

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: P243268

Luminaire Tested: **S122RDR-H485D930-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243268
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-68)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDR-H485D930-X4F0-XX-UDD-A-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1399.8 lumens
Efficiency: N/A
Efficacy: 81.4 lumens/watt
Spacing Criteria (0/90/45): 0.81 / 1.17 / 0.99
Luminous Opening: Rectangular (W 3.88' x L: 0.15' x H: 0')
CIE Type: Direct

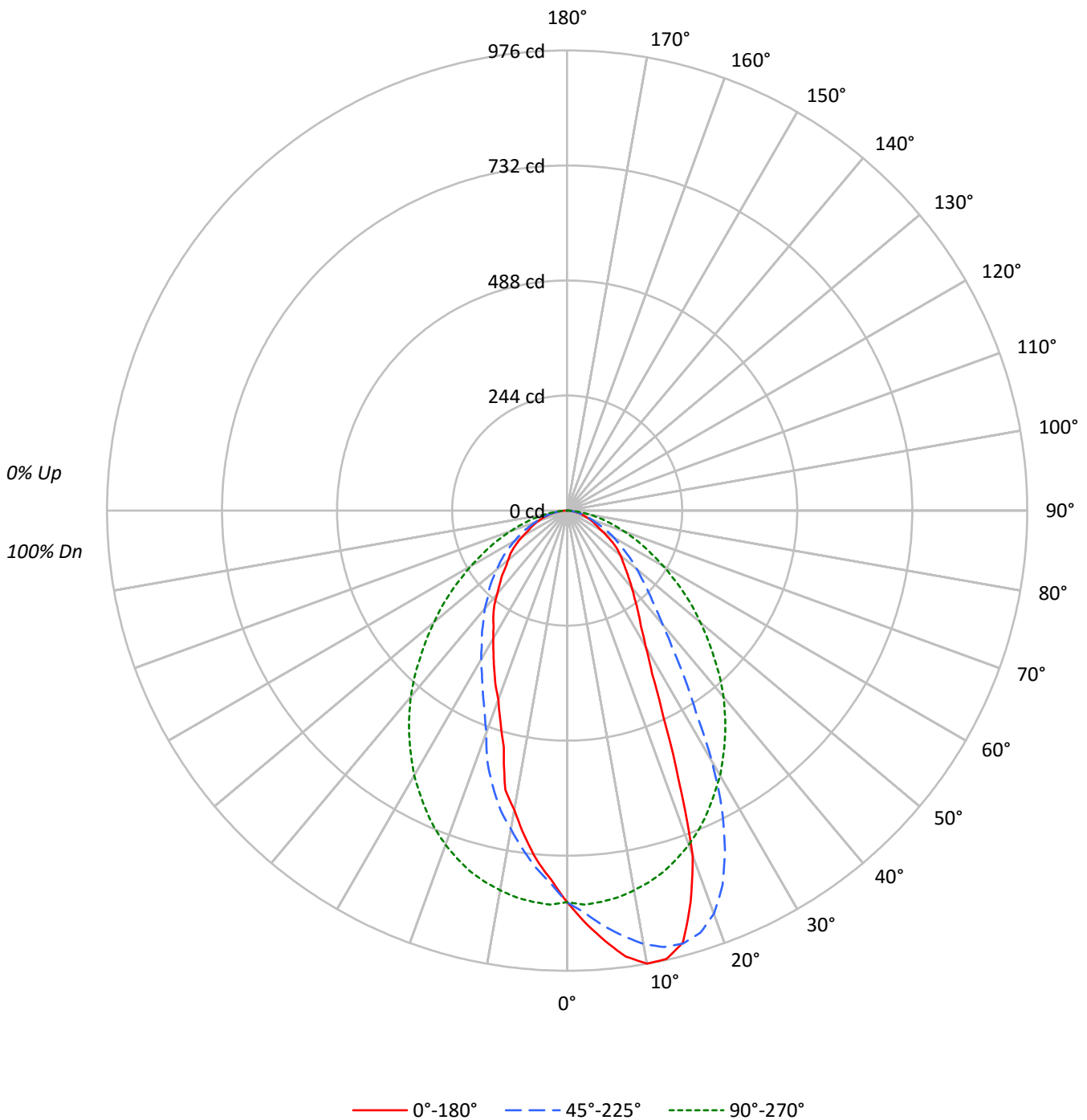
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P243268

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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	110	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	86	83	79	84	80	78	76
3	94	85	78	72	92	84	77	72	81	75	70	78	73	69	76	72	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	65	61	69	64	60	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	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	38
9	62	50	43	38	61	50	42	37	48	42	37	47	41	37	46	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°	15821	15821	15821
5°	17512	15927	14218
10°	18872	15818	12469
15°	18704	15634	10246
20°	15778	15288	8649
25°	10145	14817	7701
30°	7329	14268	6897
35°	6104	13582	6346
40°	5299	12825	5744
45°	4730	11869	5256
50°	4365	10929	4833
55°	3919	9983	4603
60°	3128	8987	4141
65°	2866	8072	3822
70°	2634	7129	3631
75°	2399	6241	3437
80°	2084	5188	3225
85°	1661	4152	2972



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.6	5.6
10°-20°	215.1	15.4
20°-30°	271.2	19.4
30°-40°	260.3	18.6
40°-50°	224.2	16.0
50°-60°	171.4	12.2
60°-70°	109.1	7.8
70°-80°	55.3	3.9
80°-90°	14.6	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°	564.9	40.4
0°-40°	825.2	59.0
0°-60°	1220.8	87.2
0°-90°	1399.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1399.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	831	831	831	831	831	
5°	916	884	833	760	744	89
15°	948	950	793	607	520	257
25°	483	792	705	423	366	231
35°	262	435	584	315	273	165
45°	176	244	441	233	195	137
55°	118	148	301	162	139	104
65°	64	82	179	100	85	63
75°	33	37	85	51	47	35
85°	8	9	19	14	14	9
90°	0	0	0	0	0	



TEST NUMBER: P243268

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	830.6	830.6	830.6	830.6	830.6	830.6	830.6	830.6	830.6	830.6	830.6
2.5°	874.6	875.7	876.2	874.9	871.9	872.1	869.4	864.8	859.1	853.9	856.9
5°	915.9	917.3	917.0	914.5	911.6	908.8	904.2	897.7	890.9	883.8	882.5
7.5°	954.0	956.9	956.1	951.5	949.3	945.5	937.6	930.3	920.0	909.9	905.9
10°	975.7	978.1	976.8	975.7	973.3	969.4	962.4	955.3	943.9	933.3	927.3
12.5°	974.1	976.2	977.3	978.4	977.6	976.2	973.3	967.3	958.0	948.2	940.6
15°	948.5	945.0	942.5	949.3	951.8	961.0	963.2	964.0	957.8	950.4	948.5
17.5°	870.8	871.9	890.6	887.6	891.7	914.3	923.2	935.5	940.6	939.0	942.3
20°	778.4	765.6	774.9	788.4	801.2	834.1	855.8	875.1	897.4	909.9	921.9
22.5°	617.5	617.8	640.0	662.3	691.1	726.7	759.9	796.9	836.5	860.7	888.7
25°	482.7	495.7	505.5	515.3	557.2	591.4	646.6	691.4	746.0	792.0	839.0
27.5°	390.3	403.9	405.5	427.5	452.2	480.0	516.1	586.8	642.8	710.2	768.3
30°	333.2	335.9	341.6	347.3	365.5	391.4	430.2	474.5	536.8	613.7	691.7
32.5°	291.9	291.4	297.1	306.0	316.1	333.5	355.5	392.2	448.4	509.6	600.6
35°	262.5	261.7	265.8	269.1	275.0	289.2	309.0	333.2	373.7	434.6	505.2
37.5°	234.8	236.5	238.9	242.4	250.3	259.3	272.6	292.7	324.8	365.0	432.7
40°	213.1	215.0	217.7	220.1	226.1	233.5	242.4	258.5	279.9	315.0	366.9
42.5°	193.5	194.3	196.5	200.0	204.4	210.9	219.6	231.8	249.8	274.2	319.6
45°	175.6	175.6	178.0	181.3	184.0	190.2	197.0	208.7	222.6	243.5	275.9
47.5°	160.4	160.6	162.0	162.5	165.5	171.2	178.6	187.8	199.2	215.3	245.4
50°	147.3	148.4	148.9	149.8	150.8	153.8	159.0	166.1	178.6	192.7	212.8
52.5°	133.7	135.1	136.2	137.8	139.4	139.7	143.5	148.1	156.8	171.5	187.8
55°	118.0	119.0	121.2	122.6	124.7	126.7	129.6	132.9	138.6	148.4	165.2
57.5°	100.0	100.3	102.5	103.8	108.2	112.5	115.2	118.8	122.8	129.6	142.4
60°	82.1	82.9	83.2	84.3	88.1	92.7	98.1	103.5	107.9	113.9	122.8
62.5°	72.3	72.6	73.4	74.5	74.7	76.9	78.5	85.1	92.7	98.7	104.6
65°	63.6	63.9	63.9	64.7	65.8	66.9	67.7	70.1	73.4	81.8	89.1
67.5°	55.4	55.2	55.7	56.5	56.8	57.6	59.0	60.3	62.5	65.0	72.6
70°	47.3	47.3	47.0	47.8	48.6	48.9	49.7	51.1	52.5	54.6	57.1
72.5°	39.1	39.7	39.7	40.2	40.5	41.6	42.1	42.7	44.6	45.7	47.6
75°	32.6	32.3	33.2	32.9	33.4	33.7	34.5	35.3	35.9	37.0	38.6
77.5°	26.1	25.5	26.1	25.8	26.4	26.9	26.9	27.7	28.3	29.4	30.2
80°	19.0	19.0	19.3	19.8	19.8	20.1	20.7	20.4	21.5	21.7	22.6
82.5°	13.0	13.3	13.3	13.6	13.6	13.6	14.1	14.1	14.4	14.9	15.2
85°	7.6	7.3	7.6	7.6	7.6	7.9	8.2	7.9	8.4	9.0	9.0
87.5°	2.2	2.2	2.4	2.7	2.7	3.0	3.0	3.0	3.3	3.3	3.5
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°	830.6	830.6	830.6	830.6	830.6	830.6	830.6	830.6	830.6	830.6	830.6
2.5°	856.9	855.6	852.0	848.8	842.8	837.9	836.3	836.5	829.2	821.6	819.4
5°	880.6	875.7	868.6	861.3	852.3	843.3	837.6	833.0	821.6	810.2	803.7
7.5°	900.1	892.3	881.9	870.2	858.6	845.2	836.0	827.3	811.5	796.1	787.6
10°	918.1	906.9	892.8	877.6	862.1	844.7	831.4	817.8	798.0	780.6	766.2
12.5°	935.2	917.5	903.1	881.1	864.0	840.4	822.1	806.4	783.0	761.3	745.2
15°	936.8	924.3	905.0	882.2	856.1	834.1	811.3	792.8	766.2	742.0	714.5
17.5°	936.6	926.8	906.7	883.3	852.0	823.2	798.5	774.3	743.9	715.6	692.0
20°	926.8	920.0	902.6	874.9	843.3	810.2	782.7	754.2	718.6	689.5	663.7
22.5°	903.7	905.3	891.7	867.0	833.0	796.1	764.3	731.4	694.9	661.5	628.9
25°	864.5	881.9	877.9	854.8	818.6	778.1	742.0	705.0	665.9	630.3	600.1
27.5°	815.9	848.5	855.6	837.6	803.1	757.7	716.7	676.5	636.5	598.2	567.2
30°	758.3	806.9	824.9	815.1	783.3	735.7	688.2	648.7	605.0	564.2	531.6
32.5°	685.7	753.9	785.5	788.4	762.3	711.3	658.5	616.1	571.3	532.7	497.6
35°	604.7	688.4	739.8	753.7	734.9	684.3	628.9	584.1	536.2	497.4	462.0
37.5°	523.2	621.6	689.0	715.9	703.4	654.5	595.7	550.4	503.1	463.4	430.2
40°	448.2	541.7	629.2	671.3	667.5	622.1	562.9	515.8	467.7	431.0	394.6
42.5°	381.0	471.3	567.5	624.0	627.0	587.3	526.7	479.4	433.2	396.8	358.8
45°	328.0	407.4	502.8	570.2	583.2	550.6	489.2	440.6	398.4	364.2	326.1
47.5°	285.6	347.3	435.9	515.0	538.1	509.6	450.9	404.7	365.0	335.7	299.8
50°	249.0	306.8	382.1	455.2	489.2	467.7	412.8	368.8	332.9	304.7	273.1
52.5°	216.3	261.2	326.4	396.5	442.2	422.6	375.9	335.4	301.7	275.3	249.0
55°	189.4	226.9	284.6	347.1	389.2	378.3	336.7	300.6	271.0	246.0	224.5
57.5°	161.7	193.2	239.7	295.4	336.7	335.1	300.9	266.1	242.7	219.1	203.6
60°	137.5	163.1	200.8	248.1	289.7	290.0	263.4	235.9	215.8	195.4	180.7
62.5°	116.1	136.4	169.3	207.4	240.5	249.0	229.1	205.2	188.9	173.1	160.6
65°	97.6	112.8	137.5	172.0	198.1	209.5	196.5	179.1	165.5	151.4	140.2
67.5°	80.4	91.6	109.8	137.0	163.1	171.5	166.1	152.7	143.0	131.3	122.8
70°	63.3	72.8	85.6	106.0	127.5	139.2	137.5	128.0	119.9	111.4	103.5
72.5°	50.3	55.7	65.5	80.2	97.3	110.3	110.9	106.0	99.2	92.1	87.0
75°	40.5	42.9	47.6	59.0	72.6	83.4	87.2	84.8	79.4	75.0	71.5
77.5°	31.3	33.4	36.4	41.9	52.5	60.9	65.5	65.8	62.5	58.7	56.0
80°	23.4	24.2	26.4	29.1	34.5	41.9	47.3	47.3	45.4	43.5	41.9
82.5°	16.0	16.9	17.9	19.3	22.0	26.4	31.3	32.1	31.0	30.4	28.3
85°	9.0	9.8	10.3	11.1	12.2	14.4	17.9	19.0	19.3	17.7	16.6
87.5°	3.5	3.5	3.8	4.1	4.3	5.2	6.5	8.2	8.2	7.3	7.1
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	830.6	830.6	830.6	830.6	830.6	830.6	830.6	830.6	830.6	830.6	830.6
2.5°	816.7	812.9	808.0	803.7	797.7	791.7	790.6	792.8	793.3	790.6	791.4
5°	797.4	790.3	784.4	774.6	768.3	760.2	754.7	754.7	754.7	750.7	746.9
7.5°	777.3	767.8	756.4	747.1	734.4	723.8	718.6	716.1	711.3	707.2	702.6
10°	753.9	740.6	726.5	712.1	700.9	686.3	677.6	672.1	663.7	660.2	653.4
12.5°	726.5	713.2	696.0	672.7	669.4	651.5	639.2	629.2	618.8	610.4	607.4
15°	704.5	681.4	658.5	641.9	617.8	607.2	589.2	587.6	579.2	554.4	535.1
17.5°	668.9	648.2	622.9	604.4	585.1	561.5	542.5	523.7	505.8	488.4	487.8
20°	637.3	613.1	589.2	569.1	535.4	501.7	490.0	472.9	462.3	448.4	444.4
22.5°	602.8	577.5	547.6	518.3	478.9	457.7	444.9	431.3	420.7	414.5	408.2
25°	568.0	542.7	503.1	466.9	440.0	423.4	412.6	397.9	390.3	384.8	376.7
27.5°	534.1	502.0	460.1	431.3	409.6	390.8	381.0	369.1	360.7	353.6	348.4
30°	500.4	456.3	420.7	398.4	376.1	364.5	351.7	342.7	336.5	329.9	321.5
32.5°	463.4	417.2	394.1	366.6	353.6	336.7	327.5	318.3	310.1	305.5	302.5
35°	420.4	383.2	362.6	342.4	325.9	314.7	301.7	296.0	291.6	282.7	278.8
37.5°	384.0	357.1	335.4	317.4	302.2	290.3	284.3	274.5	268.2	265.3	261.2
40°	353.9	329.9	311.2	293.0	280.2	271.5	260.9	255.7	247.6	244.6	241.3
42.5°	327.8	305.8	286.2	272.3	261.2	249.2	243.8	235.1	231.6	224.2	221.5
45°	301.4	281.8	264.7	251.1	240.5	233.2	223.4	218.0	211.7	207.9	200.6
47.5°	275.0	257.6	243.5	232.1	222.9	213.9	205.7	201.1	193.2	189.2	185.4
50°	254.7	237.8	224.5	213.1	203.6	194.6	189.4	181.8	174.8	170.1	168.8
52.5°	230.5	215.8	203.6	194.9	185.4	178.8	171.8	163.3	159.8	155.2	154.1
55°	209.0	197.0	186.7	177.5	169.3	162.0	153.8	147.8	145.1	143.0	141.3
57.5°	188.9	177.5	168.0	159.5	152.5	144.9	138.1	134.5	132.1	129.6	128.0
60°	169.0	158.7	150.0	143.0	135.6	128.3	123.4	120.4	118.5	115.0	113.9
62.5°	151.4	141.9	132.9	126.4	119.6	113.9	109.8	105.7	102.7	100.0	94.3
65°	132.1	123.7	116.9	110.3	103.8	99.5	94.9	90.2	86.4	86.4	86.4
67.5°	115.0	107.6	100.6	94.9	89.1	84.0	79.4	79.1	77.7	77.2	76.4
70°	97.6	92.4	85.9	79.6	73.9	71.5	70.7	69.3	67.7	67.4	66.3
72.5°	81.8	75.8	69.8	64.4	63.3	62.2	60.6	59.2	58.2	57.3	56.8
75°	66.9	60.9	56.0	54.6	53.3	51.4	50.0	48.9	48.4	48.4	48.1
77.5°	51.1	47.6	45.4	43.2	42.1	41.0	40.2	39.7	38.9	39.1	38.6
80°	37.5	36.4	34.5	33.2	32.6	31.5	31.0	30.7	30.2	30.2	29.9
82.5°	26.9	25.0	24.2	23.4	22.8	22.3	22.6	22.3	22.0	21.7	22.0
85°	15.5	15.2	14.7	14.7	14.7	14.4	14.4	14.4	14.1	13.9	13.9
87.5°	6.8	7.1	7.1	6.5	7.3	7.3	7.1	7.1	6.8	7.3	6.8
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: P243268

CATALOG NUMBER: S122RDR-H485D930-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	830.6	830.6	830.6	830.6
2.5°	787.9	787.6	786.0	783.3
5°	745.2	744.1	741.4	743.6
7.5°	699.6	696.6	693.9	695.2
10°	650.6	649.6	647.9	644.7
12.5°	596.6	600.9	596.3	606.6
15°	516.4	535.7	511.5	519.6
17.5°	476.4	476.7	473.4	469.6
20°	438.9	429.4	432.9	426.7
22.5°	402.8	400.6	399.5	397.3
25°	370.4	366.4	365.0	366.4
27.5°	346.5	344.6	339.5	338.6
30°	316.6	315.8	314.2	313.6
32.5°	297.9	294.3	293.5	290.3
35°	276.9	275.0	273.7	272.9
37.5°	256.0	254.9	252.5	253.8
40°	238.9	233.5	231.3	231.0
42.5°	220.1	217.2	212.8	211.4
45°	198.4	197.0	195.7	195.1
47.5°	179.4	178.6	176.9	176.1
50°	165.8	163.6	163.3	163.1
52.5°	152.7	151.9	151.1	152.2
55°	140.5	139.4	138.6	138.6
57.5°	127.2	125.3	123.7	123.9
60°	111.7	110.6	109.3	108.7
62.5°	93.8	93.8	93.5	93.5
65°	85.3	84.8	84.5	84.8
67.5°	76.1	75.6	74.7	75.0
70°	65.5	65.2	65.5	65.2
72.5°	56.0	55.7	56.0	56.5
75°	47.3	47.0	46.7	46.7
77.5°	38.3	38.0	37.5	38.0
80°	29.9	29.6	29.4	29.4
82.5°	21.2	21.5	21.2	21.2
85°	13.9	14.1	13.9	13.6
87.5°	7.1	7.3	6.8	6.5
90°	0.0	0.0	0.0	0.0

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