

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: METALUX

Report Number: P1213893

Luminaire Tested: 4SNLED-LD5-87HL-RM-UNV-L940-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213893
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33524)
Test Lab: INNOVATIONS CENTER-P3
Issue Date: 3/29/2018
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4SNLED-LD5-87HL-RM-UNV-L940-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
METALIC FINISH REFLECTOR
Light Source: -
Ballast/Driver: -

Summary

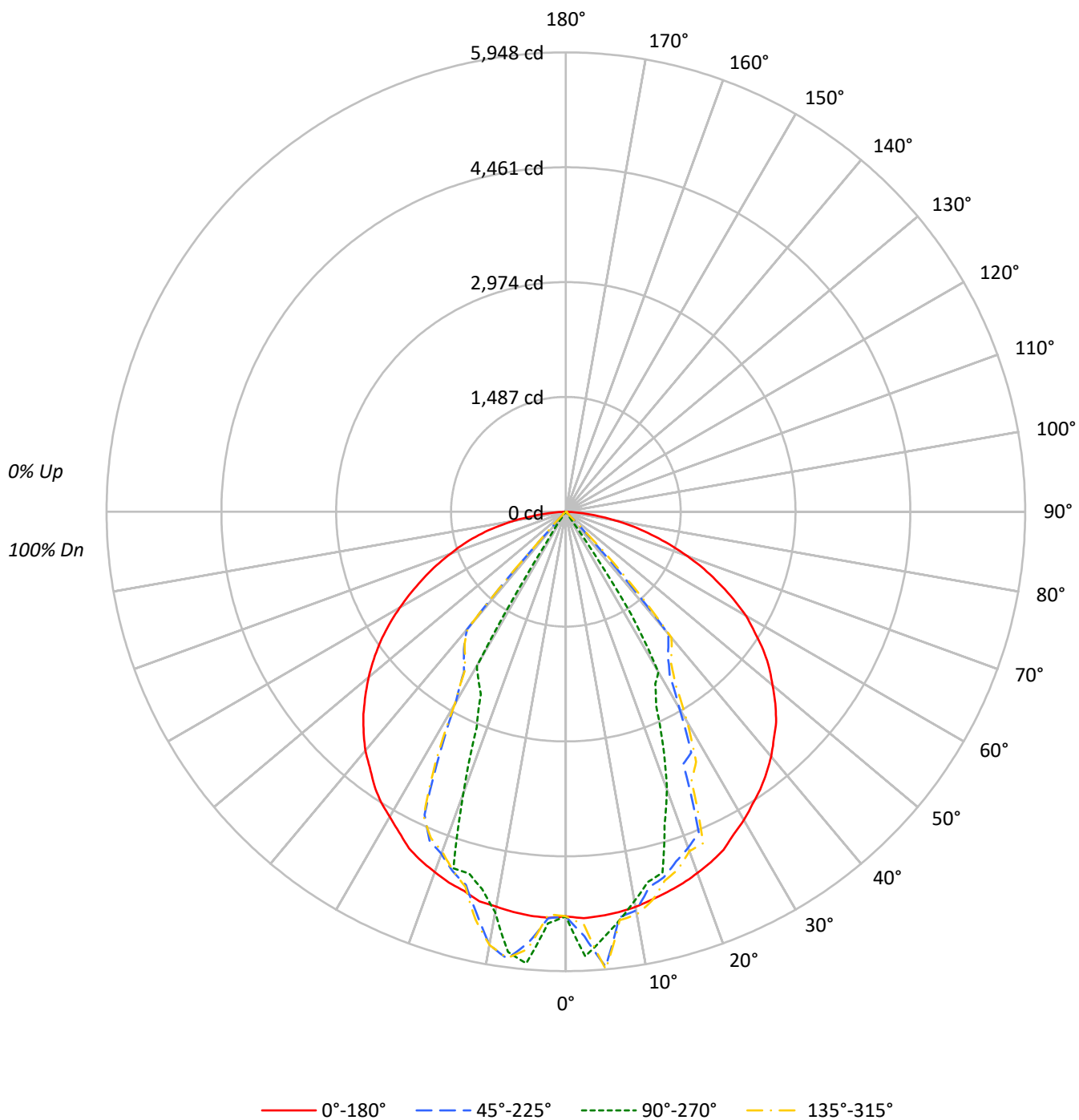
Lumens per Lamp: N/A
Luminaire Lumens: 7447.0 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 0.81 / 0.97
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 79
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: 24 FT

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	112	108	105	103	109	106	103	101	102	100	98		98	96	95		95	93	92	90
2	105	98	93	89	102	97	92	88	93	89	86		90	87	84		87	85	82	81
3	98	90	83	78	95	88	82	78	85	80	76		83	79	75		80	77	74	72
4	91	82	75	70	89	81	74	69	78	73	69		76	72	68		74	70	67	65
5	85	75	68	63	84	74	68	63	72	66	62		71	65	61		69	64	61	59
6	80	69	62	57	79	69	62	57	67	61	56		65	60	56		64	59	55	54
7	75	64	57	52	74	64	57	52	62	56	52		61	55	51		60	55	51	49
8	71	60	53	48	70	59	52	48	58	52	47		57	51	47		56	51	47	45
9	67	56	49	44	66	55	49	44	54	48	44		53	48	44		52	47	44	42
10	63	52	45	41	62	52	45	41	51	45	41		50	44	41		49	44	40	39

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	42323	42323	42323	42323
5°	42496	43528	42483	46096
10°	42393	39388	42368	40525
15°	42278	36765	42173	36860
20°	42327	28958	42207	29314
25°	42449	20956	42242	19776
30°	42255	18383	41809	17672
35°	42381	405	41759	491
40°	42526	88	41509	88
45°	42676	52	41073	39
50°	42350	41	40407	41
55°	42101	28	39515	28
60°	41306	30	38077	30
65°	39152	50	36364	33
70°	36322	55	34577	55
75°	32128	61	32656	61
80°	26098	70	27589	70
85°	15358	82	15679	82

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 2°

Vertical Angle: 45°

Luminance: 46081 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	525.4	7.1
10°-20°	1433.2	19.2
20°-30°	1823.8	24.5
30°-40°	1540.6	20.7
40°-50°	1007.2	13.5
50°-60°	634.6	8.5
60°-70°	337.8	4.5
70°-80°	123.2	1.7
80°-90°	21.2	0.3
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°-30°	3782.4	50.8
0°-40°	5323.0	71.5
0°-60°	6964.8	93.5
0°-90°	7447.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7447.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	5237	5237	5237	5237	5237	
5°	5253	5542	5251	5869	5253	499
15°	5096	4836	5083	4849	5096	1441
25°	4830	2762	4807	2606	4830	2221
35°	4390	52	4326	63	4390	2746
45°	3851	6	3706	5	3851	2961
55°	3122	3	2930	3	3122	2781
65°	2185	5	2029	3	2185	2164
75°	1149	5	1168	5	1149	1220
85°	225	5	230	5	225	284
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°
0°	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3
2.5°	5267.2	5270.3	5271.9	5275.0	5279.7	5281.3	5284.4	5281.3	5281.3	5281.3	5281.3
5°	5253.0	5259.3	5264.0	5270.3	5281.3	5282.9	5295.4	5297.0	5303.3	5315.9	5325.3
7.5°	5229.4	5235.7	5245.1	5260.9	5276.6	5293.9	5315.9	5339.5	5372.5	5403.9	5443.2
10°	5194.8	5202.7	5213.7	5227.9	5304.9	5315.9	5364.6	5432.2	5451.1	5550.1	5624.0
12.5°	5144.6	5171.3	5199.6	5212.1	5286.0	5402.3	5565.8	5532.8	5496.6	5820.4	5815.7
15°	5095.8	5132.0	5117.8	5220.0	5287.6	5490.3	5421.2	5568.9	5839.3	5773.3	5776.4
17.5°	5044.0	5051.8	5130.4	5215.3	5336.3	5440.1	5524.9	5727.7	5781.1	5785.9	5727.7
20°	4977.9	5015.7	5130.4	5207.4	5411.8	5460.5	5644.4	5748.1	5726.1	5672.7	5573.7
22.5°	4910.3	5025.1	5141.4	5249.9	5392.9	5523.4	5614.5	5663.2	5548.5	5337.9	5224.7
25°	4830.2	4897.8	5050.2	5209.0	5388.2	5463.6	5517.1	5438.5	5289.2	5100.5	4910.3
27.5°	4706.0	4814.5	5009.4	5188.6	5350.5	5441.6	5355.2	5166.6	4926.1	4801.9	4715.4
30°	4610.1	4751.6	4911.9	5084.8	5253.0	5306.4	5086.4	4871.1	4706.0	4581.8	4563.0
32.5°	4493.8	4695.0	4847.5	5012.5	5154.0	5083.2	4869.5	4591.3	4454.5	4407.4	4426.2
35°	4390.1	4542.5	4742.2	4904.1	5006.2	4847.5	4509.5	4336.6	4270.6	4297.3	4262.8
37.5°	4265.9	4467.1	4651.0	4790.9	4756.3	4517.4	4231.3	4121.3	4129.2	4107.2	4041.1
40°	4137.0	4328.8	4520.5	4652.6	4531.5	4166.9	3976.7	3953.1	3957.8	3887.1	3792.8
42.5°	3986.1	4160.6	4352.4	4471.8	4210.9	3926.4	3797.5	3800.6	3759.8	3660.8	3610.5
45°	3850.9	4011.3	4210.9	4221.9	3901.2	3663.9	3626.2	3585.3	3494.1	3461.1	3423.4
47.5°	3678.0	3855.7	4020.7	3961.0	3597.9	3450.1	3421.8	3332.2	3286.7	3261.5	3230.1
50°	3494.1	3673.3	3824.2	3654.5	3311.8	3277.2	3184.5	3113.8	3082.3	3055.6	3027.3
52.5°	3319.7	3467.4	3621.5	3329.1	3091.8	3058.8	2953.4	2912.6	2881.1	2851.3	2845.0
55°	3121.6	3252.1	3357.4	3019.5	2881.1	2804.1	2728.7	2700.4	2670.5	2656.4	2679.9
57.5°	2896.9	3044.6	3028.9	2714.5	2653.2	2541.6	2513.3	2494.5	2472.5	2481.9	2285.4
60°	2694.1	2807.3	2730.2	2491.3	2387.6	2312.1	2287.0	2274.4	2287.0	2095.2	1842.2
62.5°	2444.2	2571.5	2415.9	2230.4	2120.4	2084.2	2062.2	2079.5	1895.6	1685.0	1623.7
65°	2184.8	2323.1	2093.7	1950.6	1881.5	1850.0	1848.5	1702.3	1521.5	1439.8	1439.8
67.5°	1934.9	2077.9	1782.4	1663.0	1636.3	1639.4	1548.2	1326.6	1276.3	1221.3	1062.5
70°	1669.3	1795.0	1472.8	1400.5	1384.8	1373.8	1152.1	1092.4	1032.7	886.5	873.9
72.5°	1405.2	1466.5	1183.6	1166.3	1163.1	966.7	922.7	820.5	751.3	734.0	726.2
75°	1149.0	1130.1	935.2	950.9	801.6	732.5	661.7	602.0	592.6	586.3	146.2
77.5°	906.9	812.6	737.2	641.3	573.7	487.3	473.1	463.7	304.9	110.0	89.6
80°	660.2	526.6	490.4	416.5	355.2	341.1	348.9	106.9	84.9	70.7	61.3
82.5°	419.7	336.4	275.1	240.5	234.2	102.2	75.4	61.3	53.4	45.6	37.7
85°	224.8	149.3	138.3	116.3	69.2	47.2	39.3	29.9	25.1	20.4	18.9
87.5°	70.7	59.7	48.7	39.3	23.6	15.7	12.6	11.0	9.4	7.9	7.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	11°	12°	13°	14°	15°	16°	17°	18°	19°	20°	25°
0°	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3
2.5°	5278.2	5281.3	5279.7	5284.4	5284.4	5290.7	5295.4	5300.2	5309.6	5314.3	5350.5
5°	5345.7	5353.6	5377.2	5399.2	5425.9	5433.8	5479.3	5490.3	5543.8	5550.1	5726.1
7.5°	5496.6	5526.5	5583.1	5639.7	5696.3	5732.4	5795.3	5834.6	5877.0	5914.7	6054.6
10°	5679.0	5729.3	5784.3	5840.9	5873.9	5943.0	5980.8	5987.0	5976.0	5914.7	5688.4
12.5°	5858.2	5908.5	5884.9	5895.9	5935.2	5812.6	5829.9	5741.8	5803.1	5499.8	5275.0
15°	5833.0	5829.9	5771.7	5583.1	5614.5	5380.3	5286.0	5213.7	5271.9	5240.4	5205.9
17.5°	5757.6	5614.5	5513.9	5287.6	5191.7	5125.7	5127.3	5128.8	5100.5	5130.4	5042.4
20°	5438.5	5278.2	5128.8	5048.7	5020.4	4973.2	4996.8	4973.2	4974.8	4984.2	4849.0
22.5°	5014.1	4965.4	4878.9	4904.1	4894.6	4937.1	4905.6	4856.9	4872.6	4801.9	4699.7
25°	4842.8	4786.2	4783.0	4792.5	4778.3	4759.5	4731.2	4657.3	4652.6	4630.6	4583.4
27.5°	4669.9	4673.0	4682.4	4654.1	4603.8	4566.1	4523.7	4487.5	4501.7	4476.5	4412.1
30°	4550.4	4548.8	4492.2	4467.1	4374.4	4375.9	4364.9	4342.9	4328.8	4330.4	4289.5
32.5°	4380.6	4331.9	4267.5	4236.0	4228.2	4199.9	4177.9	4182.6	4193.6	4154.3	4196.7
35°	4206.2	4105.6	4096.1	4069.4	4044.3	4025.4	4033.3	4001.8	4000.3	3995.6	3649.8
37.5°	3972.0	3923.3	3918.5	3890.2	3873.0	3868.2	3838.4	3843.1	3857.2	3882.4	3112.2
40°	3778.6	3734.6	3723.6	3722.1	3684.3	3681.2	3689.0	3718.9	3739.3	3582.2	2966.0
42.5°	3571.2	3574.3	3539.7	3517.7	3522.4	3536.6	3574.3	3470.6	3006.9	2865.4	2711.4
45°	3393.5	3377.8	3359.0	3352.7	3393.5	3365.3	2950.3	2722.4	2667.4	2661.1	2228.8
47.5°	3208.1	3203.4	3195.5	3200.2	2967.6	2645.4	2551.1	2521.2	2530.6	2524.3	1914.5
50°	3021.0	3027.3	3027.3	2643.8	2426.9	2373.4	2381.3	2408.0	2241.4	2092.1	1784.0
52.5°	2859.1	2810.4	2408.0	2269.7	2221.0	2244.6	2188.0	1978.9	1828.0	1740.0	1650.4
55°	2558.9	2200.5	2110.9	2088.9	2106.2	1897.2	1768.3	1633.1	1593.8	1584.4	1532.5
57.5°	2013.5	1941.2	1949.1	1861.0	1661.4	1543.5	1491.7	1472.8	1455.5	1442.9	125.7
60°	1780.9	1801.3	1648.8	1460.2	1380.1	1364.3	1351.8	1334.5	1331.3	1309.3	80.2
62.5°	1630.0	1433.5	1301.5	1254.3	1235.4	1230.7	1207.2	1199.3	1018.5	139.9	59.7
65°	1229.2	1149.0	1123.8	1112.8	1092.4	1092.4	906.9	143.0	116.3	100.6	53.4
67.5°	1002.8	996.5	984.0	969.8	660.2	138.3	121.0	105.3	91.2	80.2	47.2
70°	848.8	845.6	770.2	141.5	117.9	103.7	91.2	81.7	75.4	67.6	42.4
72.5°	696.3	141.5	119.5	103.7	89.6	81.7	73.9	66.0	59.7	55.0	34.6
75°	108.5	95.9	84.9	77.0	70.7	62.9	56.6	51.9	50.3	44.0	23.6
77.5°	78.6	67.6	61.3	55.0	48.7	44.0	37.7	33.0	29.9	25.1	17.3
80°	55.0	48.7	44.0	36.2	31.4	26.7	23.6	20.4	18.9	15.7	7.9
82.5°	31.4	26.7	23.6	18.9	17.3	14.1	12.6	11.0	11.0	7.9	7.9
85°	14.1	14.1	11.0	9.4	7.9	7.9	7.9	6.3	6.3	4.7	4.7
87.5°	6.3	6.3	6.3	6.3	6.3	4.7	4.7	4.7	4.7	4.7	3.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°
0°	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3
2.5°	5400.8	5421.2	5460.5	5501.4	5455.8	5619.2	5606.7	5661.7	5691.5	5705.7	5738.7
5°	5881.7	5972.9	6002.8	5913.2	5861.3	5807.9	5686.8	5595.7	5606.7	5576.8	5468.3
7.5°	5872.3	5677.4	5414.9	5295.4	5286.0	5271.9	5309.6	5331.6	5334.7	5333.2	5330.0
10°	5375.6	5275.0	5257.7	5242.0	5248.3	5190.1	5163.4	5088.0	5128.8	5106.8	5114.7
12.5°	5224.7	5201.1	5108.4	4979.5	5056.5	4998.4	4965.4	4987.4	4962.2	4938.6	4930.8
15°	5135.1	4982.7	4930.8	4899.3	4877.3	4864.8	4875.8	4850.6	4842.8	4838.0	4849.0
17.5°	4949.6	4888.3	4831.8	4748.5	4750.0	4745.3	4776.7	4823.9	4827.0	4585.0	4366.5
20°	4803.5	4753.2	4680.9	4629.0	4699.7	4574.0	4088.3	3857.2	3821.1	3821.1	3827.4
22.5°	4687.2	4575.6	4580.3	4498.5	3836.8	3701.6	3704.8	3718.9	3654.5	3434.4	3410.8
25°	4528.4	4511.1	4166.9	3601.0	3605.7	3500.4	3338.5	3110.6	2863.8	2863.8	2823.0
27.5°	4408.9	4042.7	3539.7	3516.2	3162.5	2939.3	2801.0	2591.9	2563.6	2536.9	2540.1
30°	4306.8	3420.3	3432.8	2939.3	2678.4	2492.9	2481.9	2447.3	2430.0	2425.3	2408.0
32.5°	3404.6	3330.7	2873.3	2502.3	2400.2	2370.3	2356.2	2316.9	2315.3	2285.4	2077.9
35°	3192.4	2923.6	2404.9	2304.3	2274.4	2246.1	2222.5	1491.7	176.0	70.7	61.3
37.5°	2950.3	2442.6	2224.1	2178.5	2150.2	1589.1	158.8	55.0	39.3	28.3	25.1
40°	2500.8	2181.7	2112.5	2062.2	850.4	55.0	34.6	26.7	15.7	14.1	12.6
42.5°	2109.4	2055.9	1982.1	603.6	62.9	26.7	17.3	12.6	11.0	11.0	9.4
45°	1974.2	1927.0	798.5	59.7	39.3	12.6	11.0	11.0	9.4	6.3	6.3
47.5°	1848.5	1626.8	72.3	37.7	25.1	11.0	9.4	6.3	6.3	6.3	4.7
50°	1714.9	89.6	50.3	28.3	15.7	6.3	6.3	6.3	6.3	4.7	4.7
52.5°	320.7	62.9	40.9	25.1	7.9	6.3	6.3	6.3	4.7	4.7	4.7
55°	75.4	50.3	37.7	22.0	6.3	6.3	6.3	4.7	4.7	4.7	3.1
57.5°	56.6	37.7	29.9	20.4	6.3	4.7	4.7	4.7	4.7	4.7	3.1
60°	47.2	26.7	23.6	18.9	4.7	4.7	4.7	4.7	4.7	4.7	3.1
62.5°	33.0	22.0	17.3	14.1	4.7	4.7	4.7	4.7	4.7	4.7	4.7
65°	26.7	17.3	14.1	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
67.5°	23.6	14.1	9.4	3.1	4.7	4.7	4.7	4.7	4.7	4.7	4.7
70°	18.9	4.7	4.7	3.1	4.7	4.7	4.7	4.7	4.7	4.7	4.7
72.5°	15.7	4.7	3.1	3.1	4.7	4.7	4.7	4.7	4.7	4.7	4.7
75°	15.7	7.9	3.1	3.1	4.7	4.7	6.3	6.3	4.7	4.7	4.7
77.5°	11.0	7.9	3.1	3.1	4.7	4.7	6.3	6.3	4.7	4.7	4.7
80°	6.3	7.9	3.1	4.7	4.7	9.4	11.0	6.3	4.7	4.7	4.7
82.5°	6.3	7.9	9.4	9.4	4.7	7.9	9.4	7.9	6.3	4.7	4.7
85°	6.3	4.7	6.3	7.9	4.7	7.9	7.9	6.3	6.3	4.7	4.7
87.5°	3.1	4.7	4.7	6.3	6.3	6.3	7.9	6.3	6.3	6.3	4.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213893

CATALOG NUMBER: 4SNLED-LD5-87HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	85°	90°	95°	100°	105°	110°	115°	120°	125°	130°	135°
0°	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3
2.5°	5754.4	5760.7	5661.7	5627.1	5657.0	5650.7	5624.0	5524.9	5513.9	5447.9	5352.0
5°	5499.8	5542.2	5490.3	5579.9	5537.5	5579.9	5708.8	5768.6	5866.0	5925.7	5947.7
7.5°	5322.2	5331.6	5331.6	5339.5	5347.3	5348.9	5339.5	5333.2	5306.4	5273.4	5333.2
10°	5106.8	5117.8	5136.7	5133.5	5132.0	5165.0	5172.8	5240.4	5237.3	5249.9	5295.4
12.5°	4995.2	4910.3	4987.4	4966.9	4995.2	4951.2	5033.0	5018.8	5023.5	5061.2	5158.7
15°	4809.8	4836.5	4855.3	4855.3	4866.3	4856.9	4847.5	4911.9	4951.2	4952.8	4946.5
17.5°	4453.0	4250.2	4457.7	4404.2	4830.2	4841.2	4805.0	4775.2	4775.2	4798.8	4849.0
20°	3822.7	3827.4	3828.9	3849.4	3874.5	3873.0	3874.5	4493.8	4787.7	4720.2	4674.6
22.5°	3351.1	3293.0	3401.4	3393.5	3528.7	3678.0	3821.1	3806.9	3816.4	4253.3	4646.3
25°	2686.2	2761.7	2700.4	2727.1	2879.6	3057.2	3167.2	3454.8	3767.6	3745.6	3847.8
27.5°	2529.1	2508.6	2536.9	2536.9	2557.3	2580.9	2642.2	2804.1	3082.3	3374.7	3651.3
30°	2379.7	2397.0	2400.2	2428.5	2444.2	2459.9	2469.3	2530.6	2593.5	2796.3	3137.3
32.5°	1787.2	1567.1	2062.2	2195.8	2309.0	2335.7	2354.6	2379.7	2425.3	2455.2	2626.5
35°	51.9	51.9	55.0	62.9	80.2	540.7	2059.1	2269.7	2299.6	2337.3	2368.7
37.5°	25.1	18.9	22.0	23.6	28.3	39.3	56.6	176.0	1960.1	2216.3	2250.8
40°	11.0	11.0	11.0	11.0	12.6	15.7	23.6	39.3	59.7	1576.5	2126.7
42.5°	9.4	9.4	9.4	9.4	9.4	9.4	11.0	14.1	28.3	67.6	1116.0
45°	6.3	6.3	4.7	6.3	6.3	7.9	9.4	9.4	12.6	42.4	77.0
47.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	7.9	9.4	28.3	40.9
50°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	22.0	28.3
52.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	9.4	25.1
55°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	4.7	4.7	6.3	22.0
57.5°	3.1	3.1	3.1	3.1	3.1	4.7	3.1	3.1	4.7	4.7	20.4
60°	3.1	3.1	3.1	3.1	3.1	4.7	4.7	4.7	4.7	4.7	18.9
62.5°	4.7	4.7	3.1	4.7	3.1	3.1	4.7	4.7	4.7	4.7	12.6
65°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	3.1	4.7
67.5°	4.7	4.7	4.7	4.7	3.1	4.7	3.1	4.7	4.7	3.1	3.1
70°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	3.1	3.1	3.1	3.1
72.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	3.1	3.1	3.1	3.1
75°	4.7	4.7	4.7	4.7	4.7	4.7	6.3	6.3	3.1	3.1	3.1
77.5°	4.7	4.7	4.7	4.7	4.7	4.7	7.9	9.4	7.9	7.9	3.1
80°	4.7	4.7	4.7	4.7	4.7	4.7	7.9	7.9	7.9	7.9	11.0
82.5°	4.7	4.7	4.7	4.7	4.7	4.7	6.3	6.3	6.3	6.3	7.9
85°	4.7	4.7	4.7	4.7	4.7	4.7	6.3	6.3	6.3	4.7	6.3
87.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	6.3	4.7	4.7	4.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213893

CATALOG NUMBER: 4SNLED-LD5-87HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	140°	145°	150°	155°	160°	161°	162°	163°	164°	165°	166°
0°	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3
2.5°	5359.9	5306.4	5289.2	5253.0	5249.9	5253.0	5245.1	5234.1	5240.4	5229.4	5220.0
5°	5960.3	5817.3	5724.6	5600.4	5429.0	5391.3	5381.9	5328.5	5309.6	5303.3	5278.2
7.5°	5474.6	5735.6	5892.7	5946.2	5745.0	5697.8	5642.8	5598.8	5556.4	5476.2	5427.5
10°	5259.3	5271.9	5422.8	5598.8	5884.9	5924.2	5954.0	5858.2	5831.4	5627.1	5583.1
12.5°	5209.0	5210.6	5227.9	5334.7	5559.5	5584.7	5690.0	5746.6	5815.7	5855.0	5823.6
15°	4979.5	5106.8	5201.1	5210.6	5231.0	5275.0	5306.4	5502.9	5586.2	5809.4	5796.9
17.5°	4872.6	4913.5	5050.2	5161.8	5143.0	5127.3	5152.4	5179.1	5259.3	5482.5	5479.3
20°	4695.0	4825.5	4899.3	5015.7	5121.0	5125.7	5097.4	5081.7	5050.2	5086.4	5119.4
22.5°	4619.6	4640.0	4778.3	4860.1	4979.5	5021.9	5028.2	5029.8	5012.5	4993.7	4984.2
25°	4611.7	4547.3	4618.0	4720.2	4808.2	4853.8	4905.6	4922.9	4916.6	4916.6	4907.2
27.5°	3773.9	4526.8	4489.1	4556.7	4663.6	4695.0	4721.7	4775.2	4808.2	4831.8	4842.8
30°	3594.7	3729.9	4388.5	4397.9	4506.4	4503.2	4533.1	4577.1	4619.6	4674.6	4688.7
32.5°	3179.8	3511.4	4017.6	4239.2	4352.4	4363.4	4379.1	4391.7	4430.9	4492.2	4545.7
35°	2547.9	3198.6	3442.3	4163.7	4184.2	4206.2	4215.6	4245.5	4258.0	4283.2	4330.4
37.5°	2305.9	2643.8	3302.4	3601.0	3990.8	4009.7	4060.0	4072.6	4093.0	4113.4	4149.6
40°	2166.0	2258.7	2749.1	3215.9	3835.2	3847.8	3865.1	3896.5	3898.1	3921.7	3954.7
42.5°	2054.4	2114.1	2257.1	3071.3	3725.2	3723.6	3682.8	3703.2	3712.6	3737.8	3783.4
45°	1641.0	1983.6	2074.8	2508.6	2966.0	3179.8	3590.0	3522.4	3520.9	3530.3	3579.0
47.5°	83.3	1865.7	1930.2	2070.1	2801.0	2808.8	2862.3	3311.8	3381.0	3359.0	3363.7
50°	56.6	128.9	1798.2	1862.6	2414.3	2609.2	2648.5	2668.9	2928.3	3217.5	3170.4
52.5°	44.0	73.9	1101.8	1729.0	1961.6	2104.7	2357.7	2502.3	2518.0	2634.4	3028.9
55°	39.3	56.6	119.5	1595.4	1667.7	1699.1	1846.9	2099.9	2304.3	2365.6	2370.3
57.5°	34.6	51.9	81.7	721.5	1516.8	1523.1	1548.2	1636.3	1820.2	1988.3	2178.5
60°	31.4	45.6	64.4	124.2	1378.5	1394.2	1398.9	1422.5	1444.5	1559.2	1777.7
62.5°	18.9	36.2	56.6	89.6	1090.8	1252.7	1251.2	1266.9	1287.3	1299.9	1343.9
65°	15.7	28.3	48.7	75.4	133.6	166.6	1012.2	1125.4	1138.0	1155.3	1163.1
67.5°	14.1	25.1	36.2	59.7	100.6	114.7	132.0	163.5	892.8	1006.0	1021.7
70°	12.6	17.3	29.9	50.3	81.7	88.0	99.0	113.2	133.6	165.0	807.9
72.5°	7.9	12.6	20.4	36.2	62.9	70.7	77.0	86.4	95.9	114.7	132.0
75°	3.1	9.4	17.3	26.7	48.7	53.4	58.2	64.4	72.3	84.9	94.3
77.5°	3.1	7.9	14.1	18.9	31.4	36.2	42.4	47.2	53.4	59.7	69.2
80°	11.0	6.3	9.4	14.1	22.0	23.6	26.7	29.9	34.6	39.3	45.6
82.5°	7.9	9.4	11.0	9.4	11.0	14.1	15.7	18.9	20.4	23.6	25.1
85°	6.3	6.3	7.9	7.9	7.9	7.9	7.9	7.9	9.4	11.0	14.1
87.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	6.3	6.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213893

CATALOG NUMBER: 4SNLED-LD5-87HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	167°	168°	169°	170°	171°	172°	173°	174°	175°	176°	177°
0°	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3
2.5°	5220.0	5216.9	5207.4	5207.4	5205.9	5212.1	5216.9	5221.6	5220.0	5229.4	5220.0
5°	5259.3	5251.4	5237.3	5224.7	5220.0	5223.1	5218.4	5223.1	5216.9	5224.7	5210.6
7.5°	5367.7	5341.0	5286.0	5264.0	5235.7	5234.1	5220.0	5216.9	5207.4	5207.4	5190.1
10°	5559.5	5430.6	5414.9	5348.9	5325.3	5210.6	5235.7	5193.3	5188.6	5168.1	5160.3
12.5°	5716.7	5616.1	5586.2	5528.1	5462.1	5229.4	5281.3	5190.1	5185.4	5144.6	5102.1
15°	5719.8	5778.0	5696.3	5535.9	5521.8	5361.5	5256.1	5224.7	5183.8	5061.2	5081.7
17.5°	5535.9	5669.5	5708.8	5674.3	5573.7	5465.2	5317.4	5254.6	5132.0	5077.0	5039.2
20°	5237.3	5372.5	5540.6	5551.7	5614.5	5537.5	5344.2	5242.0	5094.3	4998.4	4966.9
22.5°	4999.9	5099.0	5292.3	5381.9	5458.9	5485.6	5363.0	5212.1	5028.2	4935.5	4916.6
25°	4874.2	4896.2	4954.4	5059.7	5229.4	5352.0	5369.3	5209.0	5113.1	4910.3	4803.5
27.5°	4828.6	4809.8	4786.2	4839.6	4966.9	5116.3	5215.3	5242.0	5003.1	4809.8	4702.9
30°	4712.3	4723.3	4687.2	4668.3	4751.6	4905.6	5081.7	5125.7	4941.8	4742.2	4619.6
32.5°	4569.3	4588.1	4594.4	4561.4	4544.1	4651.0	4841.2	4946.5	4937.1	4646.3	4509.5
35°	4390.1	4443.5	4457.7	4459.2	4430.9	4413.7	4523.7	4742.2	4825.5	4602.3	4404.2
37.5°	4201.5	4217.2	4294.2	4314.6	4314.6	4262.8	4344.5	4519.0	4635.3	4503.2	4275.3
40°	3965.7	4016.0	4088.3	4124.4	4160.6	4165.3	4119.7	4242.3	4434.1	4401.1	4154.3
42.5°	3794.4	3827.4	3871.4	3920.1	3994.0	4012.8	3965.7	3987.7	4187.3	4273.8	3997.1
45°	3594.7	3638.8	3651.3	3704.8	3781.8	3836.8	3835.2	3789.6	3950.0	4056.9	3882.4
47.5°	3390.4	3432.8	3454.8	3481.6	3538.2	3608.9	3648.2	3627.7	3659.2	3868.2	3729.9
50°	3179.8	3203.4	3247.4	3277.2	3315.0	3355.8	3450.1	3469.0	3425.0	3591.6	3561.7
52.5°	2980.2	2988.0	3017.9	3047.7	3098.0	3127.9	3203.4	3259.9	3256.8	3305.5	3374.7
55°	2824.6	2790.0	2796.3	2819.8	2852.8	2898.4	2940.9	3028.9	3058.8	3068.2	3178.2
57.5°	2206.8	2562.1	2593.5	2591.9	2631.2	2651.7	2690.9	2749.1	2856.0	2832.4	2955.0
60°	2005.6	2044.9	2342.0	2376.6	2390.7	2409.6	2456.7	2510.2	2588.8	2639.1	2692.5
62.5°	1529.4	1768.3	1857.9	2120.4	2161.2	2172.2	2203.7	2228.8	2310.6	2425.3	2403.3
65°	1183.6	1285.7	1559.2	1666.1	1889.3	1917.6	1961.6	1988.3	2011.9	2144.0	2150.2
67.5°	1023.3	1039.0	1112.8	1318.8	1460.2	1678.7	1705.4	1729.0	1765.1	1859.5	1917.6
70°	873.9	892.8	913.2	930.5	1114.4	1259.0	1461.8	1469.6	1493.2	1556.1	1688.1
72.5°	165.0	746.6	759.2	770.2	790.6	886.5	1079.8	1237.0	1246.4	1276.3	1397.3
75°	111.6	130.5	179.2	616.2	636.6	642.9	675.9	872.4	1017.0	1023.3	1076.7
77.5°	80.2	89.6	108.5	128.9	328.5	493.5	501.4	537.6	686.9	795.3	804.8
80°	55.0	61.3	72.3	81.7	100.6	132.0	364.7	375.7	394.5	543.8	572.1
82.5°	31.4	36.2	42.4	51.9	59.7	75.4	97.5	125.7	256.2	273.5	363.1
85°	15.7	17.3	20.4	25.1	29.9	36.2	48.7	59.7	81.7	147.8	152.5
87.5°	7.9	7.9	7.9	7.9	12.6	14.1	17.3	22.0	28.3	42.4	55.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213893

CATALOG NUMBER: 4SNLED-LD5-87HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	178°	179°	180°	181°	182°	183°	184°	185°	186°	187°	188°
0°	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3
2.5°	5221.6	5243.6	5262.4	5267.2	5267.2	5270.3	5275.0	5278.2	5281.3	5284.4	5281.3
5°	5212.1	5235.7	5251.4	5256.1	5256.1	5265.6	5273.4	5282.9	5287.6	5287.6	5284.4
7.5°	5188.6	5205.9	5226.3	5238.9	5240.4	5256.1	5270.3	5268.7	5275.0	5278.2	5286.0
10°	5157.1	5157.1	5191.7	5201.1	5209.0	5226.3	5231.0	5240.4	5262.4	5265.6	5286.0
12.5°	5141.4	5125.7	5166.6	5171.3	5198.0	5176.0	5204.3	5213.7	5191.7	5221.6	5182.3
15°	5070.7	5089.5	5083.2	5097.4	5144.6	5119.4	5196.4	5171.3	5227.9	5160.3	5279.7
17.5°	5012.5	5009.4	5034.5	5047.1	5056.5	5110.0	5130.4	5158.7	5180.7	5161.8	5209.0
20°	4970.1	4944.9	4963.8	4977.9	5010.9	5051.8	5064.4	5021.9	5095.8	5221.6	5251.4
22.5°	4889.9	4872.6	4894.6	4894.6	4944.9	4938.6	4985.8	4959.1	5028.2	5174.4	5326.9
25°	4781.5	4783.0	4806.6	4834.9	4844.3	4915.1	4940.2	4974.8	5061.2	5235.7	5328.5
27.5°	4671.4	4662.0	4676.1	4734.3	4783.0	4834.9	4842.8	4960.6	5078.5	5198.0	5279.7
30°	4561.4	4552.0	4561.4	4603.8	4662.0	4696.6	4783.0	4940.2	5050.2	5132.0	5209.0
32.5°	4443.5	4434.1	4456.1	4487.5	4589.7	4594.4	4765.7	4913.5	4999.9	5059.7	5045.5
35°	4317.8	4305.2	4325.6	4374.4	4468.7	4503.2	4682.4	4792.5	4889.9	4918.2	4852.2
37.5°	4166.9	4144.9	4170.0	4237.6	4336.6	4437.2	4586.6	4713.9	4765.7	4690.3	4611.7
40°	4009.7	3994.0	4038.0	4072.6	4188.9	4328.8	4500.1	4589.7	4556.7	4470.2	4383.8
42.5°	3869.8	3836.8	3876.1	3942.1	4074.1	4232.9	4371.2	4421.5	4342.9	4215.6	4115.0
45°	3698.5	3659.2	3706.3	3794.4	3935.8	4116.6	4225.0	4207.7	4074.1	3964.1	3825.8
47.5°	3519.3	3472.1	3519.3	3624.6	3783.4	3975.1	4053.7	3975.1	3806.9	3668.6	3557.0
50°	3343.3	3288.2	3333.8	3492.6	3648.2	3795.9	3794.4	3641.9	3541.3	3390.4	3293.0
52.5°	3168.8	3090.2	3135.8	3308.7	3464.3	3632.5	3508.3	3366.8	3245.8	3113.8	3082.3
55°	2953.4	2868.6	2929.9	3181.4	3300.8	3399.8	3201.8	3077.6	2958.2	2892.1	2852.8
57.5°	2749.1	2656.4	2709.8	3006.9	3094.9	3120.1	2937.7	2761.7	2690.9	2668.9	2612.4
60°	2538.5	2433.2	2483.5	2826.1	2887.4	2785.3	2606.1	2469.3	2455.2	2411.2	2367.2
62.5°	2337.3	2221.0	2252.4	2601.4	2629.6	2444.2	2279.1	2243.0	2208.4	2164.4	2140.8
65°	2106.2	1985.2	2029.2	2362.4	2335.7	2096.8	2004.1	1996.2	1950.6	1914.5	1949.1
67.5°	1894.0	1751.0	1812.3	2101.5	1980.5	1785.6	1747.9	1729.0	1692.8	1713.3	1350.2
70°	1661.4	1505.8	1589.1	1820.2	1641.0	1512.1	1497.9	1469.6	1471.2	1169.4	985.5
72.5°	1402.1	1266.9	1387.9	1512.1	1298.3	1260.6	1240.2	1237.0	998.1	811.1	765.5
75°	1174.1	1037.4	1167.9	1215.0	1034.3	1009.1	1007.5	833.1	655.4	625.6	611.4
77.5°	916.4	811.1	935.2	864.5	793.8	765.5	686.9	515.6	493.5	473.1	177.6
80°	617.7	625.6	697.9	595.7	565.9	482.5	380.4	364.7	314.4	125.7	99.0
82.5°	375.7	471.5	444.8	372.5	364.7	262.5	240.5	122.6	91.2	72.3	62.9
85°	194.9	238.9	229.5	202.8	150.9	135.2	75.4	58.2	47.2	36.2	29.9
87.5°	66.0	88.0	84.9	67.6	51.9	40.9	26.7	22.0	15.7	12.6	11.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213893

CATALOG NUMBER: 4SNLED-LD5-87HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	189°	190°	191°	192°	193°	194°	195°	196°	197°	198°	199°
0°	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3
2.5°	5278.2	5278.2	5275.0	5278.2	5279.7	5276.6	5276.6	5279.7	5281.3	5282.9	5290.7
5°	5286.0	5289.2	5293.9	5303.3	5304.9	5323.7	5331.6	5336.3	5341.0	5342.6	5331.6
7.5°	5303.3	5314.3	5323.7	5322.2	5311.2	5281.3	5271.9	5264.0	5278.2	5314.3	5356.7
10°	5319.0	5268.7	5174.4	5303.3	5264.0	5300.2	5407.0	5430.6	5502.9	5605.1	5635.0
12.5°	5210.6	5348.9	5378.8	5234.1	5501.4	5402.3	5520.2	5624.0	5653.8	5757.6	5694.7
15°	5326.9	5394.5	5440.1	5584.7	5568.9	5653.8	5686.8	5666.4	5671.1	5697.8	5768.6
17.5°	5325.3	5460.5	5490.3	5587.8	5653.8	5655.4	5646.0	5636.5	5661.7	5682.1	5639.7
20°	5416.5	5460.5	5518.6	5557.9	5570.5	5586.2	5616.1	5592.5	5545.4	5499.8	5480.9
22.5°	5370.9	5469.9	5520.2	5526.5	5518.6	5469.9	5425.9	5359.9	5337.9	5314.3	5322.2
25°	5380.3	5425.9	5419.6	5394.5	5361.5	5270.3	5248.3	5220.0	5177.6	5075.4	4982.7
27.5°	5312.7	5289.2	5260.9	5199.6	5139.8	5091.1	5036.1	4944.9	4869.5	4759.5	4718.6
30°	5199.6	5105.3	5036.1	4999.9	4941.8	4860.1	4776.7	4665.1	4569.3	4547.3	4526.8
32.5°	4982.7	4889.9	4833.3	4745.3	4646.3	4548.8	4453.0	4408.9	4388.5	4391.7	4372.8
35°	4761.0	4679.3	4594.4	4462.4	4388.5	4291.1	4256.5	4247.0	4228.2	4207.7	4185.7
37.5°	4525.3	4429.4	4302.1	4223.5	4149.6	4110.3	4093.0	4078.9	4045.9	4009.7	3984.6
40°	4297.3	4124.4	4053.7	3976.7	3954.7	3937.4	3912.2	3877.7	3832.1	3825.8	3814.8
42.5°	3992.4	3868.2	3806.9	3791.2	3764.5	3734.6	3712.6	3674.9	3656.0	3668.6	3678.0
45°	3703.2	3640.3	3619.9	3601.0	3550.7	3508.3	3494.1	3481.6	3497.3	3566.4	3401.4
47.5°	3469.0	3443.8	3418.7	3387.3	3340.1	3308.7	3322.8	3335.4	3349.5	2841.8	2593.5
50°	3266.2	3231.7	3192.4	3157.8	3129.5	3126.3	3200.2	2978.6	2494.5	2481.9	2230.4
52.5°	3044.6	2992.7	2969.2	2948.7	2961.3	3008.5	2489.8	2310.6	2216.3	1925.5	1796.6
55°	2805.7	2760.1	2760.1	2779.0	2711.4	2197.4	2170.7	1876.7	1699.1	1648.8	1628.4
57.5°	2566.8	2562.1	2588.8	2367.2	1994.6	1912.9	1608.0	1543.5	1515.2	1508.9	1475.9
60°	2348.3	2392.3	2002.5	1842.2	1601.7	1444.5	1400.5	1392.6	1362.8	1351.8	1321.9
62.5°	2173.8	1802.9	1678.7	1370.6	1290.5	1270.0	1246.4	1235.4	1208.7	1067.3	312.8
65°	1570.2	1483.8	1204.0	1152.1	1145.9	1116.0	1106.6	995.0	234.2	157.2	133.6
67.5°	1185.1	1051.5	1015.4	1006.0	976.1	916.4	271.9	155.6	133.6	116.3	102.2
70°	910.1	886.5	859.8	837.8	246.8	154.0	133.6	113.2	97.5	86.4	78.6
72.5°	745.0	729.3	424.4	161.9	132.0	111.6	99.0	86.4	75.4	69.2	62.9
75°	583.1	161.9	133.6	111.6	95.9	81.7	72.3	64.4	58.2	53.4	48.7
77.5°	132.0	106.9	91.2	77.0	69.2	61.3	55.0	47.2	42.4	37.7	31.4
80°	81.7	70.7	59.7	55.0	47.2	39.3	34.6	31.4	25.1	23.6	20.4
82.5°	53.4	42.4	37.7	31.4	25.1	23.6	20.4	15.7	14.1	12.6	11.0
85°	23.6	20.4	17.3	14.1	11.0	9.4	7.9	6.3	6.3	6.3	6.3
87.5°	7.9	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	3.1	3.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213893

CATALOG NUMBER: 4SNLED-LD5-87HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	200°	205°	210°	215°	220°	225°	230°	235°	240°	245°	250°
0°	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3
2.5°	5293.9	5322.2	5348.9	5341.0	5312.7	5268.7	5256.1	5238.9	5251.4	5278.2	5289.2
5°	5331.6	5315.9	5372.5	5455.8	5590.9	5603.5	5697.8	5719.8	5795.3	5842.4	5840.9
7.5°	5385.0	5608.2	5701.0	5801.6	5847.2	5836.1	5850.3	5839.3	5822.0	5814.1	5804.7
10°	5657.0	5826.7	5861.3	5861.3	5790.6	5694.7	5653.8	5583.1	5441.6	5444.8	5421.2
12.5°	5815.7	5875.4	5793.7	5724.6	5440.1	5330.0	5210.6	5154.0	5121.0	5070.7	5089.5
15°	5732.4	5647.5	5598.8	5375.6	5201.1	5003.1	5006.2	4971.7	4935.5	4938.6	4915.1
17.5°	5609.8	5542.2	5196.4	5042.4	4957.5	4880.5	4866.3	4820.8	4797.2	4789.3	4787.7
20°	5441.6	5198.0	4940.2	4902.5	4800.3	4712.3	4698.2	4712.3	4784.6	4655.7	4218.8
22.5°	5245.1	4894.6	4819.2	4712.3	4643.1	4608.6	4695.0	4302.1	3707.9	3780.2	3703.2
25°	4911.9	4759.5	4630.6	4548.8	4541.0	4328.8	3607.3	3531.9	3149.9	2945.6	2716.1
27.5°	4668.3	4602.3	4467.1	4453.0	4350.8	3539.7	3164.1	2749.1	2596.6	2573.1	2522.8
30°	4520.5	4426.2	4344.5	3987.7	3472.1	2849.7	2538.5	2480.3	2453.6	2425.3	2381.3
32.5°	4342.9	4253.3	4292.6	3352.7	2768.0	2453.6	2390.7	2348.3	2299.6	2280.7	2122.0
35°	4162.2	4121.3	3354.3	2818.3	2379.7	2304.3	2257.1	2213.1	1760.4	426.0	144.6
37.5°	3968.8	3959.4	3014.7	2338.9	2228.8	2158.1	2024.5	418.1	99.0	67.6	50.3
40°	3817.9	3016.3	2382.9	2192.7	2103.1	1991.5	279.8	69.2	44.0	26.7	17.3
42.5°	3717.3	2713.0	2133.0	2057.5	1862.6	205.9	70.7	29.9	17.3	14.1	11.0
45°	2865.4	2142.4	1993.1	1914.5	235.8	70.7	40.9	14.1	11.0	9.4	6.3
47.5°	2643.8	1945.9	1857.9	418.1	78.6	37.7	28.3	9.4	6.3	6.3	6.3
50°	2002.5	1798.2	1479.1	102.2	50.3	26.7	20.4	6.3	6.3	6.3	4.7
52.5°	1755.7	1659.8	158.8	67.6	39.3	20.4	12.6	4.7	4.7	4.7	4.7
55°	1604.8	1053.1	94.3	51.9	33.0	18.9	7.9	4.7	4.7	4.7	3.1
57.5°	1468.1	141.5	69.2	44.0	29.9	17.3	4.7	4.7	4.7	4.7	3.1
60°	1244.9	102.2	56.6	39.3	28.3	15.7	4.7	4.7	4.7	4.7	4.7
62.5°	161.9	80.2	48.7	34.6	20.4	12.6	3.1	4.7	4.7	4.7	4.7
65°	117.9	62.9	44.0	23.6	12.6	4.7	3.1	4.7	4.7	4.7	4.7
67.5°	91.2	51.9	33.0	20.4	11.0	3.1	3.1	4.7	4.7	4.7	4.7
70°	72.3	44.0	26.7	17.3	9.4	3.1	3.1	4.7	4.7	4.7	4.7
72.5°	56.6	31.4	18.9	9.4	6.3	3.1	3.1	4.7	4.7	4.7	4.7
75°	42.4	25.1	14.1	7.9	3.1	3.1	3.1	4.7	4.7	4.7	4.7
77.5°	28.3	15.7	11.0	6.3	6.3	6.3	7.9	7.9	4.7	4.7	4.7
80°	18.9	11.0	7.9	7.9	7.9	6.3	7.9	7.9	4.7	7.9	4.7
82.5°	9.4	7.9	7.9	6.3	6.3	4.7	6.3	6.3	6.3	6.3	4.7
85°	6.3	4.7	4.7	4.7	4.7	4.7	4.7	4.7	6.3	6.3	4.7
87.5°	3.1	3.1	3.1	3.1	4.7	4.7	4.7	4.7	6.3	6.3	4.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213893

CATALOG NUMBER: 4SNLED-LD5-87HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	255°	260°	265°	270°	275°	280°	285°	290°	295°	300°	305°
0°	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3
2.5°	5275.0	5279.7	5267.2	5334.7	5300.2	5303.3	5317.4	5281.3	5289.2	5264.0	5246.7
5°	5847.2	5856.6	5866.0	5869.2	5875.4	5883.3	5873.9	5869.2	5859.7	5828.3	5795.3
7.5°	5757.6	5746.6	5741.8	5748.1	5759.1	5763.8	5756.0	5767.0	5807.9	5825.1	5836.1
10°	5286.0	5235.7	5270.3	5265.6	5226.3	5358.3	5322.2	5342.6	5356.7	5501.4	5589.4
12.5°	5061.2	5092.7	5033.0	5003.1	5042.4	5069.1	5095.8	5039.2	5117.8	5081.7	5198.0
15°	4872.6	4853.8	4847.5	4849.0	4841.2	4878.9	4888.3	4900.9	4911.9	4960.6	4979.5
17.5°	4787.7	4819.2	4831.8	4841.2	4825.5	4808.2	4790.9	4765.7	4773.6	4761.0	4797.2
20°	3924.8	3819.5	3813.2	3874.5	3806.9	3844.7	3935.8	4545.7	4525.3	4762.6	4682.4
22.5°	3275.7	3176.6	3091.8	3017.9	3123.2	3167.2	3337.0	3528.7	3839.9	3791.2	4129.2
25°	2675.2	2639.1	2617.1	2606.1	2613.9	2610.8	2648.5	2738.1	2879.6	3212.8	3643.5
27.5°	2502.3	2485.0	2477.2	2452.0	2470.9	2464.6	2494.5	2513.3	2555.8	2588.8	2728.7
30°	2365.6	2345.1	2331.0	2304.3	2323.1	2324.7	2334.1	2382.9	2400.2	2428.5	2472.5
32.5°	864.5	509.3	477.8	454.3	496.7	647.6	1136.4	1986.8	2266.6	2288.6	2338.9
35°	84.9	70.7	62.9	62.9	64.4	70.7	94.3	248.3	454.3	1755.7	2197.4
37.5°	33.0	28.3	23.6	22.0	23.6	26.7	36.2	47.2	64.4	133.6	595.7
40°	14.1	12.6	11.0	11.0	11.0	11.0	12.6	15.7	23.6	44.0	69.2
42.5°	9.4	7.9	7.9	7.9	7.9	7.9	7.9	7.9	11.0	14.1	28.3
45°	6.3	4.7	4.7	4.7	4.7	4.7	4.7	4.7	6.3	7.9	12.6
47.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	6.3
50°	4.7	4.7	4.7	4.7	3.1	4.7	3.1	4.7	4.7	4.7	4.7
52.5°	4.7	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	4.7	4.7
55°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	4.7
57.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
60°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
62.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	4.7	4.7	3.1
65°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	4.7	3.1
67.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
70°	4.7	4.7	3.1	4.7	3.1	3.1	4.7	4.7	4.7	3.1	3.1
72.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	9.4	9.4	6.3
75°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	7.9	9.4	7.9
77.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	7.9	7.9	7.9
80°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	6.3	6.3	6.3
82.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	6.3	6.3	6.3
85°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
87.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213893

CATALOG NUMBER: 4SNLED-LD5-87HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	310°	315°	320°	325°	330°	335°	340°	341°	342°	343°	344°
0°	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3
2.5°	5216.9	5215.3	5248.3	5273.4	5264.0	5273.4	5284.4	5286.0	5289.2	5276.6	5271.9
5°	5732.4	5683.7	5589.4	5521.8	5443.2	5300.2	5229.4	5237.3	5238.9	5234.1	5240.4
7.5°	5831.4	5826.7	5793.7	5779.6	5726.1	5624.0	5460.5	5432.2	5363.0	5319.0	5282.9
10°	5583.1	5696.3	5726.1	5776.4	5807.9	5789.0	5650.7	5630.2	5586.2	5535.9	5546.9
12.5°	5314.3	5407.0	5411.8	5685.3	5746.6	5752.8	5699.4	5727.7	5734.0	5620.8	5554.8
15°	4984.2	5028.2	5121.0	5375.6	5561.1	5677.4	5712.0	5727.7	5650.7	5646.0	5619.2
17.5°	4839.6	4867.9	4910.3	5053.4	5334.7	5506.1	5652.2	5641.2	5671.1	5649.1	5581.5
20°	4657.3	4680.9	4756.3	4828.6	4966.9	5194.8	5468.3	5488.8	5528.1	5523.4	5542.2
22.5°	4654.1	4570.8	4583.4	4640.0	4784.6	4988.9	5279.7	5347.3	5372.5	5389.8	5410.2
25°	3692.2	4353.9	4475.0	4511.1	4605.4	4724.9	5067.5	5092.7	5139.8	5216.9	5273.4
27.5°	3198.6	3648.2	4132.3	4383.8	4443.5	4542.5	4746.9	4784.6	4944.9	4963.8	5051.8
30°	2524.3	2871.7	3594.7	4199.9	4298.9	4368.1	4512.7	4588.1	4657.3	4732.7	4825.5
32.5°	2375.0	2430.0	2830.8	3475.3	4245.5	4193.6	4300.5	4346.1	4421.5	4487.5	4555.1
35°	2238.3	2276.0	2360.9	2846.6	3458.0	4050.6	4122.9	4152.7	4195.2	4245.5	4294.2
37.5°	2095.2	2151.8	2210.0	2340.4	3198.6	3937.4	3935.8	3970.4	3995.6	4038.0	4078.9
40°	380.4	1975.8	2070.1	2155.0	2480.3	3140.5	3759.8	3775.5	3792.8	3819.5	3861.9
42.5°	61.3	330.1	1939.6	2021.4	2114.1	2812.0	3679.6	3615.2	3604.2	3623.0	3660.8
45°	31.4	80.2	389.8	1887.7	1971.1	2243.0	3008.5	3503.6	3492.6	3456.4	3464.3
47.5°	23.6	50.3	95.9	652.3	1845.3	1925.5	2775.8	2746.0	2955.0	3355.8	3294.5
50°	20.4	34.6	56.6	133.6	1630.0	1773.0	2137.7	2497.6	2607.6	2621.8	3102.8
52.5°	18.9	23.6	40.9	86.4	342.7	1639.4	1738.4	1864.2	2049.6	2447.3	2437.9
55°	17.3	22.0	34.6	58.2	119.5	1477.5	1579.7	1603.3	1642.5	1832.7	2084.2
57.5°	9.4	20.4	33.0	50.3	89.6	270.4	1433.5	1452.4	1483.8	1491.7	1581.2
60°	4.7	18.9	29.9	44.0	66.0	125.7	1288.9	1310.9	1329.8	1332.9	1361.2
62.5°	3.1	17.3	25.1	40.9	55.0	89.6	304.9	622.4	1183.6	1183.6	1216.6
65°	3.1	12.6	15.7	26.7	50.3	73.9	128.9	149.3	290.8	715.2	1067.3
67.5°	3.1	4.7	14.1	22.0	37.7	56.6	94.3	110.0	132.0	150.9	279.8
70°	3.1	3.1	12.6	14.1	23.6	42.4	67.6	77.0	89.6	102.2	117.9
72.5°	3.1	3.1	11.0	11.0	15.7	28.3	51.9	56.6	64.4	72.3	83.3
75°	7.9	6.3	9.4	9.4	11.0	22.0	39.3	44.0	47.2	53.4	61.3
77.5°	7.9	7.9	7.9	7.9	7.9	14.1	25.1	28.3	33.0	36.2	42.4
80°	6.3	6.3	6.3	7.9	7.9	9.4	15.7	17.3	18.9	23.6	25.1
82.5°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	9.4	11.0	14.1
85°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	6.3	6.3	6.3	6.3
87.5°	4.7	4.7	4.7	3.1	3.1	4.7	4.7	4.7	4.7	4.7	4.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213893

CATALOG NUMBER: 4SNLED-LD5-87HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	345°	346°	347°	348°	349°	350°	351°	352°	353°	354°	355°
0°	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3	5237.3
2.5°	5270.3	5260.9	5253.0	5257.7	5243.6	5237.3	5242.0	5243.6	5246.7	5254.6	5256.1
5°	5256.1	5253.0	5267.2	5275.0	5271.9	5275.0	5275.0	5268.7	5259.3	5265.6	5251.4
7.5°	5246.7	5226.3	5210.6	5213.7	5198.0	5216.9	5234.1	5259.3	5267.2	5267.2	5251.4
10°	5408.6	5386.6	5298.6	5238.9	5199.6	5165.0	5246.7	5163.4	5202.7	5053.4	5224.7
12.5°	5542.2	5572.1	5532.8	5369.3	5341.0	5237.3	5297.0	5194.8	5165.0	4993.7	5048.7
15°	5595.7	5539.1	5526.5	5480.9	5419.6	5389.8	5229.4	5212.1	5163.4	5182.3	5110.0
17.5°	5548.5	5576.8	5539.1	5509.2	5446.3	5375.6	5279.7	5194.8	5127.3	4976.4	5103.7
20°	5502.9	5540.6	5427.5	5446.3	5452.6	5370.9	5320.6	5249.9	5165.0	5023.5	4913.5
22.5°	5427.5	5400.8	5410.2	5381.9	5358.3	5369.3	5300.2	5251.4	5108.4	5044.0	4894.6
25°	5304.9	5295.4	5320.6	5317.4	5260.9	5242.0	5207.4	5155.6	5099.0	4995.2	4872.6
27.5°	5105.3	5154.0	5198.0	5218.4	5188.6	5138.3	5119.4	5089.5	5050.2	4944.9	4853.8
30°	4894.6	4949.6	4999.9	5044.0	5070.7	5048.7	5031.4	5014.1	4954.4	4885.2	4783.0
32.5°	4654.1	4726.4	4795.6	4849.0	4907.2	4924.5	4911.9	4897.8	4847.5	4784.6	4702.9
35°	4375.9	4475.0	4575.6	4671.4	4696.6	4737.5	4778.3	4754.7	4728.0	4665.1	4589.7
37.5°	4140.2	4210.9	4283.2	4404.2	4492.2	4544.1	4616.4	4625.9	4580.3	4550.4	4451.4
40°	3896.5	3961.0	4066.3	4137.0	4258.0	4317.8	4394.8	4429.4	4418.4	4401.1	4314.6
42.5°	3704.8	3736.2	3805.4	3868.2	3987.7	4110.3	4177.9	4215.6	4254.9	4240.8	4196.7
45°	3500.4	3528.7	3552.3	3607.3	3723.6	3832.1	3915.4	3972.0	4042.7	4075.7	4022.3
47.5°	3297.7	3305.5	3333.8	3379.4	3448.6	3531.9	3671.8	3756.6	3822.7	3887.1	3852.5
50°	3142.1	3113.8	3118.5	3146.8	3203.4	3285.1	3385.7	3505.1	3580.6	3659.2	3667.0
52.5°	2746.0	2975.4	2920.4	2936.2	2966.0	3005.3	3110.6	3228.5	3321.2	3388.8	3456.4
55°	2304.3	2349.9	2791.5	2728.7	2747.5	2782.1	2830.8	2948.7	3038.3	3132.6	3226.9
57.5°	1787.2	2126.7	2144.0	2552.6	2543.2	2546.3	2587.2	2654.8	2744.4	2862.3	2942.4
60°	1389.5	1532.5	1810.7	1952.2	2310.6	2323.1	2346.7	2386.0	2463.0	2574.6	2701.9
62.5°	1226.0	1244.9	1343.9	1556.1	1788.7	2070.1	2120.4	2126.7	2161.2	2272.8	2420.6
65°	1076.7	1089.3	1119.1	1141.1	1336.0	1608.0	1850.0	1889.3	1911.3	1977.3	2103.1
67.5°	741.9	938.4	965.1	980.8	999.7	1125.4	1425.6	1625.3	1650.4	1708.6	1818.6
70°	143.0	297.1	812.6	829.9	839.3	867.6	916.4	1233.9	1400.5	1455.5	1505.8
72.5°	97.5	114.7	138.3	326.9	691.6	707.3	718.3	759.2	1040.5	1200.9	1227.6
75°	70.7	78.6	92.7	114.7	141.5	460.5	570.6	591.0	611.4	844.1	979.2
77.5°	50.3	56.6	62.9	73.9	86.4	111.6	160.3	441.7	462.1	473.1	668.0
80°	28.3	34.6	42.4	48.7	55.0	62.9	81.7	102.2	227.9	333.2	350.5
82.5°	15.7	18.9	22.0	26.7	29.9	37.7	45.6	55.0	72.3	106.9	226.3
85°	7.9	7.9	7.9	11.0	12.6	17.3	20.4	23.6	33.0	45.6	62.9
87.5°	4.7	4.7	6.3	6.3	6.3	7.9	7.9	7.9	9.4	14.1	20.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213893

CATALOG NUMBER: 4SNLED-LD5-87HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	356°	357°	358°	359°	360°
0°	5237.3	5237.3	5237.3	5237.3	5237.3
2.5°	5257.7	5253.0	5253.0	5271.9	5267.2
5°	5248.3	5243.6	5242.0	5262.4	5253.0
7.5°	5240.4	5223.1	5218.4	5237.3	5229.4
10°	5209.0	5196.4	5204.3	5198.0	5194.8
12.5°	5155.6	5147.7	5114.7	5117.8	5144.6
15°	5059.7	5091.1	5034.5	5084.8	5095.8
17.5°	4883.6	4954.4	5009.4	5039.2	5044.0
20°	4962.2	4985.8	4957.5	4959.1	4977.9
22.5°	4860.1	4871.1	4878.9	4869.5	4910.3
25°	4696.6	4654.1	4745.3	4764.2	4830.2
27.5°	4646.3	4611.7	4654.1	4651.0	4706.0
30°	4605.4	4493.8	4512.7	4542.5	4610.1
32.5°	4547.3	4371.2	4352.4	4418.4	4493.8
35°	4445.1	4278.5	4234.5	4276.9	4390.1
37.5°	4358.6	4149.6	4061.6	4118.2	4265.9
40°	4229.8	4049.0	3912.2	3962.5	4137.0
42.5°	4075.7	3962.5	3751.9	3786.5	3986.1
45°	3920.1	3819.5	3596.3	3613.6	3850.9
47.5°	3761.4	3668.6	3434.4	3437.6	3678.0
50°	3605.7	3483.1	3289.8	3234.8	3494.1
52.5°	3403.0	3289.8	3143.6	3054.0	3319.7
55°	3211.2	3083.9	2977.0	2838.7	3121.6
57.5°	3024.2	2882.7	2810.4	2632.8	2896.9
60°	2768.0	2700.4	2593.5	2423.7	2694.1
62.5°	2505.5	2483.5	2375.0	2199.0	2444.2
65°	2199.0	2250.8	2139.2	1988.3	2184.8
67.5°	1909.8	2002.5	1879.9	1787.2	1934.9
70°	1601.7	1708.6	1639.4	1606.4	1669.3
72.5°	1298.3	1402.1	1408.3	1384.8	1405.2
75°	1002.8	1117.6	1180.4	1144.3	1149.0
77.5°	760.8	815.8	884.9	913.2	906.9
80°	470.0	565.9	622.4	680.6	660.2
82.5°	237.3	317.5	386.7	449.5	419.7
85°	99.0	127.3	177.6	234.2	224.8
87.5°	29.9	50.3	53.4	75.4	70.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)