

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: NEO-RAY

Report Number: P242388

Luminaire Tested: **S122RDR-S485D927-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242388
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-29)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDR-S485D927-X4F0-XX-UDD-A-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1414.5 lumens
Efficiency: N/A
Efficacy: 75.2 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 1.16 / 1.02
Luminous Opening: Rectangular (W 3.88' x L: 0.15' x H: 0')
CIE Type: Direct

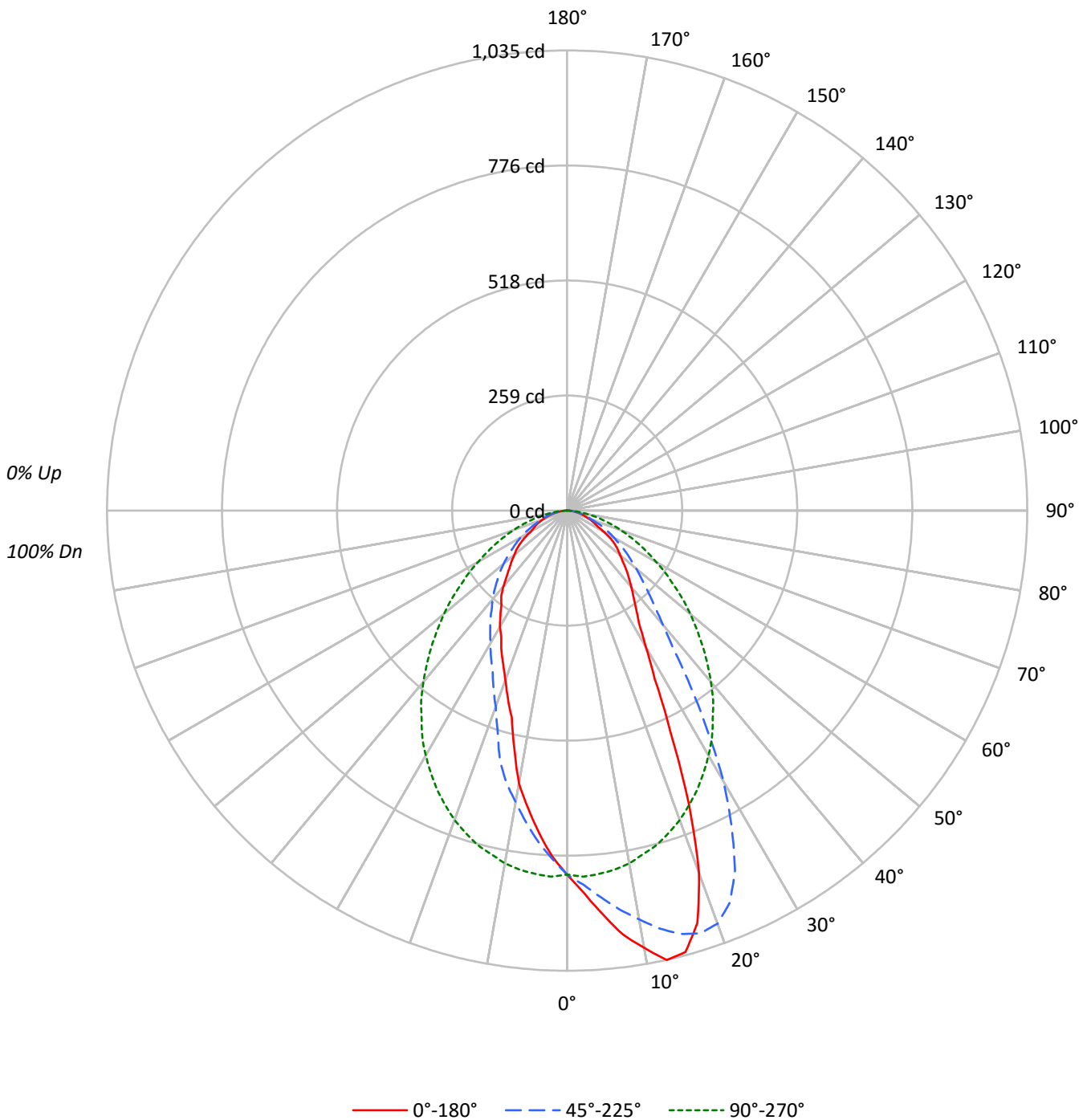
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	39
9	62	50	43	38	61	50	42	37	49	42	37	47	41	37	47	41	37	35
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	44	38	34	33

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	15592	15592	15592
5°	17413	15688	13910
10°	19320	15580	12058
15°	20270	15352	9501
20°	17572	15012	8222
25°	11526	14550	7341
30°	7757	13988	6645
35°	6283	13280	5992
40°	5587	12510	5545
45°	5056	11607	4948
50°	4602	10712	4584
55°	4327	9720	4271
60°	3619	8808	3577
65°	3051	8000	3461
70°	2818	7145	3264
75°	2635	6219	3017
80°	2435	5112	2687
85°	2229	4043	2360



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.6	5.5
10°-20°	216.7	15.3
20°-30°	278.9	19.7
30°-40°	264.6	18.7
40°-50°	226.7	16.0
50°-60°	172.7	12.2
60°-70°	108.9	7.7
70°-80°	54.4	3.8
80°-90°	14.0	1.0
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°	573.2	40.5
0°-40°	837.8	59.2
0°-60°	1237.2	87.5
0°-90°	1414.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1414.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	819	819	819	819	819	
5°	911	873	820	748	728	90
15°	1028	986	778	583	482	279
25°	548	893	692	396	349	259
35°	270	486	571	301	258	172
45°	188	256	431	222	184	145
55°	130	159	293	150	129	115
65°	68	91	178	90	77	69
75°	36	40	84	46	41	38
85°	10	10	18	11	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	818.6	818.6	818.6	818.6	818.6	818.6	818.6	818.6	818.6	818.6	818.6
2.5°	860.1	860.9	861.8	859.8	859.8	858.1	854.4	851.6	843.6	842.4	842.4
5°	910.7	910.1	911.3	907.6	902.5	901.3	895.9	888.8	881.4	873.2	871.5
7.5°	961.9	958.5	957.1	958.8	953.4	946.0	936.9	928.3	915.5	905.0	898.5
10°	998.9	1008.3	1002.6	992.6	994.6	981.2	974.1	961.9	951.7	933.7	929.8
12.5°	1035.3	1037.6	1036.7	1032.2	1028.5	1020.2	1010.0	999.7	978.7	963.0	946.5
15°	1027.9	1033.3	1034.7	1033.0	1034.4	1033.9	1028.7	1019.9	1003.4	985.8	970.4
17.5°	973.3	979.5	984.7	989.2	996.3	1010.3	1014.5	1016.2	1009.4	996.9	984.1
20°	866.9	860.7	886.8	900.2	911.6	940.0	964.5	973.9	988.9	988.6	985.8
22.5°	716.2	719.6	744.0	760.5	799.2	827.7	856.4	898.2	930.9	955.1	969.9
25°	548.4	559.2	583.9	605.5	642.5	695.4	743.5	799.2	851.8	893.4	932.9
27.5°	426.6	428.1	450.5	472.4	495.2	541.0	605.2	672.1	747.2	801.2	869.5
30°	352.7	351.0	359.2	371.5	390.2	423.8	469.3	534.7	609.5	702.8	785.9
32.5°	300.3	300.9	306.6	314.9	329.6	349.6	377.1	427.2	496.9	588.2	689.1
35°	270.2	269.9	274.5	281.0	287.5	302.1	323.4	351.3	399.9	485.5	585.1
37.5°	245.2	246.6	248.6	252.8	260.8	269.3	282.7	302.3	339.3	392.5	481.8
40°	224.7	225.3	228.4	231.8	236.1	242.3	252.8	267.9	293.2	333.6	394.8
42.5°	205.9	206.5	208.5	211.6	214.7	221.0	229.2	241.8	261.1	290.4	338.2
45°	187.7	187.7	189.7	191.1	194.8	200.5	207.6	218.4	232.7	256.0	289.5
47.5°	170.1	170.1	171.5	174.1	176.6	181.2	188.6	197.7	207.9	227.0	256.8
50°	155.3	155.6	156.4	158.4	159.8	163.8	169.2	176.9	187.7	201.7	225.5
52.5°	143.3	143.1	144.2	144.8	145.6	148.2	151.9	158.4	167.8	179.5	198.2
55°	130.3	129.1	130.8	132.3	133.1	134.2	136.5	140.8	149.0	159.3	174.1
57.5°	114.9	114.3	115.2	116.6	119.2	122.0	123.4	126.3	130.5	138.5	154.2
60°	95.0	95.0	97.6	98.4	101.5	105.5	109.5	111.8	116.0	120.9	131.7
62.5°	77.4	77.6	78.5	79.4	80.8	85.9	91.9	97.6	101.5	106.1	112.3
65°	67.7	68.3	68.3	68.8	70.0	71.1	73.4	77.4	84.5	91.0	96.4
67.5°	59.2	59.2	59.4	60.0	60.3	61.7	62.6	64.6	66.0	73.4	80.8
70°	50.6	51.5	51.2	51.8	52.0	52.6	53.8	54.6	57.2	58.6	62.6
72.5°	42.7	43.2	43.2	43.5	44.4	44.4	45.2	46.1	47.5	48.6	50.3
75°	35.8	35.6	35.8	36.4	36.7	37.0	37.0	38.1	39.0	40.1	41.5
77.5°	29.0	29.3	29.3	29.3	29.3	29.9	29.9	30.4	31.3	31.9	32.7
80°	22.2	22.5	22.2	22.5	22.8	23.0	22.8	23.0	23.9	24.5	24.5
82.5°	15.9	15.9	16.2	16.2	16.2	16.2	16.8	16.8	17.3	17.1	17.3
85°	10.2	10.0	10.0	10.0	10.2	10.5	10.2	10.2	10.5	10.5	10.5
87.5°	4.6	4.8	4.8	4.8	4.8	4.8	4.8	5.1	4.8	5.1	4.8
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	818.6	818.6	818.6	818.6	818.6	818.6	818.6	818.6	818.6	818.6	818.6
2.5°	843.0	840.7	838.8	833.6	831.1	825.4	824.5	824.2	816.9	809.7	807.8
5°	866.9	862.4	855.5	847.6	839.3	830.8	825.1	820.5	809.2	798.4	792.1
7.5°	890.5	882.3	871.5	857.8	846.1	832.5	823.1	814.6	798.9	784.7	775.3
10°	917.5	901.6	886.0	865.2	849.0	833.1	818.3	805.5	787.3	766.8	752.3
12.5°	934.3	916.4	893.4	873.2	851.0	829.7	808.6	791.3	769.1	747.7	729.8
15°	949.1	930.3	904.2	875.2	848.1	821.7	798.9	778.5	750.6	725.3	704.2
17.5°	962.8	936.9	909.9	876.3	846.4	814.3	785.6	760.0	729.5	699.7	675.8
20°	968.7	943.1	910.7	877.1	840.2	800.6	769.1	740.6	707.4	674.1	645.6
22.5°	965.0	946.5	909.6	867.8	829.7	787.8	751.2	717.0	679.2	645.1	610.9
25°	945.7	938.9	904.7	860.9	817.7	769.6	728.4	692.3	650.2	613.8	577.9
27.5°	910.1	920.1	895.9	848.4	801.8	750.0	705.1	664.4	621.5	580.8	544.9
30°	853.8	887.7	878.6	835.3	781.6	731.0	678.9	636.0	589.3	547.2	512.0
32.5°	776.7	838.2	851.6	817.1	761.1	704.2	649.0	606.4	557.2	512.2	478.1
35°	694.0	777.6	816.0	793.0	737.2	677.2	620.9	571.1	522.2	478.4	444.3
37.5°	595.9	707.4	766.5	763.9	710.8	649.6	588.5	539.3	488.9	445.7	410.1
40°	500.9	624.3	707.6	726.1	682.9	615.5	553.5	503.1	454.2	412.1	369.7
42.5°	415.5	538.4	645.6	681.2	649.0	582.2	519.9	466.7	419.5	380.3	336.8
45°	349.8	457.3	570.3	627.7	608.7	546.7	481.0	430.9	386.2	351.8	310.3
47.5°	302.9	381.1	494.6	569.7	567.4	508.5	443.1	395.1	353.0	321.1	285.8
50°	263.9	329.9	422.4	510.5	517.9	470.4	409.0	361.5	322.8	289.0	262.0
52.5°	229.0	280.4	361.2	444.8	469.3	429.8	370.6	327.7	290.4	260.0	237.8
55°	199.4	241.5	304.6	383.7	415.5	386.5	333.6	292.7	262.2	236.1	216.2
57.5°	173.5	206.5	259.1	325.4	361.5	341.9	296.6	262.8	235.8	211.3	195.4
60°	149.3	175.2	218.1	271.3	312.3	299.5	262.2	231.2	209.0	188.6	173.8
62.5°	126.6	147.9	183.2	223.8	260.5	257.1	228.4	203.6	184.9	166.7	154.7
65°	105.5	121.7	150.5	184.3	214.5	217.0	195.1	177.5	160.1	145.3	134.2
67.5°	87.3	98.4	120.0	149.9	172.9	180.9	166.1	151.9	137.7	125.7	115.8
70°	70.8	79.4	94.1	117.2	137.9	146.5	138.8	128.3	116.3	106.9	98.7
72.5°	54.0	62.3	72.2	87.6	104.7	114.1	112.6	105.8	96.7	89.3	81.6
75°	43.2	45.8	53.2	64.6	78.5	86.5	88.5	84.5	76.8	70.8	66.3
77.5°	33.6	35.3	39.2	46.1	55.7	62.9	66.0	65.4	59.7	55.7	51.5
80°	25.6	26.5	28.2	30.7	37.5	44.7	46.6	46.6	42.9	41.5	37.3
82.5°	17.9	18.5	19.3	20.5	22.8	28.7	31.0	31.6	29.6	27.6	24.5
85°	11.1	10.8	11.4	12.2	12.8	14.5	17.9	18.5	17.9	15.6	14.8
87.5°	4.8	5.1	5.1	4.8	5.1	5.4	6.8	8.2	7.1	6.3	5.7
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	818.6	818.6	818.6	818.6	818.6	818.6	818.6	818.6	818.6	818.6	818.6
2.5°	804.1	802.1	798.4	792.7	789.3	783.3	779.3	781.6	782.2	781.6	781.0
5°	785.3	779.3	771.1	763.1	755.7	747.7	743.2	741.2	737.2	734.9	733.8
7.5°	763.9	755.1	743.5	730.7	718.7	707.4	702.2	698.2	690.9	686.9	683.2
10°	739.5	723.3	711.6	693.4	682.3	666.1	655.0	655.3	644.2	638.0	633.4
12.5°	712.5	694.3	672.9	657.0	640.5	628.3	614.3	607.5	595.6	589.6	575.4
15°	682.0	661.3	640.8	618.6	603.0	582.8	563.4	539.8	520.8	504.3	499.7
17.5°	649.6	624.0	603.8	581.1	556.6	519.9	496.0	481.5	470.1	461.6	454.8
20°	616.1	589.9	568.0	528.7	492.6	469.6	453.1	442.6	430.6	421.2	416.1
22.5°	580.8	553.2	521.3	476.4	450.2	432.9	418.7	406.2	399.0	392.2	387.7
25°	547.8	517.9	468.7	438.6	415.8	396.5	386.2	378.8	370.3	360.4	355.8
27.5°	513.4	465.9	428.6	406.7	383.4	371.2	362.3	350.1	342.4	338.7	333.6
30°	473.8	426.3	398.8	374.3	358.9	345.0	334.2	327.9	320.5	312.9	309.7
32.5°	429.8	394.2	368.0	348.7	333.1	321.7	313.7	302.6	297.8	293.8	286.4
35°	394.8	366.0	341.9	325.4	310.6	300.9	291.0	285.0	275.3	271.3	268.8
37.5°	362.9	337.9	319.7	301.5	290.1	278.7	273.0	263.1	259.4	253.1	248.0
40°	336.8	312.3	294.9	280.7	267.6	259.7	252.0	244.3	238.1	235.5	229.0
42.5°	310.0	291.2	273.9	258.0	250.3	241.8	231.5	226.4	219.9	215.3	211.9
45°	285.8	268.2	253.4	240.6	230.9	222.1	215.9	206.5	202.8	194.5	191.1
47.5°	264.5	247.4	233.2	220.7	211.0	205.9	196.8	188.6	183.5	177.8	172.9
50°	241.5	227.8	214.2	203.4	194.8	186.6	177.2	173.5	164.4	161.8	159.3
52.5°	220.4	207.6	195.4	184.9	176.3	168.4	160.4	155.3	149.9	147.3	145.6
55°	201.1	188.6	176.6	167.2	158.7	150.5	145.3	139.4	136.5	134.5	132.3
57.5°	181.2	169.8	160.4	150.7	142.2	135.4	129.1	125.7	122.9	120.6	117.5
60°	162.4	151.6	143.3	134.5	125.7	120.3	115.8	111.5	108.1	104.1	103.0
62.5°	142.5	133.4	126.0	117.5	110.1	105.2	101.0	97.0	92.7	86.5	84.8
65°	124.6	117.2	109.2	102.1	95.3	90.4	84.2	79.6	77.9	77.4	77.1
67.5°	108.1	101.0	94.1	86.7	80.5	75.1	71.4	70.8	69.7	69.4	68.5
70°	91.6	85.0	78.2	71.4	65.4	64.6	63.4	62.3	60.9	60.3	59.7
72.5°	76.8	70.0	63.1	58.0	56.3	55.2	54.0	52.9	52.0	51.5	51.2
75°	61.2	54.9	50.3	48.4	46.9	46.1	44.4	43.5	42.9	42.1	41.8
77.5°	46.6	42.7	40.4	39.2	37.5	36.7	35.6	34.7	33.8	33.8	33.3
80°	33.6	31.9	30.4	28.7	28.2	27.0	26.7	25.9	26.2	25.3	25.3
82.5°	24.2	21.9	20.8	20.2	19.6	18.8	18.5	18.2	18.2	17.6	17.6
85°	13.4	12.8	12.2	11.7	11.7	10.8	11.1	10.8	10.8	10.2	10.0
87.5°	5.4	5.1	4.6	4.6	4.6	4.3	4.3	4.0	4.0	4.0	3.7
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: P242388

CATALOG NUMBER: S122RDR-S485D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	818.6	818.6	818.6	818.6
2.5°	777.9	778.5	777.6	778.2
5°	732.4	729.0	728.4	727.5
7.5°	678.6	678.3	676.6	674.6
10°	627.1	625.7	625.4	623.4
12.5°	566.8	555.8	554.6	548.9
15°	492.9	491.2	485.5	481.8
17.5°	451.7	446.0	444.0	443.1
20°	412.1	407.0	406.2	405.6
22.5°	384.8	379.4	376.9	374.9
25°	353.0	351.0	349.8	349.3
27.5°	327.9	322.8	322.2	320.8
30°	307.2	305.8	303.8	302.1
32.5°	282.7	281.6	279.9	279.3
35°	265.9	262.0	260.2	257.7
37.5°	247.4	245.2	242.3	243.5
40°	225.3	223.8	223.3	223.0
42.5°	207.6	203.1	201.4	201.4
45°	189.7	186.0	183.5	183.7
47.5°	170.4	170.7	168.9	169.5
50°	157.3	155.6	154.4	154.7
52.5°	144.8	143.3	142.5	143.9
55°	130.8	129.1	128.8	128.6
57.5°	115.8	114.9	113.5	112.6
60°	99.3	97.0	94.1	93.9
62.5°	84.2	84.2	84.2	84.2
65°	76.5	76.2	76.5	76.8
67.5°	68.5	68.0	67.4	67.7
70°	59.2	58.9	58.6	58.6
72.5°	50.1	50.1	49.8	49.5
75°	41.5	41.0	41.0	41.0
77.5°	33.3	33.0	32.7	32.4
80°	25.0	24.7	24.5	24.5
82.5°	17.6	17.3	17.3	17.1
85°	10.2	10.5	10.2	10.8
87.5°	3.7	3.4	3.7	3.4
90°	0.0	0.0	0.0	0.0

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