

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: P196556

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-7030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196556
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-SL2-7030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 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: 10542.4 lumens
Efficiency: N/A
Efficacy: 81.7 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

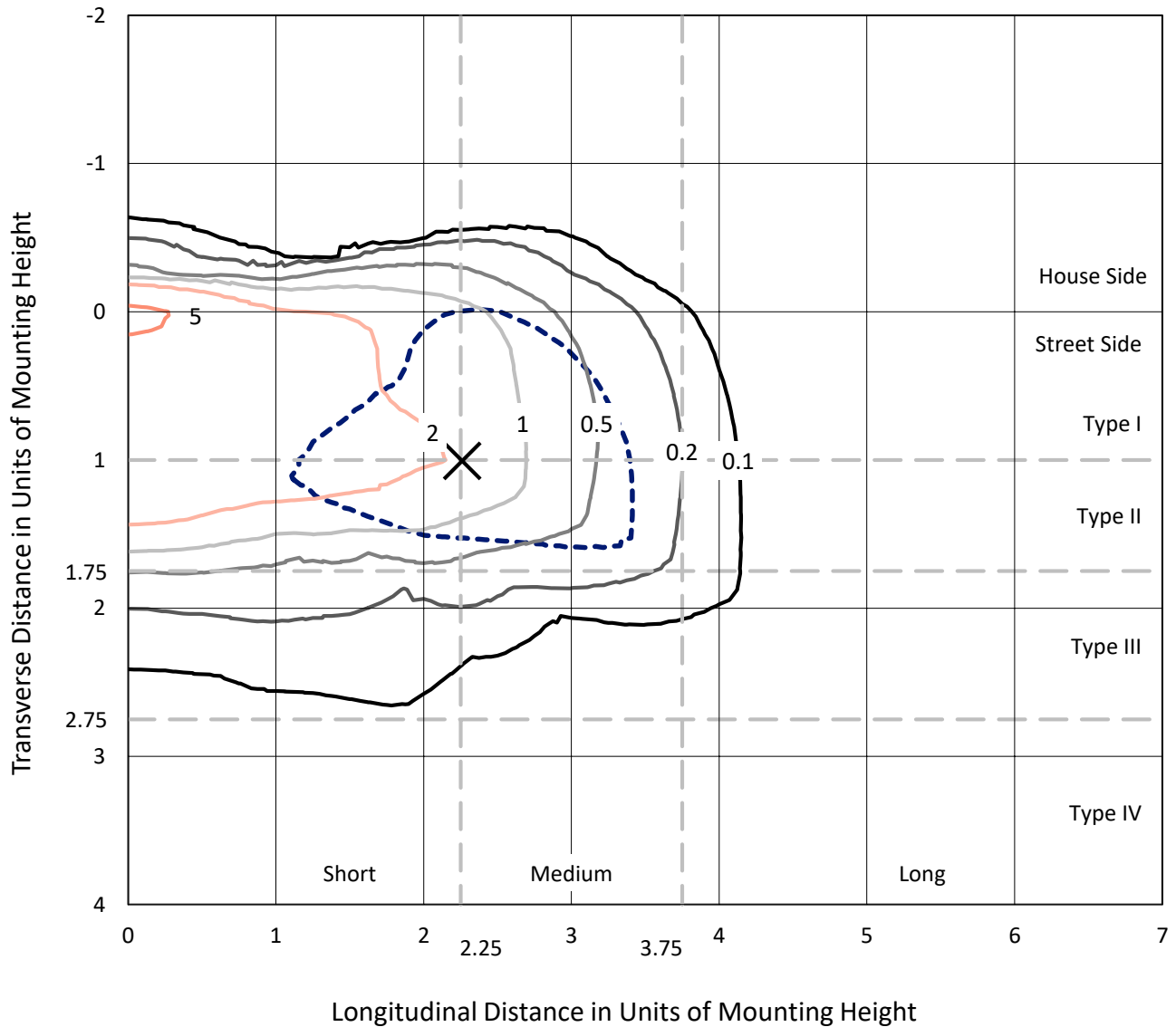
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

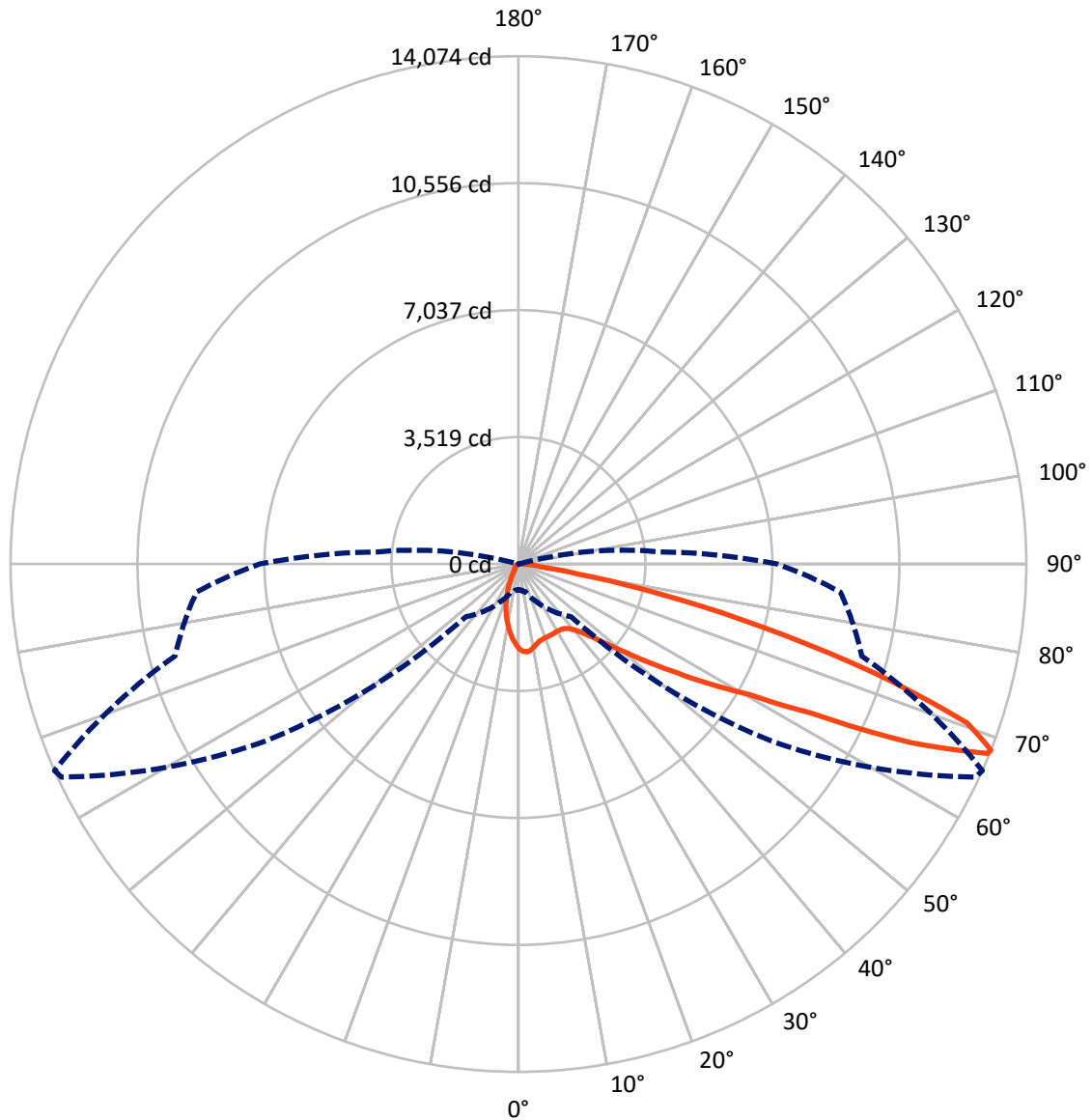
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.9 fc
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P196556
CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-7030-1200-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196556

CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-7030-1200-HSS

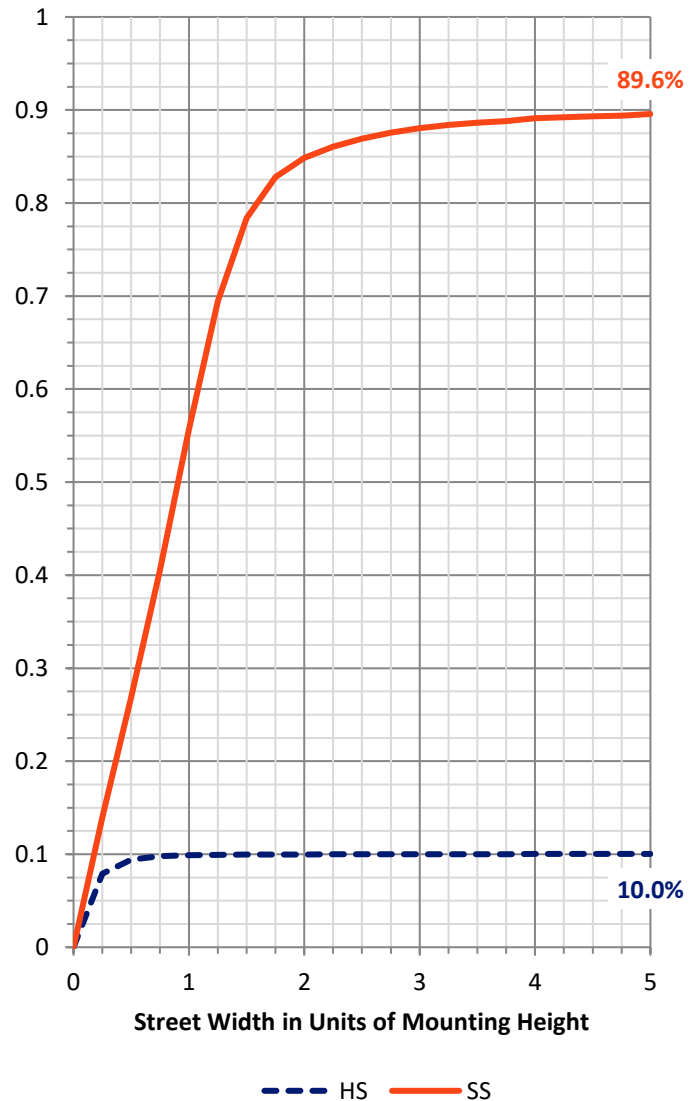
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1067.9	0.0	1067.9
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	9474.6	0.0	9474.6
	% Fixture	89.9	0.0	89.9
Total	Lumens	10542.4	0.0	10542.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.5	1.8
10°-20°	414.3	3.9
20°-30°	600.3	5.7
30°-40°	919.0	8.7
40°-50°	1571.9	14.9
50°-60°	2458.9	23.3
60°-70°	2831.4	26.9
70°-80°	1416.9	13.4
80°-90°	137.2	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°	10542.4	100.0
0°-180°	10542.4	100.0

Coefficient of Utilization



REPORT NUMBER: P196556

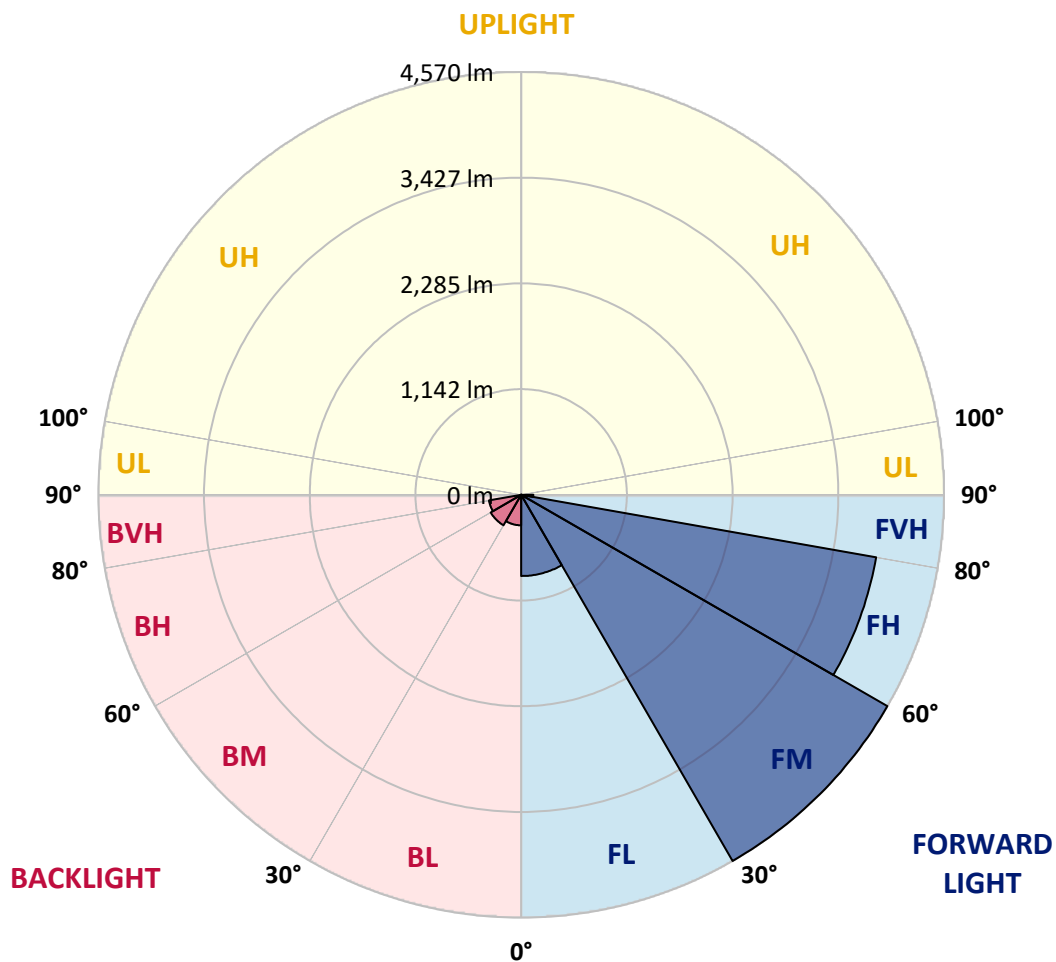
CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-7030-1200-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	877.6	8.3			
FM	(30°-60°)	4569.6	43.3			
FH	(60°-80°)	3895.4	36.9			G2/5000
FVH	(80°-90°)	132.0	1.3			G2/225
BL	(0°-30°)	329.6	3.1	B1/500		
BM	(30°-60°)	380.3	3.6	B1/1000		
BH	(60°-80°)	352.8	3.3	B1/500		G1/500
BVH	(80°-90°)	5.2	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: P196556

CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-7030-1200-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	2348.7	2348.7	2348.7	2348.7	2348.7	2348.7	2348.7	2348.7	2348.7	2348.7	2348.7
2.5°	2470.5	2472.1	2471.2	2473.7	2472.1	2459.7	2446.5	2418.2	2420.7	2384.4	2343.8
5°	2296.6	2310.8	2324.7	2338.8	2372.8	2402.5	2438.1	2446.5	2446.5	2414.9	2355.4
7.5°	2119.5	2120.2	2136.0	2155.1	2200.6	2255.2	2338.0	2412.5	2414.1	2422.4	2357.0
10°	1986.3	1990.3	2001.2	2021.9	2067.4	2121.2	2213.8	2330.5	2339.7	2400.9	2340.5
12.5°	1882.7	1887.8	1899.4	1923.4	1964.7	2020.2	2117.9	2251.1	2263.6	2380.2	2335.5
15°	1803.4	1810.0	1819.0	1843.1	1887.8	1946.6	2053.3	2198.1	2213.0	2371.9	2351.3
17.5°	1770.2	1770.2	1769.5	1786.0	1830.6	1890.3	2001.9	2170.0	2189.0	2378.6	2377.7
20°	1784.3	1781.8	1764.4	1760.2	1787.6	1847.2	1961.4	2151.8	2173.2	2390.9	2410.0
22.5°	1858.8	1853.8	1814.9	1782.7	1774.4	1814.1	1934.1	2139.4	2165.0	2416.6	2453.0
25°	2016.9	2001.9	1948.2	1875.3	1810.0	1805.8	1915.1	2132.7	2160.0	2446.5	2500.2
27.5°	2222.2	2218.0	2131.8	2034.3	1908.4	1833.2	1909.3	2127.9	2155.1	2467.9	2538.3
30°	2477.0	2478.6	2379.3	2252.0	2061.6	1910.1	1927.6	2125.3	2153.4	2469.6	2554.8
32.5°	2740.2	2741.9	2659.2	2522.6	2271.0	2042.5	1978.8	2136.9	2162.6	2462.9	2554.1
35°	2993.4	2995.9	2946.2	2836.3	2550.6	2226.2	2075.6	2176.7	2194.8	2467.1	2552.3
37.5°	3313.8	3323.6	3262.5	3159.8	2901.6	2496.0	2233.7	2256.9	2271.8	2501.1	2564.8
40°	3860.0	3846.7	3671.2	3497.5	3282.2	2824.7	2462.1	2395.1	2400.1	2588.8	2612.0
42.5°	4496.3	4479.8	4179.3	3879.8	3673.8	3221.1	2754.3	2606.9	2606.2	2736.1	2714.5
45°	5044.3	5034.3	4718.2	4318.5	4107.4	3658.9	3114.3	2912.3	2902.5	2991.0	2901.6
47.5°	5433.3	5424.9	5185.8	4785.2	4609.0	4140.5	3563.7	3328.7	3308.0	3324.5	3205.3
50°	5471.2	5462.2	5378.7	5121.2	5194.9	4847.3	4119.0	3874.0	3847.6	3821.9	3664.7
52.5°	5115.4	5114.7	5158.4	5142.0	5605.4	5756.9	4800.1	4548.6	4517.1	4451.7	4295.3
55°	4388.0	4383.8	4550.2	4791.9	5596.3	6695.3	5838.9	5351.3	5309.9	5179.2	4973.9
57.5°	3206.1	3184.7	3532.3	4044.6	5203.2	7105.9	7488.2	6348.6	6279.9	5865.2	5549.2
60°	1770.2	1778.5	2225.4	2832.1	4272.1	7024.8	9006.0	7511.3	7331.0	6457.0	6138.4
62.5°	992.3	1013.0	1345.6	1840.6	2723.7	6366.7	9820.4	9512.5	9078.1	7147.2	6883.3
65°	750.6	763.0	930.3	1420.2	1717.3	4449.2	9950.4	12310.7	11935.8	8193.4	8069.3
67.5°	706.8	716.7	798.6	1177.7	1564.1	2307.3	8972.2	13965.8	14013.0	9620.2	8987.7
68°	711.8	724.2	806.2	1133.0	1561.7	2064.0	8555.0	13974.1	14074.3	9850.2	8956.4
70°	653.8	657.0	852.4	1111.5	1513.7	1626.3	6188.9	13016.6	13196.3	10124.2	8130.4
72.5°	249.9	250.7	382.4	962.5	1585.7	1635.4	3117.6	10288.0	10297.1	8810.6	6338.6
75°	129.9	109.3	119.9	301.2	1514.6	1594.0	1564.1	7024.8	6980.9	5958.8	3883.9
77.5°	89.4	76.2	80.3	104.3	629.8	1593.1	1129.6	4039.6	4030.5	2535.0	1108.2
80°	50.5	43.8	48.0	87.7	220.9	1495.5	1052.7	1736.3	1636.1	445.2	179.6
82.5°	25.6	21.6	25.6	73.6	137.3	940.9	1023.8	681.1	606.6	106.0	116.7
85°	6.7	6.7	12.4	51.4	85.2	308.6	917.8	491.5	442.0	46.3	82.7
87.5°	1.6	0.9	4.9	19.0	30.6	67.0	508.9	273.9	235.9	24.0	48.0
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: P196556

CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-7030-1200-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2348.7	2348.7	2348.7	2348.7	2348.7	2348.7	2348.7	2348.7	2348.7	2348.7	2348.7
2.5°	2327.2	2304.1	2258.5	2207.2	2170.8	2131.1	2107.9	2079.8	2058.2	2039.3	2053.3
5°	2318.9	2274.2	2173.2	2059.9	1964.7	1873.7	1805.8	1741.3	1692.4	1661.9	1674.3
7.5°	2297.4	2231.2	2067.4	1890.3	1734.7	1588.2	1469.0	1362.3	1279.5	1234.7	1248.9
10°	2261.0	2167.4	1947.3	1701.6	1483.8	1277.0	1099.9	940.9	821.0	764.7	777.9
12.5°	2234.6	2111.2	1823.2	1519.5	1233.1	939.3	704.2	522.3	428.8	372.5	377.4
15°	2223.0	2067.4	1707.4	1327.5	959.2	603.3	380.7	275.6	243.3	231.7	232.5
17.5°	2224.6	2032.7	1597.3	1128.0	682.8	346.8	233.4	210.3	205.3	202.7	202.7
20°	2228.8	1997.8	1483.0	920.3	436.9	223.4	194.5	187.1	184.5	181.3	182.0
22.5°	2241.1	1971.4	1368.0	711.8	269.0	182.0	172.2	165.5	161.3	156.5	157.3
25°	2260.2	1951.5	1254.7	512.3	189.6	158.9	149.8	140.7	133.3	127.5	128.3
27.5°	2271.8	1923.4	1133.8	349.3	157.3	139.1	126.6	114.1	106.0	100.9	100.2
30°	2263.6	1877.8	996.5	229.2	139.1	119.9	105.1	91.0	82.7	78.6	78.6
32.5°	2241.1	1819.0	845.0	167.1	123.4	103.5	85.2	72.8	67.0	64.6	65.3
35°	2215.6	1757.9	683.6	141.5	110.9	87.7	69.5	59.5	57.2	56.3	56.3
37.5°	2201.5	1704.9	528.9	128.3	99.3	72.8	57.2	51.4	48.8	48.8	48.8
40°	2217.2	1664.3	391.4	118.3	87.7	60.4	48.0	43.8	43.0	43.0	43.0
42.5°	2284.2	1650.3	286.4	110.1	76.2	50.5	41.4	38.0	37.2	38.0	38.0
45°	2414.9	1680.9	216.9	101.8	65.3	41.4	35.6	33.1	33.1	34.0	34.0
47.5°	2636.8	1759.5	178.0	93.5	54.6	34.8	30.6	29.0	29.0	29.8	29.8
50°	2981.0	1905.2	159.7	84.4	45.6	29.8	25.6	24.8	24.8	25.6	26.4
52.5°	3504.1	2182.5	150.7	75.3	37.2	24.8	21.6	20.6	21.6	22.4	22.4
55°	4085.9	2537.4	139.9	66.2	31.4	20.6	17.4	17.4	18.2	19.8	19.8
57.5°	4628.0	2880.1	129.9	54.6	27.4	16.5	14.1	14.1	15.8	17.4	17.4
60°	5200.7	3216.0	116.7	43.8	23.2	13.2	11.6	11.6	14.1	15.8	16.5
62.5°	5908.3	3606.7	99.3	34.8	18.2	10.0	8.3	10.7	13.2	15.8	15.8
65°	6931.2	4092.6	77.8	27.4	14.1	7.4	6.7	10.0	12.4	14.9	15.8
67.5°	7302.8	4030.5	58.8	22.4	10.7	5.8	5.8	9.1	12.4	14.9	14.9
68°	7167.1	3894.8	56.3	21.6	10.0	5.8	5.8	9.1	12.4	14.9	14.9
70°	6245.2	3183.9	46.3	16.5	8.3	4.9	4.9	8.3	12.4	14.1	14.9
72.5°	4676.0	2115.4	39.8	10.7	7.4	4.9	4.2	8.3	11.6	14.1	14.1
75°	2682.4	878.1	34.0	8.3	6.7	4.2	4.2	7.4	11.6	14.1	14.1
77.5°	758.0	205.3	27.4	6.7	5.8	4.2	3.3	7.4	10.7	13.2	13.2
80°	139.1	61.3	21.6	5.8	4.9	4.2	3.3	7.4	10.7	13.2	13.2
82.5°	91.9	29.0	15.8	5.8	4.9	4.2	3.3	6.7	10.0	12.4	12.4
85°	68.8	20.6	10.0	5.8	4.9	4.2	3.3	6.7	10.0	12.4	12.4
87.5°	38.0	9.1	7.4	6.7	5.8	4.2	3.3	5.8	9.1	11.6	11.6
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)