

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: P242732

Luminaire Tested: **S124RDR-S575D927-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242732
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-31)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDR-S575D927-X4F0-XX-UDD-A-W
Description: DEFINE 4 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: 1784.4 lumens
Efficiency: N/A
Efficacy: 94.9 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.22 / 1.39
Luminous Opening: Rectangular (W 3.88' x L: 0.31' x H: 0')
CIE Type: Direct

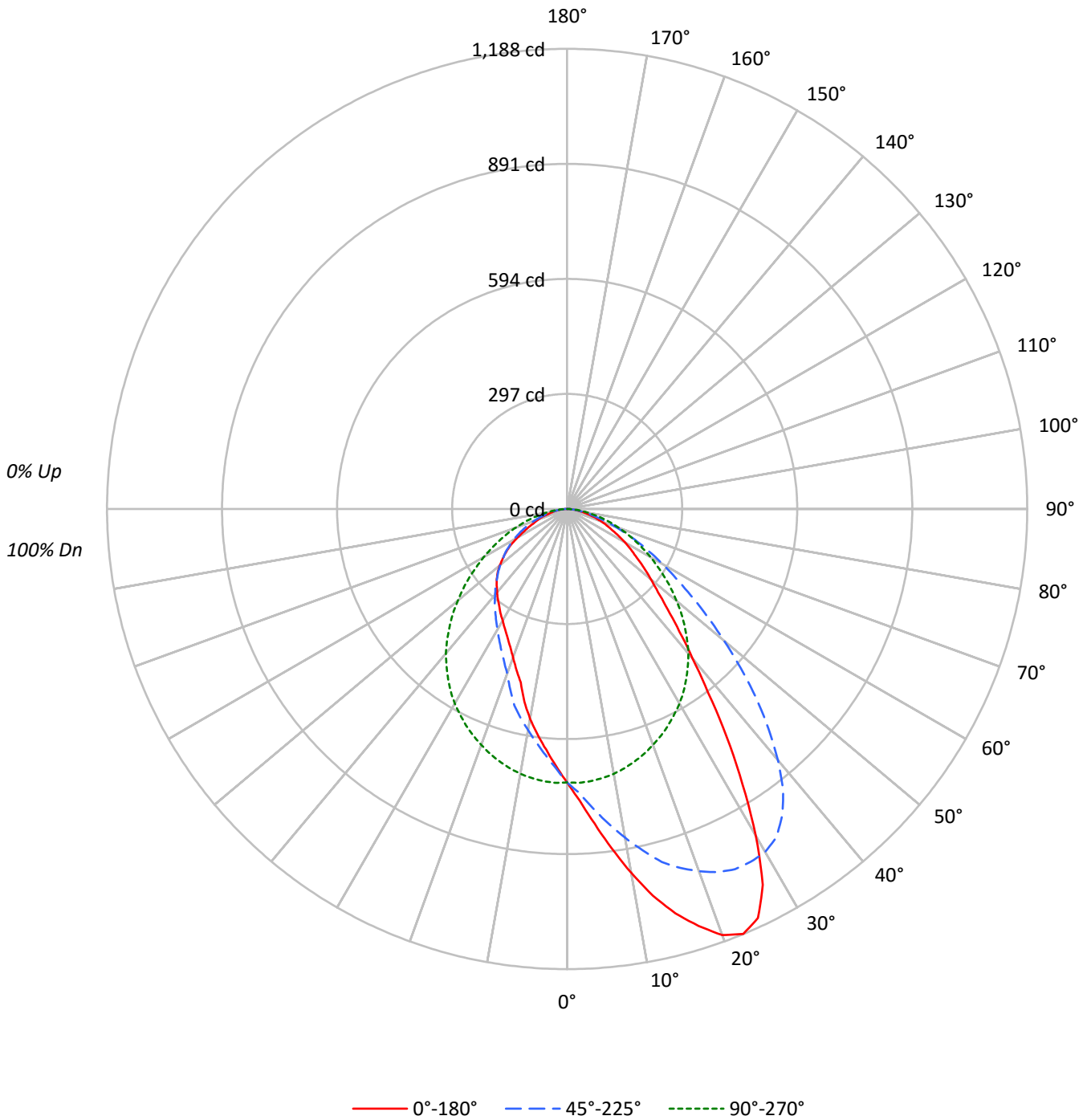
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74
3	93	83	76	70	90	81	75	69	79	73	68	76	71	67	73	69	65	63
4	85	74	66	60	83	73	65	59	71	64	59	68	63	58	66	61	57	55
5	79	67	58	52	77	66	58	52	64	57	51	62	56	51	60	55	50	48
6	73	61	52	46	71	60	52	46	58	51	46	56	50	45	55	49	45	43
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	44	40	38
8	64	51	42	37	62	50	42	37	49	42	37	47	41	36	46	40	36	34
9	59	47	39	33	58	46	38	33	45	38	33	44	38	33	43	37	33	31
10	56	43	35	30	55	43	35	30	42	35	30	41	34	30	40	34	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	6275	6275	6275
5°	7278	6293	5563
10°	8610	6266	4964
15°	9945	6208	4266
20°	11073	6129	3858
25°	11431	6050	3582
30°	10006	5955	3416
35°	7789	5814	3315
40°	5841	5653	3261
45°	4612	5395	3232
50°	3894	5097	3139
55°	3394	4769	2971
60°	3054	4428	2629
65°	2692	4061	2261
70°	2425	3680	2040
75°	2033	3263	1738
80°	1720	2780	1633
85°	1448	2172	1448



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.4	3.8
10°-20°	206.4	11.6
20°-30°	323.3	18.1
30°-40°	359.1	20.1
40°-50°	318.2	17.8
50°-60°	248.0	13.9
60°-70°	162.2	9.1
70°-80°	79.6	4.5
80°-90°	19.4	1.1
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°	598.1	33.5
0°-40°	957.1	53.6
0°-60°	1523.3	85.4
0°-90°	1784.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1784.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	706	706	706	706	706	
5°	816	776	705	638	623	82
15°	1081	944	675	526	464	307
25°	1166	1026	617	402	365	520
35°	718	968	536	323	306	449
45°	367	690	429	257	257	289
55°	219	390	308	194	192	199
65°	128	200	193	125	108	129
75°	59	76	95	61	51	65
85°	14	15	21	15	14	16
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°	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9
2.5°	754.2	756.8	754.2	754.0	751.1	750.3	749.1	745.4	738.6	734.6	735.5
5°	815.7	822.8	818.8	818.2	812.0	805.7	801.7	792.6	783.0	776.4	771.0
7.5°	883.9	888.2	885.4	882.2	871.4	868.0	858.6	847.8	831.6	819.4	808.3
10°	953.9	957.3	956.2	948.8	941.4	926.3	917.8	901.0	879.1	861.7	845.5
12.5°	1022.7	1026.4	1014.2	1016.5	1000.8	989.7	974.9	952.8	926.6	903.0	881.7
15°	1080.7	1076.2	1076.2	1070.5	1054.9	1038.4	1024.4	1002.2	970.4	943.7	915.5
17.5°	1128.5	1130.5	1128.2	1113.7	1102.4	1085.6	1060.5	1035.2	1007.6	971.8	943.9
20°	1170.6	1170.6	1168.1	1158.9	1143.0	1124.8	1097.2	1069.1	1031.5	995.4	963.0
22.5°	1187.7	1188.8	1185.7	1178.6	1164.6	1147.0	1124.5	1095.8	1056.8	1015.0	972.9
25°	1165.5	1170.9	1171.5	1169.5	1165.2	1154.4	1134.2	1104.9	1070.2	1026.1	982.9
27.5°	1093.8	1100.9	1103.8	1110.0	1121.7	1126.0	1123.4	1103.8	1070.2	1026.7	983.8
30°	974.9	980.6	999.1	1023.3	1042.1	1059.1	1073.9	1077.9	1060.8	1022.7	976.9
32.5°	843.0	851.2	869.7	896.2	930.6	962.4	1000.3	1020.4	1024.1	1005.1	963.6
35°	717.8	723.5	740.6	767.9	805.4	848.4	901.0	941.9	969.8	967.8	941.9
37.5°	597.8	605.8	623.1	645.6	682.6	737.5	787.2	842.1	892.2	916.6	903.6
40°	503.4	503.7	520.5	543.8	577.9	624.3	679.7	742.3	799.7	846.7	855.8
42.5°	428.9	428.9	438.6	464.1	486.3	529.3	581.6	643.6	713.3	769.3	797.2
45°	366.9	369.4	378.5	393.6	413.0	449.9	492.3	550.0	625.4	689.7	729.8
47.5°	318.0	322.5	327.9	341.6	357.5	383.4	419.5	473.5	536.1	607.5	662.9
50°	281.6	282.1	289.5	296.3	309.7	329.3	360.1	403.3	459.6	527.6	591.0
52.5°	250.3	250.0	253.7	262.8	273.0	287.2	310.6	349.0	397.3	456.5	522.5
55°	219.0	220.4	223.8	230.7	238.9	249.7	269.3	298.9	338.2	390.2	449.6
57.5°	195.1	196.0	199.1	201.6	209.6	217.6	233.5	254.8	289.2	332.8	391.1
60°	171.8	172.1	172.9	177.2	183.2	190.6	200.5	217.9	245.7	284.7	328.5
62.5°	149.0	149.6	151.0	153.9	158.1	162.7	173.2	186.3	208.2	240.0	278.4
65°	128.0	128.3	130.3	131.4	135.1	139.6	147.3	156.7	172.6	200.5	230.4
67.5°	110.3	110.3	110.3	112.1	114.9	118.0	123.1	131.1	143.9	161.8	189.7
70°	93.3	93.3	93.9	94.7	96.1	98.7	101.2	106.9	115.8	129.7	149.9
72.5°	77.4	77.6	78.2	78.2	78.8	80.8	82.5	85.6	91.6	101.2	116.6
75°	59.2	60.0	61.4	62.6	64.0	63.7	65.7	68.0	70.0	76.2	85.6
77.5°	46.6	46.1	46.1	47.2	47.5	47.8	49.2	51.2	52.9	56.3	59.7
80°	33.6	33.6	34.4	34.7	34.4	34.7	36.1	37.0	37.5	38.7	41.8
82.5°	23.3	23.9	23.3	23.6	23.9	24.2	25.3	25.3	25.9	26.2	27.0
85°	14.2	14.5	14.8	14.2	14.2	14.2	14.8	15.1	15.6	15.4	15.9
87.5°	6.3	6.0	6.3	6.3	6.5	6.3	6.5	7.1	6.5	6.8	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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9
2.5°	732.6	728.6	726.7	722.1	716.7	713.9	711.3	707.6	702.8	697.6	693.9
5°	764.2	757.4	748.8	738.6	729.5	720.7	713.0	705.3	696.5	687.4	678.3
7.5°	795.5	783.3	770.2	754.5	739.5	725.5	713.0	700.8	686.8	674.3	662.7
10°	828.5	810.3	790.1	768.7	747.4	728.9	710.7	694.2	676.0	659.8	646.2
12.5°	855.2	833.0	807.7	779.8	753.1	729.8	708.2	685.4	664.1	646.2	626.8
15°	885.4	856.1	823.4	791.5	758.2	727.8	699.6	674.6	651.0	626.3	608.9
17.5°	906.1	872.3	833.6	796.6	758.5	723.2	691.4	662.4	635.4	610.6	590.1
20°	924.3	885.9	841.8	798.3	754.2	715.8	680.9	647.9	619.7	592.4	571.1
22.5°	934.6	891.0	841.8	795.8	749.7	707.3	668.1	633.4	602.1	574.8	550.6
25°	935.1	889.6	840.4	788.1	738.0	693.9	654.1	616.9	582.7	555.4	530.4
27.5°	932.8	880.2	830.7	777.6	726.1	679.2	637.9	598.4	564.5	535.5	509.9
30°	926.0	868.6	814.5	758.8	706.5	661.8	617.7	580.2	544.6	514.2	488.3
32.5°	911.2	854.4	795.2	737.7	684.6	638.2	597.0	559.1	524.4	493.2	465.3
35°	890.8	833.0	769.9	711.3	659.3	611.5	572.2	535.8	502.5	469.3	440.3
37.5°	867.2	806.9	744.6	680.3	628.5	583.0	546.3	511.4	478.9	448.5	416.4
40°	830.7	777.0	712.1	648.4	595.0	551.5	518.2	487.2	454.5	424.3	392.2
42.5°	786.7	742.9	677.2	613.2	560.6	519.0	488.6	458.5	429.5	400.4	366.6
45°	736.6	701.9	640.5	579.0	525.9	484.3	455.9	429.2	403.0	375.1	343.6
47.5°	680.9	655.3	601.8	537.5	487.8	449.6	422.3	400.2	377.1	349.0	320.5
50°	622.3	607.2	556.0	498.6	451.6	417.2	389.1	368.6	350.1	323.4	298.6
52.5°	559.7	553.5	512.2	457.9	413.0	379.4	356.4	338.4	319.7	298.6	275.9
55°	496.0	500.3	463.6	416.1	373.4	345.0	323.1	307.7	291.8	273.0	255.1
57.5°	429.7	445.9	418.6	375.7	334.5	307.7	290.9	277.3	263.9	248.0	231.8
60°	371.4	384.5	370.6	333.9	298.9	274.5	259.1	249.1	235.8	221.6	209.9
62.5°	314.6	328.8	321.9	294.1	262.2	242.0	228.9	219.8	210.7	198.8	186.6
65°	268.8	277.9	273.9	253.4	230.4	212.5	199.9	193.1	184.0	174.9	164.1
67.5°	215.0	232.9	230.1	218.7	196.5	182.3	173.5	167.2	158.7	151.9	144.2
70°	169.2	185.4	185.1	176.3	165.5	152.4	146.8	141.6	134.2	127.7	121.7
72.5°	130.8	145.3	148.2	141.9	135.4	126.3	120.9	117.7	110.6	106.7	102.1
75°	97.0	107.8	110.6	110.6	107.2	102.1	97.3	95.0	89.9	85.9	83.0
77.5°	68.3	75.7	79.9	80.8	81.1	79.1	74.5	72.8	68.8	67.4	64.3
80°	44.9	49.5	54.6	56.3	57.7	57.2	55.5	54.3	50.6	49.2	48.1
82.5°	27.6	29.6	33.6	37.8	37.0	39.0	37.5	36.7	34.1	33.8	32.7
85°	16.2	16.5	17.1	19.6	21.0	21.6	21.9	21.3	20.5	20.5	18.5
87.5°	6.8	6.5	7.1	7.1	7.4	8.5	9.4	9.7	8.8	8.0	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°	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9
2.5°	690.0	687.1	683.4	679.2	674.0	669.5	667.5	669.2	670.1	667.8	667.5
5°	672.0	664.9	659.3	650.7	643.9	638.2	634.2	632.5	633.1	628.5	627.4
7.5°	652.1	644.5	635.1	625.4	616.3	608.3	604.1	602.1	597.2	595.3	592.1
10°	633.1	621.7	612.6	600.7	589.9	579.9	575.1	571.1	566.2	564.0	559.1
12.5°	613.5	599.8	589.6	577.1	566.0	553.5	548.9	540.7	532.4	527.0	520.5
15°	595.3	579.3	567.1	552.3	539.2	525.6	513.4	499.7	494.6	483.8	477.5
17.5°	573.6	557.1	543.5	524.4	504.8	488.3	474.7	460.5	452.8	445.4	442.2
20°	552.3	537.5	516.5	493.4	471.0	452.2	441.7	433.1	424.6	419.8	416.4
22.5°	532.1	512.2	486.9	461.6	439.1	425.5	416.9	408.1	401.6	397.0	392.2
25°	509.1	484.3	458.5	430.0	414.7	401.9	392.2	385.1	380.8	374.8	372.6
27.5°	486.6	456.8	427.5	408.1	392.2	380.0	371.1	366.0	360.3	356.4	353.2
30°	459.9	429.5	403.9	385.7	369.4	359.8	352.9	346.7	342.4	339.3	337.0
32.5°	433.4	403.0	382.5	362.6	350.7	341.3	333.9	329.6	326.5	322.2	321.1
35°	408.1	381.1	362.3	344.7	331.6	323.1	317.4	312.6	309.7	308.6	307.7
37.5°	383.4	360.9	340.1	325.9	313.7	307.2	299.8	297.5	295.5	292.9	294.1
40°	360.1	339.3	321.4	306.0	296.6	289.2	285.3	282.4	280.7	280.7	280.7
42.5°	339.9	319.7	302.3	289.0	279.6	273.6	269.0	266.8	266.5	266.2	267.9
45°	318.8	300.0	282.4	271.0	263.1	256.8	254.3	252.3	252.3	253.4	253.7
47.5°	297.8	280.1	265.9	252.8	245.4	241.5	239.2	238.0	238.0	239.5	240.6
50°	278.7	261.4	247.4	236.1	229.2	225.5	223.5	223.0	223.5	223.5	225.5
52.5°	258.0	242.9	229.2	220.1	212.2	208.8	207.9	207.0	207.3	208.5	209.0
55°	237.8	223.8	210.7	201.6	196.0	193.7	191.1	191.4	190.8	191.4	191.4
57.5°	217.3	205.1	192.3	184.9	180.0	176.6	173.8	174.6	173.8	173.8	173.5
60°	197.7	184.0	174.3	167.8	162.1	159.3	156.7	157.3	156.4	155.9	154.7
62.5°	176.3	165.5	156.4	150.2	145.9	142.5	139.9	139.1	136.8	134.5	131.7
65°	155.9	146.5	138.2	132.2	128.0	125.4	123.4	121.7	117.5	112.9	110.6
67.5°	135.7	128.8	120.9	115.8	112.3	108.9	105.2	102.1	97.8	95.0	93.6
70°	116.3	109.8	103.2	98.4	94.7	91.6	87.3	85.3	82.5	81.3	79.9
72.5°	97.8	91.9	85.9	81.6	77.6	75.4	72.2	70.2	69.4	69.1	67.7
75°	79.1	74.2	69.7	65.7	62.6	60.9	59.4	58.0	57.4	54.9	53.5
77.5°	60.9	57.4	54.6	51.5	49.5	48.3	45.2	43.2	42.1	40.7	40.4
80°	44.9	42.7	39.8	38.1	35.0	33.8	32.7	32.4	32.1	31.9	31.6
82.5°	31.0	28.7	25.9	25.0	24.7	24.2	23.6	23.3	23.0	23.3	23.3
85°	17.1	15.9	15.9	15.6	15.4	15.1	14.8	14.8	14.5	14.8	14.5
87.5°	7.1	6.8	6.8	6.3	6.5	6.5	6.3	6.3	6.5	6.0	6.0
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: S124RDR-S575D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	705.9	705.9	705.9	705.9
2.5°	665.8	666.4	664.4	663.8
5°	625.1	624.6	623.1	623.4
7.5°	589.9	587.9	589.3	587.0
10°	558.0	554.9	552.3	550.0
12.5°	514.5	511.9	508.2	509.7
15°	473.8	469.6	462.7	463.6
17.5°	437.4	438.0	434.0	435.1
20°	410.4	408.4	408.7	407.8
22.5°	391.6	389.1	386.5	384.5
25°	370.0	368.3	365.7	365.2
27.5°	351.0	350.7	349.5	348.1
30°	334.7	334.2	333.6	332.8
32.5°	320.2	320.0	319.4	319.7
35°	306.6	306.3	305.7	305.5
37.5°	293.8	294.6	294.1	294.1
40°	280.4	280.7	281.3	281.0
42.5°	269.3	269.3	270.2	269.0
45°	255.7	257.4	257.1	257.1
47.5°	241.2	243.2	243.5	243.5
50°	227.0	226.4	227.2	227.0
52.5°	209.6	209.9	209.6	209.3
55°	191.7	192.0	191.4	191.7
57.5°	172.6	171.5	172.3	171.8
60°	151.9	149.6	149.0	147.9
62.5°	128.6	127.1	124.9	126.3
65°	108.4	107.2	106.4	107.5
67.5°	92.1	91.6	91.6	91.0
70°	79.9	79.1	79.1	78.5
72.5°	67.4	66.6	66.8	66.6
75°	51.8	50.3	50.3	50.6
77.5°	40.4	40.1	40.7	39.8
80°	31.6	31.3	31.0	31.9
82.5°	22.8	22.8	22.8	23.9
85°	14.8	14.2	14.8	14.2
87.5°	6.5	6.3	6.0	6.3
90°	0.0	0.0	0.0	0.0

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