

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: P243273

Luminaire Tested: **S122RDR-H485D935-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243273
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-H485D935-X4F0-XX-UDD-A-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1478.2 lumens
Efficiency: N/A
Efficacy: 85.9 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

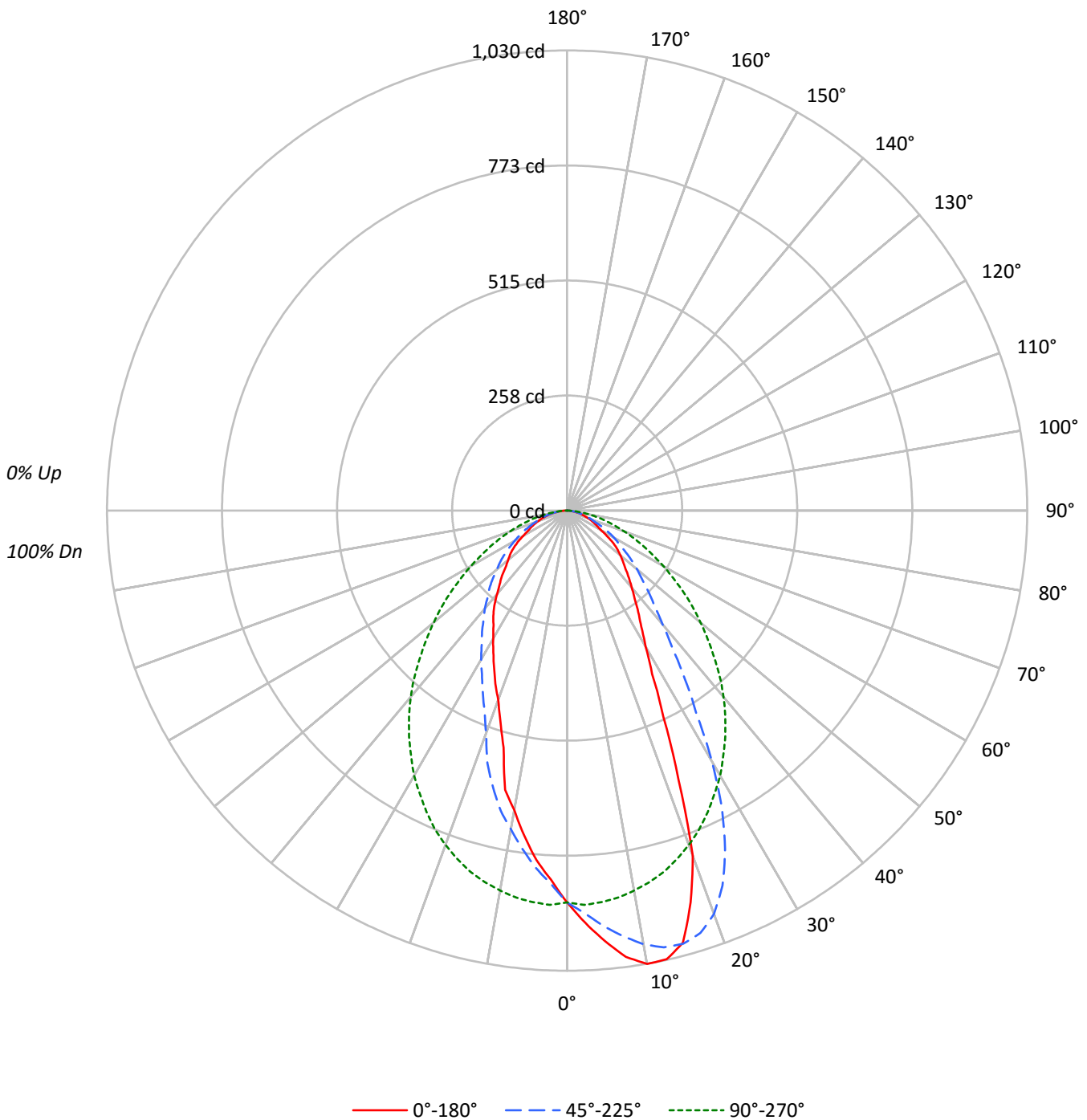
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				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°	16707	16707	16707
5°	18493	16820	15015
10°	19930	16703	13168
15°	19753	16509	10822
20°	16662	16145	9134
25°	10712	15647	8131
30°	7740	15068	7285
35°	6448	14342	6702
40°	5595	13546	6067
45°	4994	12534	5552
50°	4611	11542	5103
55°	4138	10540	4862
60°	3303	9490	4373
65°	3029	8523	4034
70°	2779	7530	3837
75°	2532	6587	3636
80°	2205	5474	3400
85°	1748	4393	3147



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.0	5.6
10°-20°	227.2	15.4
20°-30°	286.4	19.4
30°-40°	274.9	18.6
40°-50°	236.8	16.0
50°-60°	181.0	12.2
60°-70°	115.2	7.8
70°-80°	58.4	3.9
80°-90°	15.4	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°	596.6	40.4
0°-40°	871.5	59.0
0°-60°	1289.3	87.2
0°-90°	1478.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1478.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	877	877	877	877	877	
5°	967	933	880	803	785	94
15°	1002	1004	837	641	549	272
25°	510	836	744	447	387	244
35°	277	459	617	332	288	175
45°	185	257	465	246	206	144
55°	125	157	317	171	146	110
65°	67	86	189	105	90	67
75°	34	39	90	54	49	36
85°	8	10	20	15	14	9
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°	877.1	877.1	877.1	877.1	877.1	877.1	877.1	877.1	877.1	877.1	877.1
2.5°	923.6	924.8	925.3	923.9	920.7	921.0	918.2	913.3	907.3	901.8	905.0
5°	967.2	968.7	968.4	965.8	962.7	959.8	954.9	948.0	940.8	933.4	931.9
7.5°	1007.4	1010.6	1009.7	1004.8	1002.5	998.5	990.2	982.5	971.6	960.9	956.6
10°	1030.4	1033.0	1031.5	1030.4	1027.8	1023.8	1016.3	1008.9	996.8	985.6	979.3
12.5°	1028.7	1031.0	1032.1	1033.3	1032.4	1031.0	1027.8	1021.5	1011.7	1001.4	993.4
15°	1001.7	998.0	995.4	1002.5	1005.1	1014.9	1017.2	1018.0	1011.4	1003.7	1001.7
17.5°	919.6	920.7	940.6	937.4	941.7	965.5	975.0	987.9	993.4	991.6	995.1
20°	822.0	808.5	818.3	832.6	846.1	880.9	903.8	924.2	947.7	960.9	973.6
22.5°	652.1	652.4	675.9	699.5	729.9	767.5	802.5	841.5	883.4	909.0	938.5
25°	509.7	523.5	533.9	544.2	588.4	624.5	682.8	730.2	787.9	836.4	886.0
27.5°	412.2	426.5	428.2	451.5	477.6	506.9	545.0	619.7	678.8	750.0	811.4
30°	351.9	354.8	360.8	366.8	386.0	413.3	454.3	501.1	566.9	648.1	730.5
32.5°	308.3	307.7	313.7	323.2	333.8	352.2	375.4	414.2	473.6	538.2	634.3
35°	277.3	276.4	280.7	284.1	290.5	305.4	326.3	351.9	394.6	458.9	533.6
37.5°	248.0	249.7	252.3	256.0	264.3	273.8	287.9	309.1	343.0	385.5	456.9
40°	225.0	227.0	229.9	232.5	238.8	246.5	256.0	273.0	295.6	332.7	387.5
42.5°	204.4	205.2	207.5	211.2	215.8	222.7	231.9	244.8	263.8	289.6	337.5
45°	185.4	185.4	188.0	191.4	194.3	200.9	208.1	220.4	235.1	257.2	291.3
47.5°	169.3	169.6	171.1	171.6	174.8	180.8	188.6	198.3	210.4	227.3	259.2
50°	155.6	156.7	157.3	158.1	159.3	162.5	167.9	175.4	188.6	203.5	224.7
52.5°	141.2	142.6	143.8	145.5	147.2	147.5	151.5	156.4	165.6	181.1	198.3
55°	124.6	125.7	128.0	129.4	131.7	133.7	136.9	140.4	146.4	156.7	174.5
57.5°	105.6	105.9	108.2	109.6	114.2	118.8	121.7	125.4	129.7	136.9	150.4
60°	86.7	87.5	87.8	89.0	93.0	97.9	103.6	109.4	113.9	120.3	129.7
62.5°	76.3	76.6	77.5	78.6	78.9	81.2	82.9	89.8	97.9	104.2	110.5
65°	67.2	67.4	67.4	68.3	69.5	70.6	71.5	74.1	77.5	86.4	94.1
67.5°	58.6	58.3	58.8	59.7	60.0	60.8	62.3	63.7	66.0	68.6	76.6
70°	49.9	49.9	49.7	50.5	51.4	51.7	52.5	54.0	55.4	57.7	60.3
72.5°	41.3	41.9	41.9	42.5	42.8	43.9	44.5	45.1	47.1	48.2	50.2
75°	34.4	34.2	35.0	34.7	35.3	35.6	36.5	37.3	37.9	39.0	40.8
77.5°	27.6	27.0	27.6	27.3	27.8	28.4	28.4	29.3	29.8	31.0	31.9
80°	20.1	20.1	20.4	21.0	21.0	21.2	21.8	21.5	22.7	23.0	23.8
82.5°	13.8	14.1	14.1	14.4	14.4	14.4	14.9	14.9	15.2	15.8	16.1
85°	8.0	7.7	8.0	8.0	8.0	8.3	8.6	8.3	8.9	9.5	9.5
87.5°	2.3	2.3	2.6	2.9	2.9	3.2	3.2	3.2	3.4	3.4	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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	877.1	877.1	877.1	877.1	877.1	877.1	877.1	877.1	877.1	877.1	877.1
2.5°	905.0	903.5	899.8	896.4	890.0	884.9	883.2	883.4	875.7	867.7	865.4
5°	929.9	924.8	917.3	909.6	900.1	890.6	884.6	879.7	867.7	855.6	848.7
7.5°	950.6	942.3	931.4	919.0	906.7	892.6	882.9	873.7	857.0	840.7	831.8
10°	969.5	957.8	942.8	926.8	910.4	892.0	878.0	863.6	842.7	824.3	809.1
12.5°	987.6	969.0	953.8	930.5	912.4	887.5	868.2	851.6	826.9	803.9	787.0
15°	989.3	976.1	955.8	931.7	904.1	880.9	856.7	837.2	809.1	783.6	754.6
17.5°	989.1	978.7	957.5	932.8	899.8	869.4	843.3	817.7	785.6	755.7	730.7
20°	978.7	971.6	953.2	923.9	890.6	855.6	826.6	796.5	758.9	728.2	700.9
22.5°	954.3	956.1	941.7	915.6	879.7	840.7	807.1	772.4	733.9	698.6	664.2
25°	913.0	931.4	927.1	902.7	864.5	821.7	783.6	744.5	703.2	665.6	633.7
27.5°	861.6	896.1	903.5	884.6	848.1	800.2	756.9	714.4	672.2	631.7	599.0
30°	800.8	852.2	871.1	860.8	827.2	777.0	726.7	685.1	638.9	595.8	561.4
32.5°	724.1	796.2	829.5	832.6	805.1	751.1	695.4	650.7	603.3	562.6	525.5
35°	638.6	727.0	781.3	795.9	776.1	722.7	664.2	616.8	566.3	525.2	487.9
37.5°	552.5	656.4	727.6	756.0	742.8	691.1	629.1	581.2	531.3	489.4	454.3
40°	473.3	572.0	664.4	708.9	704.9	657.0	594.4	544.8	494.0	455.2	416.7
42.5°	402.4	497.7	599.3	659.0	662.1	620.2	556.2	506.3	457.5	419.0	378.9
45°	346.4	430.2	531.0	602.2	615.9	581.5	516.6	465.3	420.8	384.6	344.4
47.5°	301.7	366.8	460.4	543.9	568.3	538.2	476.2	427.4	385.5	354.5	316.6
50°	262.9	324.0	403.5	480.8	516.6	494.0	436.0	389.5	351.6	321.7	288.5
52.5°	228.5	275.8	344.7	418.8	467.0	446.3	396.9	354.2	318.6	290.7	262.9
55°	200.1	239.7	300.5	366.5	411.0	399.5	355.6	317.4	286.2	259.8	237.1
57.5°	170.8	204.1	253.1	312.0	355.6	353.9	317.7	281.0	256.3	231.3	215.0
60°	145.2	172.2	212.1	262.0	306.0	306.2	278.1	249.1	227.9	206.4	190.9
62.5°	122.6	144.1	178.8	219.0	254.0	262.9	242.0	216.7	199.5	182.8	169.6
65°	103.0	119.1	145.2	181.7	209.2	221.3	207.5	189.1	174.8	159.9	148.1
67.5°	85.0	96.7	116.0	144.7	172.2	181.1	175.4	161.3	151.0	138.6	129.7
70°	66.9	76.9	90.4	111.9	134.6	147.0	145.2	135.2	126.6	117.7	109.4
72.5°	53.1	58.8	69.2	84.7	102.8	116.5	117.1	111.9	104.8	97.3	91.8
75°	42.8	45.3	50.2	62.3	76.6	88.1	92.1	89.5	83.8	79.2	75.5
77.5°	33.0	35.3	38.5	44.2	55.4	64.3	69.2	69.5	66.0	62.0	59.1
80°	24.7	25.5	27.8	30.7	36.5	44.2	49.9	49.9	47.9	45.9	44.2
82.5°	16.9	17.8	18.9	20.4	23.2	27.8	33.0	33.9	32.7	32.1	29.8
85°	9.5	10.3	10.9	11.8	12.9	15.2	18.9	20.1	20.4	18.7	17.5
87.5°	3.7	3.7	4.0	4.3	4.6	5.5	6.9	8.6	8.6	7.7	7.5
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	877.1	877.1	877.1	877.1	877.1	877.1	877.1	877.1	877.1	877.1	877.1
2.5°	862.5	858.5	853.3	848.7	842.4	836.1	834.9	837.2	837.8	834.9	835.8
5°	842.1	834.6	828.3	818.0	811.4	802.8	797.0	797.0	797.0	792.7	788.7
7.5°	820.9	810.8	798.8	789.0	775.5	764.3	758.9	756.3	751.1	746.8	741.9
10°	796.2	782.1	767.2	752.0	740.2	724.7	715.5	709.8	700.9	697.2	690.0
12.5°	767.2	753.1	735.0	710.4	706.9	688.0	675.1	664.4	653.5	644.6	641.5
15°	743.9	719.6	695.4	677.9	652.4	641.2	622.3	620.5	611.6	585.5	565.1
17.5°	706.3	684.5	657.8	638.3	617.9	593.0	572.9	553.1	534.1	515.8	515.2
20°	673.1	647.5	622.3	601.0	565.4	529.8	517.5	499.4	488.2	473.6	469.3
22.5°	636.6	609.9	578.3	547.3	505.7	483.3	469.8	455.5	444.3	437.7	431.1
25°	599.9	573.2	531.3	493.1	464.7	447.2	435.7	420.2	412.2	406.4	397.8
27.5°	564.0	530.1	485.9	455.5	432.5	412.7	402.4	389.8	380.9	373.4	368.0
30°	528.4	481.9	444.3	420.8	397.2	384.9	371.4	361.9	355.3	348.4	339.5
32.5°	489.4	440.6	416.2	387.2	373.4	355.6	345.9	336.1	327.5	322.6	319.4
35°	444.0	404.7	382.9	361.6	344.1	332.4	318.6	312.6	308.0	298.5	294.5
37.5°	405.6	377.1	354.2	335.2	319.2	306.5	300.2	289.9	283.3	280.1	275.8
40°	373.7	348.4	328.6	309.4	295.9	286.7	275.5	270.1	261.5	258.3	254.9
42.5°	346.1	322.9	302.2	287.6	275.8	263.2	257.5	248.3	244.5	236.8	233.9
45°	318.3	297.6	279.6	265.2	254.0	246.3	235.9	230.2	223.6	219.6	211.8
47.5°	290.5	272.1	257.2	245.1	235.4	225.9	217.3	212.4	204.1	199.8	195.7
50°	268.9	251.1	237.1	225.0	215.0	205.5	200.1	192.0	184.6	179.7	178.2
52.5°	243.4	227.9	215.0	205.8	195.7	188.9	181.4	172.5	168.8	163.9	162.7
55°	220.7	208.1	197.2	187.4	178.8	171.1	162.5	156.1	153.3	151.0	149.2
57.5°	199.5	187.4	177.4	168.5	161.0	153.0	145.8	142.1	139.5	136.9	135.2
60°	178.5	167.6	158.4	151.0	143.2	135.5	130.3	127.1	125.1	121.4	120.3
62.5°	159.9	149.8	140.4	133.5	126.3	120.3	116.0	111.6	108.5	105.6	99.6
65°	139.5	130.6	123.4	116.5	109.6	105.0	100.2	95.3	91.3	91.3	91.3
67.5°	121.4	113.7	106.2	100.2	94.1	88.7	83.8	83.5	82.1	81.5	80.7
70°	103.0	97.6	90.7	84.1	78.1	75.5	74.6	73.2	71.5	71.2	70.0
72.5°	86.4	80.1	73.8	68.0	66.9	65.7	64.0	62.6	61.4	60.6	60.0
75°	70.6	64.3	59.1	57.7	56.3	54.2	52.8	51.7	51.1	51.1	50.8
77.5°	54.0	50.2	47.9	45.6	44.5	43.3	42.5	41.9	41.0	41.3	40.8
80°	39.6	38.5	36.5	35.0	34.4	33.3	32.7	32.4	31.9	31.9	31.6
82.5°	28.4	26.4	25.5	24.7	24.1	23.5	23.8	23.5	23.2	23.0	23.2
85°	16.4	16.1	15.5	15.5	15.5	15.2	15.2	15.2	14.9	14.6	14.6
87.5°	7.2	7.5	7.5	6.9	7.7	7.7	7.5	7.5	7.2	7.7	7.2
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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CATALOG NUMBER: S122RDR-H485D935-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	877.1	877.1	877.1	877.1
2.5°	832.1	831.8	830.1	827.2
5°	787.0	785.9	783.0	785.3
7.5°	738.8	735.6	732.8	734.2
10°	687.1	686.0	684.2	680.8
12.5°	630.0	634.6	629.7	640.6
15°	545.3	565.7	540.2	548.8
17.5°	503.1	503.4	500.0	496.0
20°	463.5	453.5	457.2	450.6
22.5°	425.4	423.1	421.9	419.6
25°	391.2	386.9	385.5	386.9
27.5°	365.9	363.9	358.5	357.6
30°	334.4	333.5	331.8	331.2
32.5°	314.6	310.8	310.0	306.5
35°	292.5	290.5	289.0	288.2
37.5°	270.4	269.2	266.6	268.1
40°	252.3	246.5	244.3	244.0
42.5°	232.5	229.3	224.7	223.3
45°	209.5	208.1	206.7	206.1
47.5°	189.4	188.6	186.8	186.0
50°	175.1	172.8	172.5	172.2
52.5°	161.3	160.4	159.6	160.7
55°	148.4	147.2	146.4	146.4
57.5°	134.3	132.3	130.6	130.9
60°	118.0	116.8	115.4	114.8
62.5°	99.0	99.0	98.7	98.7
65°	90.1	89.5	89.3	89.5
67.5°	80.4	79.8	78.9	79.2
70°	69.2	68.9	69.2	68.9
72.5°	59.1	58.8	59.1	59.7
75°	49.9	49.7	49.4	49.4
77.5°	40.5	40.2	39.6	40.2
80°	31.6	31.3	31.0	31.0
82.5°	22.4	22.7	22.4	22.4
85°	14.6	14.9	14.6	14.4
87.5°	7.5	7.7	7.2	6.9
90°	0.0	0.0	0.0	0.0

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