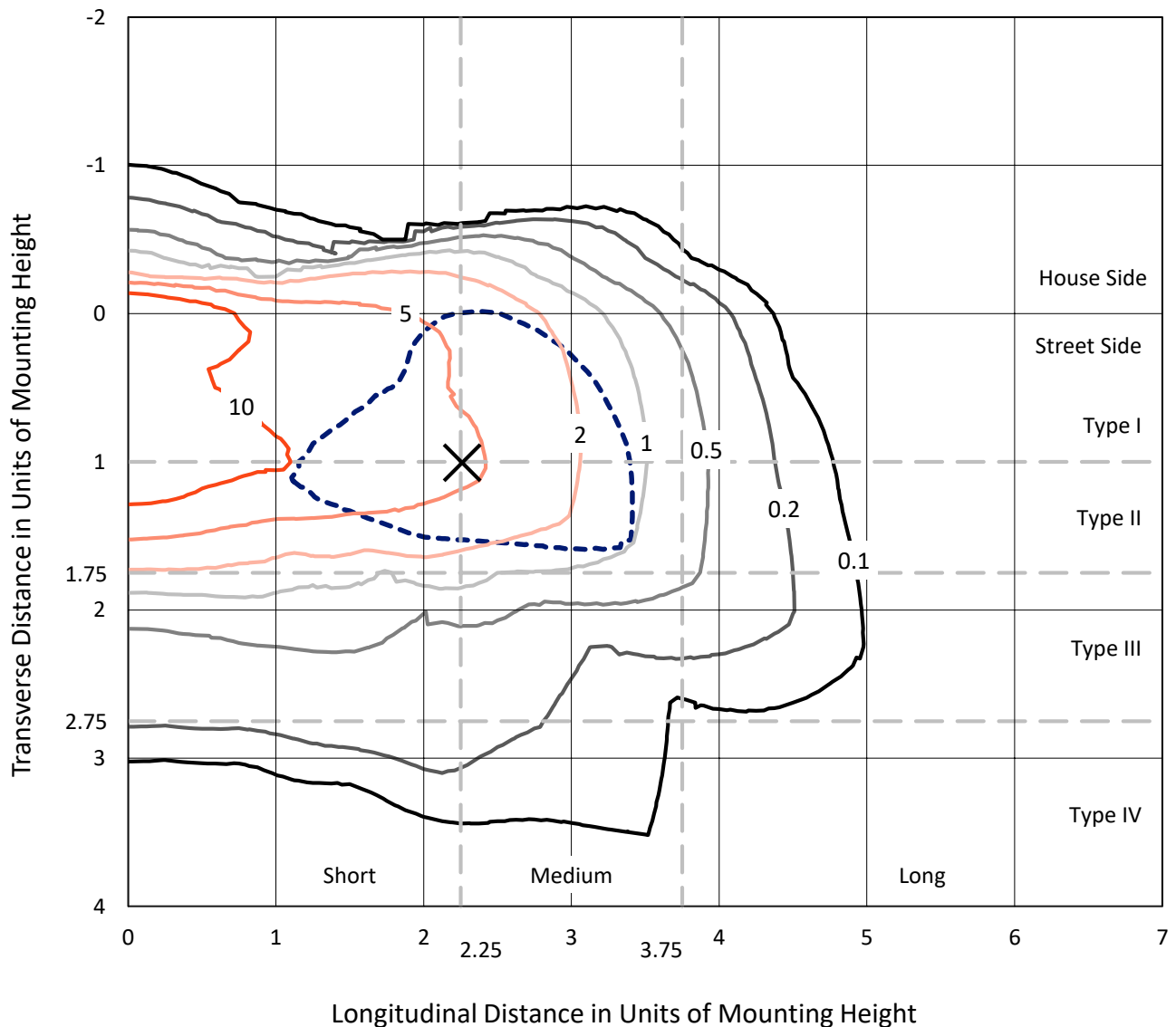


REPORT NUMBER: P197036

CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-8030-1200-HSS

Iso-Footcandle Lines of Horizontal Illumination

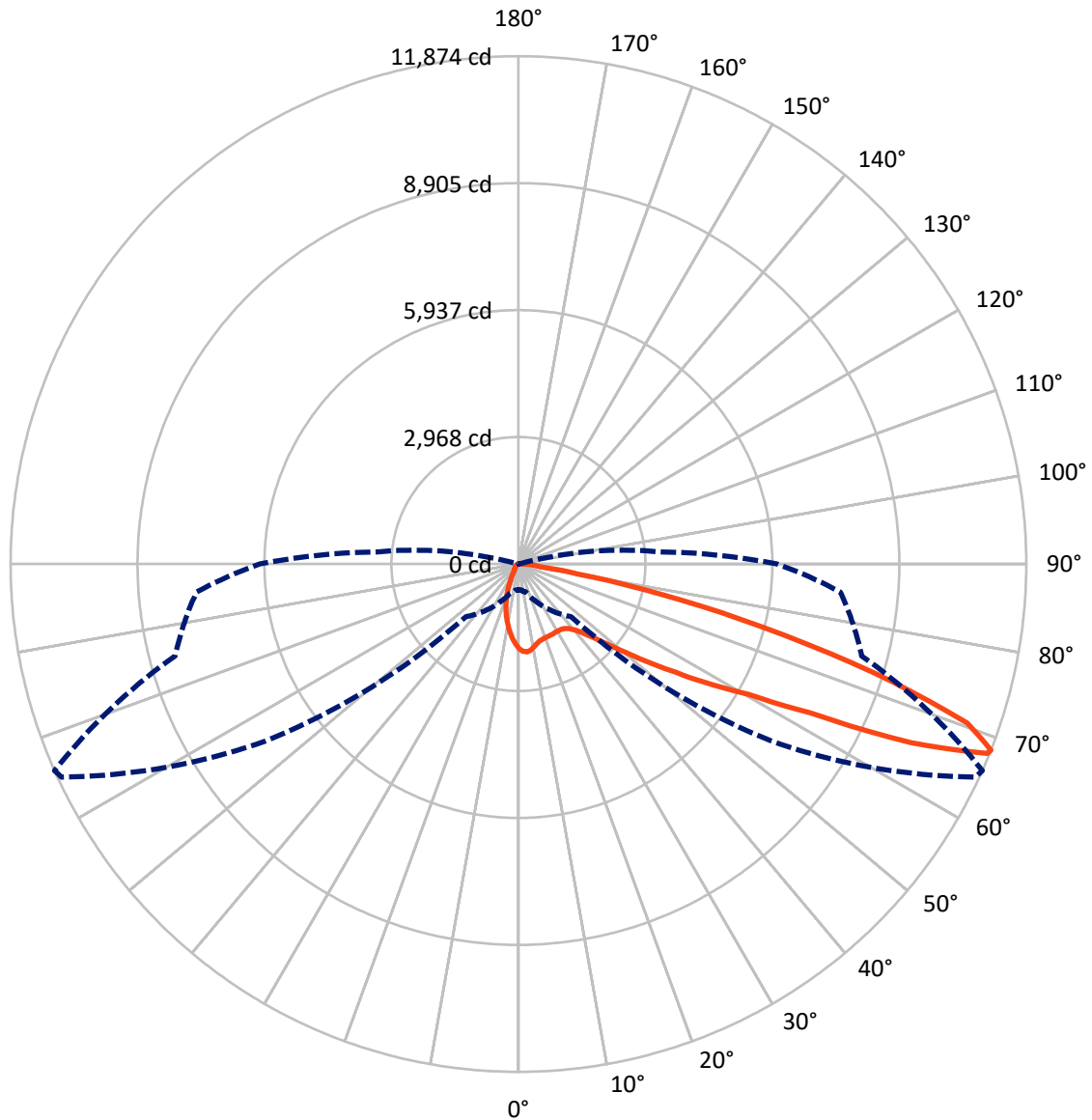
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 19.8 fc
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P197036
CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-8030-1200-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P197036

CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-8030-1200-HSS

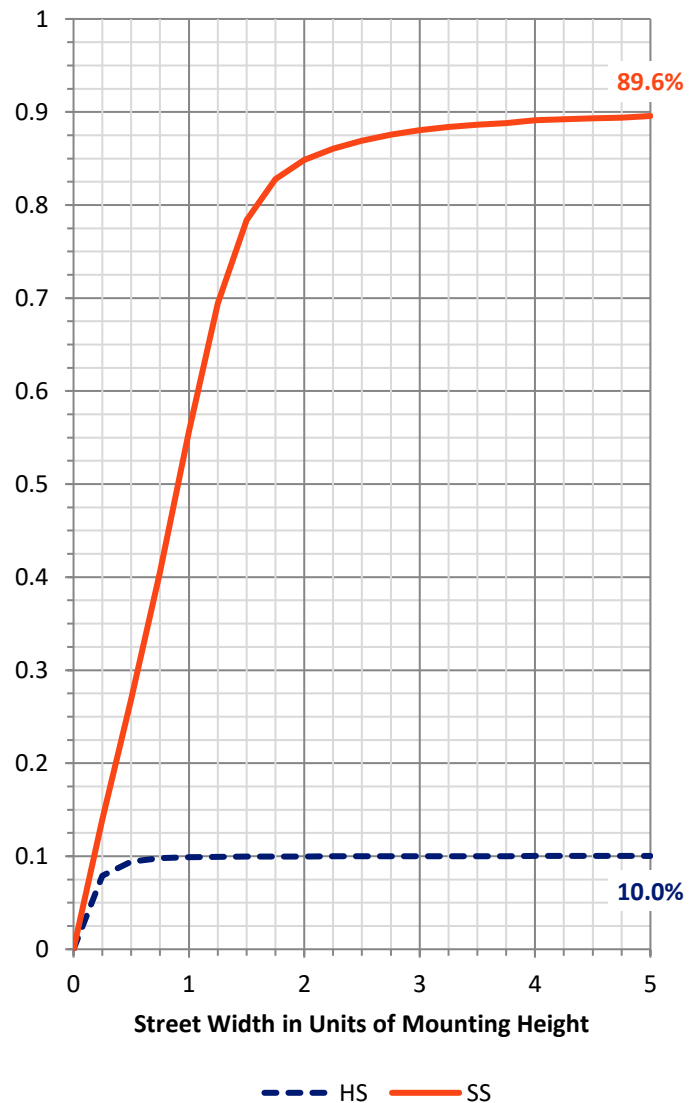
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	900.9	0.0	900.9
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	7993.1	0.0	7993.1
	% Fixture	89.9	0.0	89.9
Total	Lumens	8894.0	0.0	8894.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.4	1.8
10°-20°	349.5	3.9
20°-30°	506.5	5.7
30°-40°	775.3	8.7
40°-50°	1326.1	14.9
50°-60°	2074.4	23.3
60°-70°	2388.6	26.9
70°-80°	1195.3	13.4
80°-90°	115.8	1.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	8894.0	100.0
0°-180°	8894.0	100.0



REPORT NUMBER: P197036

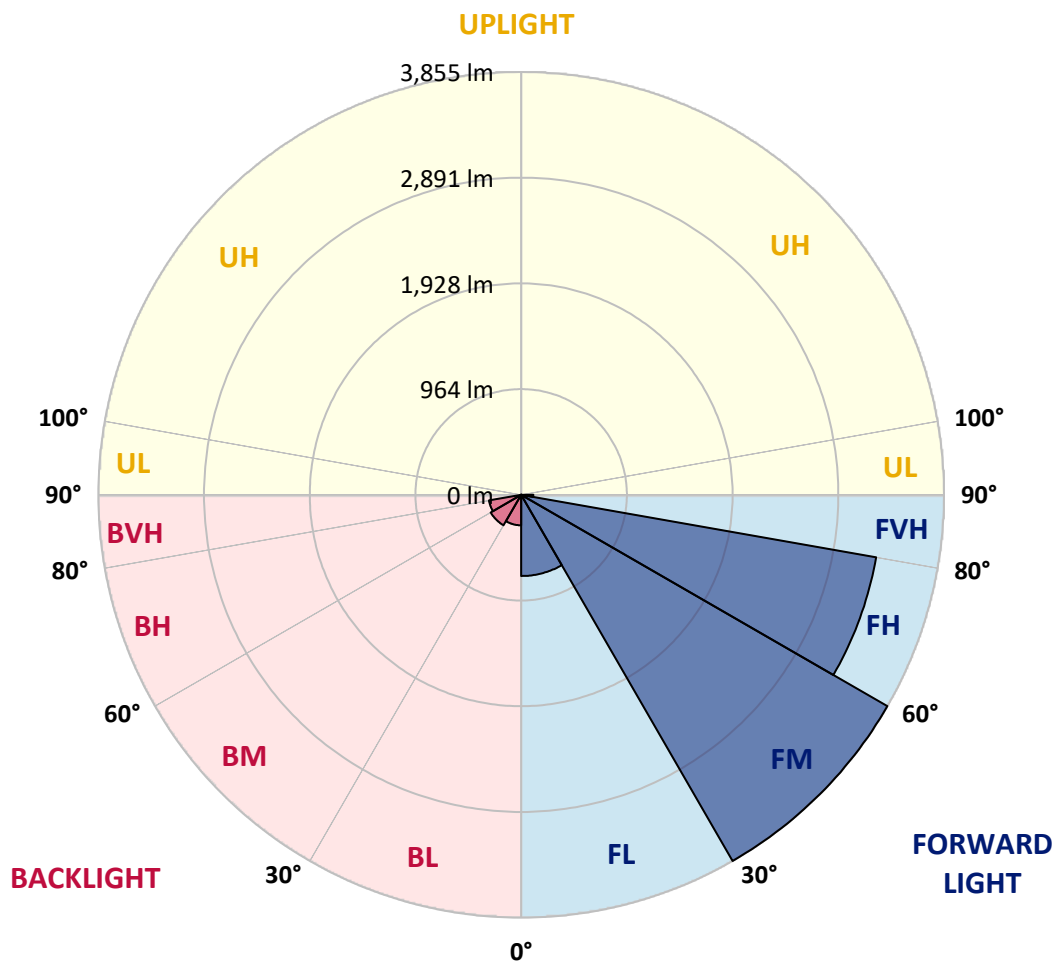
CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-8030-1200-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	740.4	8.3			
FM (30°-60°)	3855.1	43.3			
FH (60°-80°)	3286.3	36.9			G2/5000
FVH (80°-90°)	111.4	1.3			G2/225
BL (0°-30°)	278.0	3.1	B1/500		
BM (30°-60°)	320.8	3.6	B1/1000		
BH (60°-80°)	297.7	3.3	B1/500		G1/500
BVH (80°-90°)	4.4	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Medium





REPORT NUMBER: P197036

CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-8030-1200-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	1981.5	1981.5	1981.5	1981.5	1981.5	1981.5	1981.5	1981.5	1981.5	1981.5	1981.5
2.5°	2084.1	2085.5	2084.8	2086.9	2085.5	2075.1	2063.9	2040.1	2042.2	2011.5	1977.3
5°	1937.5	1949.4	1961.3	1973.1	2001.7	2026.9	2056.9	2063.9	2063.9	2037.4	1987.1
7.5°	1788.1	1788.8	1802.1	1818.1	1856.5	1902.6	1972.4	2035.3	2036.7	2043.6	1988.5
10°	1675.7	1679.2	1688.3	1705.7	1744.1	1789.5	1867.7	1966.1	1973.8	2025.5	1974.5
12.5°	1588.4	1592.6	1602.4	1622.6	1657.5	1704.3	1786.7	1899.1	1909.6	2008.0	1970.3
15°	1521.4	1527.0	1534.6	1554.9	1592.6	1642.2	1732.2	1854.4	1867.0	2001.0	1983.6
17.5°	1493.5	1493.5	1492.8	1506.7	1544.4	1594.7	1689.0	1830.7	1846.7	2006.6	2005.9
20°	1505.3	1503.2	1488.6	1485.1	1508.1	1558.4	1654.7	1815.3	1833.5	2017.1	2033.2
22.5°	1568.2	1564.0	1531.2	1503.9	1496.9	1530.5	1631.7	1804.9	1826.5	2038.8	2069.5
25°	1701.5	1689.0	1643.6	1582.1	1527.0	1523.5	1615.6	1799.3	1822.3	2063.9	2109.3
27.5°	1874.7	1871.2	1798.6	1716.2	1610.1	1546.5	1610.8	1795.1	1818.1	2082.0	2141.4
30°	2089.7	2091.1	2007.3	1899.8	1739.2	1611.5	1626.1	1793.0	1816.7	2083.4	2155.4
32.5°	2311.7	2313.1	2243.3	2128.1	1915.9	1723.2	1669.4	1802.8	1824.4	2077.9	2154.7
35°	2525.4	2527.5	2485.6	2392.7	2151.9	1878.2	1751.1	1836.3	1851.6	2081.3	2153.3
37.5°	2795.6	2804.0	2752.3	2665.7	2447.9	2105.8	1884.4	1904.0	1916.6	2110.0	2163.7
40°	3256.4	3245.2	3097.2	2950.6	2769.1	2383.0	2077.2	2020.6	2024.8	2184.0	2203.5
42.5°	3793.3	3779.4	3525.9	3273.2	3099.3	2717.4	2323.6	2199.3	2198.6	2308.3	2290.1
45°	4255.5	4247.2	3980.5	3643.2	3465.2	3086.8	2627.3	2457.0	2448.6	2523.3	2447.9
47.5°	4583.7	4576.7	4374.9	4037.0	3888.3	3493.1	3006.5	2808.2	2790.7	2804.7	2704.1
50°	4615.8	4608.1	4537.6	4320.5	4382.6	4089.4	3475.0	3268.3	3245.9	3224.3	3091.6
52.5°	4315.6	4314.9	4351.9	4337.9	4728.9	4856.7	4049.6	3837.3	3810.8	3755.6	3623.7
55°	3701.9	3698.4	3838.7	4042.6	4721.2	5648.5	4925.8	4514.6	4479.7	4369.4	4196.2
57.5°	2704.8	2686.7	2979.9	3412.1	4389.6	5994.8	6317.3	5355.9	5298.0	4948.2	4681.4
60°	1493.5	1500.4	1877.5	2389.2	3604.1	5926.3	7597.8	6336.9	6184.7	5447.4	5178.6
62.5°	837.1	854.6	1135.3	1552.8	2297.8	5371.3	8284.9	8025.1	7658.6	6029.7	5807.0
65°	633.3	643.7	784.8	1198.1	1448.8	3753.5	8394.5	10385.8	10069.5	6912.2	6807.5
67.5°	596.3	604.6	673.8	993.5	1319.6	1946.6	7569.2	11782.2	11822.0	8115.9	7582.5
68°	600.5	610.9	680.0	955.8	1317.5	1741.3	7217.3	11789.2	11873.6	8310.0	7555.9
70°	551.6	554.4	719.1	937.7	1277.0	1372.0	5221.2	10981.3	11132.8	8541.1	6859.1
72.5°	210.9	211.6	322.6	812.0	1337.8	1379.6	2630.1	8679.4	8687.0	7433.1	5347.5
75°	109.6	92.2	101.2	254.1	1277.7	1344.7	1319.6	5926.3	5889.3	5027.1	3276.7
77.5°	75.4	64.2	67.7	88.0	531.3	1344.0	953.0	3407.9	3400.2	2138.6	934.9
80°	42.6	37.0	40.5	74.0	186.4	1261.7	888.1	1464.8	1380.3	375.6	151.5
82.5°	21.6	18.2	21.6	62.1	115.9	793.9	863.7	574.6	511.8	89.4	98.4
85°	5.6	5.6	10.5	43.3	71.9	260.4	774.3	414.7	372.8	39.1	69.8
87.5°	1.4	0.7	4.2	16.1	25.8	56.6	429.4	231.1	199.0	20.2	40.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P197036

CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-8030-1200-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1981.5	1981.5	1981.5	1981.5	1981.5	1981.5	1981.5	1981.5	1981.5	1981.5	1981.5
2.5°	1963.3	1943.8	1905.4	1862.1	1831.4	1797.9	1778.3	1754.6	1736.4	1720.4	1732.2
5°	1956.4	1918.7	1833.5	1737.8	1657.5	1580.7	1523.5	1469.0	1427.8	1402.0	1412.5
7.5°	1938.2	1882.4	1744.1	1594.7	1463.4	1339.9	1239.3	1149.2	1079.4	1041.7	1053.6
10°	1907.5	1828.6	1642.9	1435.5	1251.9	1077.3	927.9	793.9	692.6	645.1	656.3
12.5°	1885.1	1781.1	1538.1	1281.9	1040.3	792.5	594.2	440.6	361.7	314.2	318.4
15°	1875.4	1744.1	1440.4	1119.9	809.2	509.0	321.2	232.5	205.3	195.5	196.2
17.5°	1876.8	1714.8	1347.5	951.7	576.0	292.5	196.9	177.3	173.2	171.1	171.1
20°	1880.3	1685.5	1251.2	776.4	368.7	188.5	164.1	157.8	155.7	152.9	153.6
22.5°	1890.7	1663.1	1154.1	600.5	226.9	153.6	145.2	139.6	136.1	132.0	132.7
25°	1906.8	1646.4	1058.5	432.2	159.9	134.1	126.4	118.7	112.4	107.5	108.2
27.5°	1916.6	1622.6	956.5	294.6	132.7	117.3	106.8	96.4	89.4	85.2	84.5
30°	1909.6	1584.2	840.6	193.4	117.3	101.2	88.7	76.8	69.8	66.3	66.3
32.5°	1890.7	1534.6	712.9	141.0	104.0	87.3	71.9	61.4	56.6	54.5	55.2
35°	1869.1	1483.0	576.7	119.4	93.6	74.0	58.6	50.3	48.2	47.5	47.5
37.5°	1857.2	1438.3	446.2	108.2	83.8	61.4	48.2	43.3	41.2	41.2	41.2
40°	1870.5	1404.1	330.2	99.8	74.0	51.0	40.5	37.0	36.3	36.3	36.3
42.5°	1927.0	1392.2	241.6	92.9	64.2	42.6	34.9	32.1	31.4	32.1	32.1
45°	2037.4	1418.0	182.9	85.9	55.2	34.9	30.0	27.9	27.9	28.6	28.6
47.5°	2224.5	1484.4	150.1	78.9	46.1	29.3	25.8	24.4	24.4	25.1	25.1
50°	2514.9	1607.3	134.8	71.2	38.4	25.1	21.6	20.9	20.9	21.6	22.3
52.5°	2956.2	1841.2	127.1	63.5	31.4	20.9	18.2	17.5	18.2	18.9	18.9
55°	3447.0	2140.7	118.0	55.9	26.5	17.5	14.7	14.7	15.4	16.8	16.8
57.5°	3904.3	2429.7	109.6	46.1	23.0	14.0	11.9	11.9	13.3	14.7	14.7
60°	4387.5	2713.2	98.4	37.0	19.5	11.2	9.8	9.8	11.9	13.3	14.0
62.5°	4984.5	3042.8	83.8	29.3	15.4	8.4	7.0	9.1	11.2	13.3	13.3
65°	5847.4	3452.6	65.6	23.0	11.9	6.3	5.6	8.4	10.5	12.6	13.3
67.5°	6160.9	3400.2	49.6	18.9	9.1	4.9	4.9	7.7	10.5	12.6	12.6
68°	6046.4	3285.7	47.5	18.2	8.4	4.9	4.9	7.7	10.5	12.6	12.6
70°	5268.6	2686.0	39.1	14.0	7.0	4.2	4.2	7.0	10.5	11.9	12.6
72.5°	3944.8	1784.6	33.5	9.1	6.3	4.2	3.5	7.0	9.8	11.9	11.9
75°	2262.9	740.8	28.6	7.0	5.6	3.5	3.5	6.3	9.8	11.9	11.9
77.5°	639.6	173.2	23.0	5.6	4.9	3.5	2.8	6.3	9.1	11.2	11.2
80°	117.3	51.7	18.2	4.9	4.2	3.5	2.8	6.3	9.1	11.2	11.2
82.5°	77.5	24.4	13.3	4.9	4.2	3.5	2.8	5.6	8.4	10.5	10.5
85°	58.0	17.5	8.4	4.9	4.2	3.5	2.8	5.6	8.4	10.5	10.5
87.5°	32.1	7.7	6.3	5.6	4.9	3.5	2.8	4.9	7.7	9.8	9.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)