

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: P242752

Luminaire Tested: **S124RDR-S575D930-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242752
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-S575D930-X4F0-XX-UDD-A-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1836.5 lumens
Efficiency: N/A
Efficacy: 97.7 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

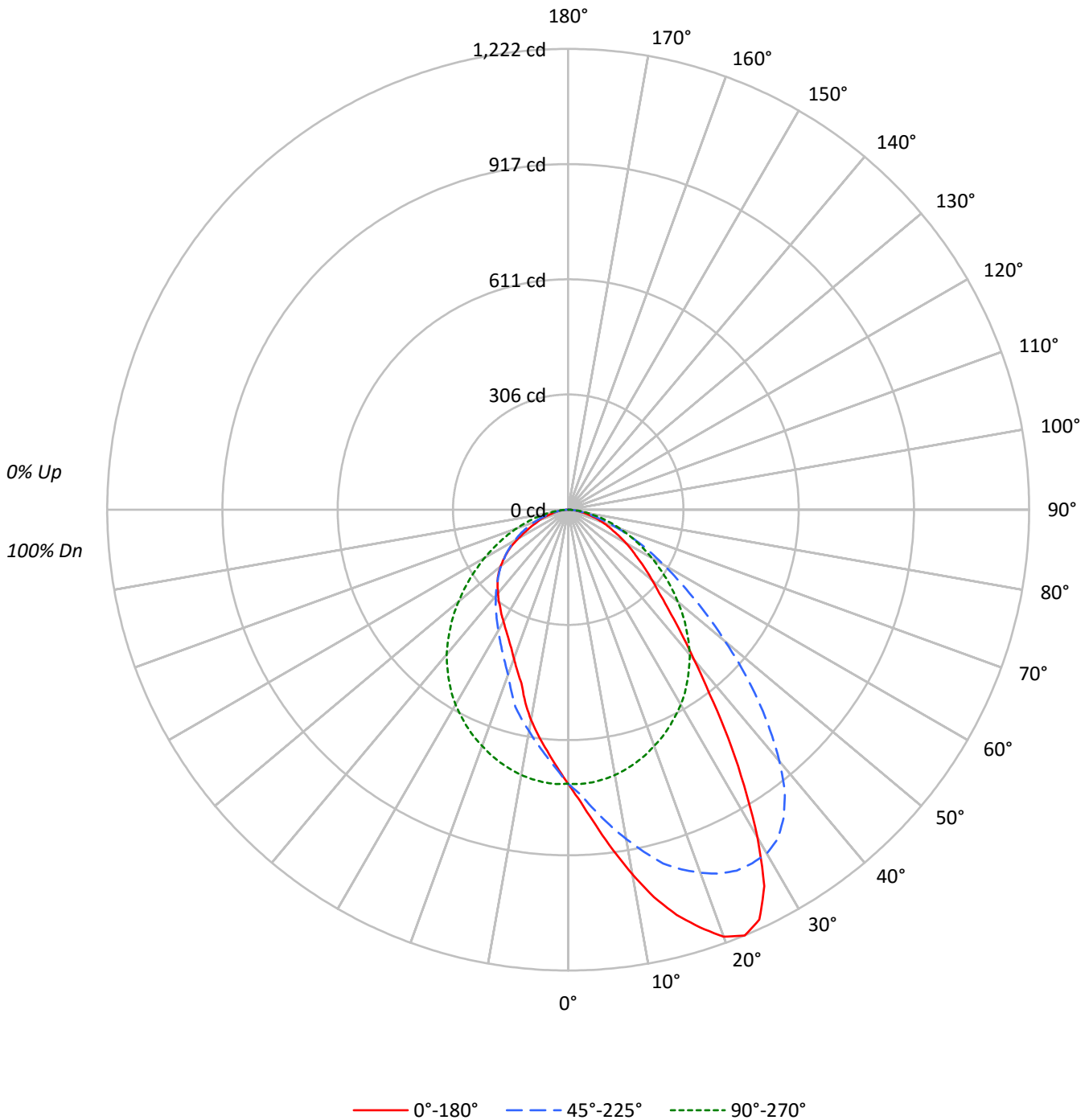
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	6458	6458	6458
5°	7491	6477	5725
10°	8861	6449	5110
15°	10236	6389	4391
20°	11397	6308	3970
25°	11764	6227	3686
30°	10299	6129	3515
35°	8017	5985	3412
40°	6012	5818	3356
45°	4747	5553	3326
50°	4008	5245	3230
55°	3493	4908	3058
60°	3143	4558	2706
65°	2770	4179	2326
70°	2495	3789	2100
75°	2092	3359	1789
80°	1766	2861	1679
85°	1489	2244	1489



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.3	3.8
10°-20°	212.4	11.6
20°-30°	332.8	18.1
30°-40°	369.5	20.1
40°-50°	327.5	17.8
50°-60°	255.2	13.9
60°-70°	166.9	9.1
70°-80°	81.9	4.5
80°-90°	19.9	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°	615.5	33.5
0°-40°	985.1	53.6
0°-60°	1567.7	85.4
0°-90°	1836.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1836.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	726	726	726	726	726	
5°	840	799	726	657	642	85
15°	1112	971	694	541	477	316
25°	1200	1056	635	414	376	536
35°	739	996	552	332	314	462
45°	378	710	442	264	265	298
55°	225	402	317	199	197	205
65°	132	206	199	129	111	132
75°	61	78	98	63	52	67
85°	15	16	22	16	15	17
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°	726.5	726.5	726.5	726.5	726.5	726.5	726.5	726.5	726.5	726.5	726.5
2.5°	776.3	778.9	776.3	776.0	773.0	772.2	771.0	767.2	760.2	756.1	756.9
5°	839.5	846.8	842.7	842.1	835.7	829.2	825.1	815.8	805.8	799.1	793.5
7.5°	909.7	914.1	911.2	908.0	896.8	893.3	883.7	872.6	855.9	843.3	831.9
10°	981.7	985.2	984.1	976.5	968.9	953.3	944.6	927.3	904.7	886.9	870.2
12.5°	1052.6	1056.4	1043.8	1046.1	1030.0	1018.6	1003.4	980.6	953.6	929.3	907.4
15°	1112.3	1107.6	1107.6	1101.7	1085.6	1068.7	1054.3	1031.5	998.7	971.2	942.2
17.5°	1161.4	1163.5	1161.2	1146.2	1134.5	1117.3	1091.5	1065.4	1037.1	1000.2	971.5
20°	1204.8	1204.8	1202.1	1192.8	1176.4	1157.6	1129.3	1100.3	1061.6	1024.5	991.1
22.5°	1222.3	1223.5	1220.3	1213.0	1198.6	1180.5	1157.4	1127.8	1087.7	1044.7	1001.3
25°	1199.5	1205.1	1205.6	1203.6	1199.2	1188.1	1167.3	1137.2	1101.4	1056.1	1011.6
27.5°	1125.7	1133.1	1136.0	1142.4	1154.4	1158.8	1156.2	1136.0	1101.4	1056.7	1012.5
30°	1003.4	1009.2	1028.3	1053.1	1072.5	1090.0	1105.3	1109.3	1091.8	1052.6	1005.4
32.5°	867.6	876.1	895.1	922.3	957.7	990.5	1029.4	1050.2	1054.0	1034.4	991.7
35°	738.8	744.6	762.2	790.3	828.9	873.1	927.3	969.4	998.1	996.1	969.4
37.5°	615.3	623.5	641.3	664.4	702.5	759.0	810.2	866.7	918.2	943.4	929.9
40°	518.1	518.4	535.6	559.7	594.8	642.5	699.6	764.0	823.1	871.4	880.7
42.5°	441.4	441.4	451.3	477.7	500.5	544.7	598.6	662.4	734.1	791.8	820.4
45°	377.6	380.2	389.6	405.1	425.0	463.1	506.7	566.1	643.7	709.8	751.1
47.5°	327.2	331.9	337.5	351.5	367.9	394.6	431.7	487.4	551.7	625.2	682.3
50°	289.8	290.4	298.0	305.0	318.8	339.0	370.6	415.1	473.0	543.0	608.2
52.5°	257.6	257.3	261.1	270.5	281.0	295.6	319.6	359.1	408.9	469.8	537.7
55°	225.4	226.8	230.4	237.4	245.9	257.0	277.2	307.6	348.0	401.6	462.8
57.5°	200.8	201.7	204.9	207.5	215.7	223.9	240.3	262.3	297.7	342.5	402.5
60°	176.8	177.1	178.0	182.4	188.5	196.1	206.4	224.2	252.9	293.0	338.1
62.5°	153.4	154.0	155.4	158.4	162.7	167.4	178.3	191.7	214.3	247.0	286.6
65°	131.7	132.0	134.1	135.2	139.0	143.7	151.6	161.3	177.7	206.4	237.1
67.5°	113.6	113.6	113.6	115.3	118.3	121.5	126.7	134.9	148.1	166.5	195.2
70°	96.0	96.0	96.6	97.5	98.9	101.6	104.2	110.1	119.1	133.5	154.3
72.5°	79.6	79.9	80.5	80.5	81.1	83.1	84.9	88.1	94.3	104.2	120.0
75°	60.9	61.8	63.2	64.4	65.9	65.6	67.6	70.0	72.0	78.4	88.1
77.5°	48.0	47.4	47.4	48.6	48.9	49.2	50.6	52.7	54.4	58.0	61.5
80°	34.5	34.5	35.4	35.7	35.4	35.7	37.2	38.1	38.6	39.8	43.0
82.5°	24.0	24.6	24.0	24.3	24.6	24.9	26.1	26.1	26.6	26.9	27.8
85°	14.6	14.9	15.2	14.6	14.6	14.6	15.2	15.5	16.1	15.8	16.4
87.5°	6.4	6.1	6.4	6.4	6.7	6.4	6.7	7.3	6.7	7.0	7.0
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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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	726.5	726.5	726.5	726.5	726.5	726.5	726.5	726.5	726.5	726.5	726.5
2.5°	754.0	749.9	747.9	743.2	737.6	734.7	732.1	728.2	723.3	718.0	714.2
5°	786.5	779.5	770.7	760.2	750.8	741.7	733.8	725.9	716.8	707.5	698.1
7.5°	818.7	806.1	792.6	776.5	761.0	746.7	733.8	721.2	706.9	694.0	682.0
10°	852.6	833.9	813.1	791.2	769.2	750.2	731.5	714.5	695.8	679.1	665.0
12.5°	880.2	857.3	831.3	802.6	775.1	751.1	728.8	705.4	683.5	665.0	645.1
15°	911.2	881.0	847.4	814.6	780.3	749.0	720.1	694.3	670.0	644.5	626.7
17.5°	932.6	897.7	857.9	819.9	780.6	744.3	711.6	681.7	653.9	628.4	607.4
20°	951.3	911.8	866.4	821.6	776.3	736.7	700.7	666.8	637.8	609.7	587.7
22.5°	961.8	917.0	866.4	819.0	771.6	728.0	687.6	651.9	619.7	591.6	566.7
25°	962.4	915.6	864.9	811.1	759.6	714.2	673.2	634.9	599.8	571.7	545.9
27.5°	960.1	905.9	855.0	800.3	747.3	699.0	656.5	615.8	581.0	551.2	524.8
30°	953.0	893.9	838.3	780.9	727.1	681.1	635.8	597.1	560.5	529.2	502.6
32.5°	937.8	879.3	818.4	759.3	704.5	656.8	614.4	575.5	539.7	507.5	478.9
35°	916.7	857.3	792.3	732.1	678.5	629.3	588.9	551.5	517.2	483.0	453.1
37.5°	892.5	830.4	766.3	700.1	646.9	600.0	562.3	526.3	492.9	461.6	428.5
40°	855.0	799.7	732.9	667.4	612.3	567.6	533.3	501.4	467.7	436.7	403.6
42.5°	809.6	764.5	696.9	631.1	576.9	534.2	502.9	471.8	442.0	412.1	377.3
45°	758.1	722.4	659.2	595.9	541.2	498.5	469.2	441.7	414.8	386.1	353.6
47.5°	700.7	674.4	619.4	553.2	502.0	462.8	434.7	411.8	388.1	359.1	329.9
50°	640.4	624.9	572.2	513.1	464.8	429.4	400.4	379.3	360.3	332.8	307.3
52.5°	576.0	569.6	527.2	471.3	425.0	390.5	366.8	348.3	329.0	307.3	283.9
55°	510.5	514.9	477.1	428.2	384.3	355.1	332.5	316.7	300.3	281.0	262.6
57.5°	442.3	459.0	430.9	386.7	344.2	316.7	299.4	285.4	271.6	255.2	238.6
60°	382.3	395.7	381.4	343.6	307.6	282.5	266.7	256.4	242.7	228.0	216.0
62.5°	323.7	338.4	331.3	302.7	269.9	249.1	235.6	226.3	216.9	204.6	192.0
65°	276.6	286.0	281.9	260.8	237.1	218.6	205.8	198.7	189.4	180.0	168.9
67.5°	221.3	239.7	236.8	225.1	202.3	187.6	178.5	172.1	163.3	156.3	148.4
70°	174.2	190.8	190.6	181.5	170.4	156.9	151.0	145.8	138.2	131.4	125.3
72.5°	134.6	149.6	152.5	146.1	139.3	130.0	124.4	121.2	113.9	109.8	105.1
75°	99.8	110.9	113.9	113.9	110.3	105.1	100.1	97.8	92.5	88.4	85.5
77.5°	70.2	77.9	82.2	83.1	83.4	81.4	76.7	74.9	70.8	69.4	66.2
80°	46.2	50.9	56.2	58.0	59.4	58.8	57.1	55.9	52.1	50.6	49.5
82.5°	28.4	30.4	34.5	38.9	38.1	40.1	38.6	37.8	35.1	34.8	33.7
85°	16.7	17.0	17.6	20.2	21.7	22.2	22.5	22.0	21.1	21.1	19.0
87.5°	7.0	6.7	7.3	7.3	7.6	8.8	9.7	10.0	9.1	8.2	7.3
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°	726.5	726.5	726.5	726.5	726.5	726.5	726.5	726.5	726.5	726.5	726.5
2.5°	710.1	707.2	703.4	699.0	693.7	689.0	687.0	688.7	689.6	687.3	687.0
5°	691.7	684.3	678.5	669.7	662.7	656.8	652.7	651.0	651.6	646.9	645.7
7.5°	671.2	663.3	653.6	643.7	634.3	626.1	621.7	619.7	614.7	612.6	609.4
10°	651.6	639.9	630.5	618.2	607.1	596.8	591.8	587.7	582.8	580.4	575.5
12.5°	631.4	617.3	606.8	593.9	582.5	569.6	564.9	556.4	547.9	542.4	535.6
15°	612.6	596.2	583.7	568.4	555.0	540.9	528.3	514.3	509.0	497.9	491.5
17.5°	590.4	573.4	559.4	539.7	519.5	502.6	488.5	473.9	466.0	458.4	455.2
20°	568.4	553.2	531.6	507.8	484.7	465.4	454.6	445.8	437.0	432.0	428.5
22.5°	547.6	527.2	501.1	475.1	451.9	437.9	429.1	420.0	413.3	408.6	403.6
25°	523.9	498.5	471.8	442.6	426.8	413.6	403.6	396.3	391.9	385.8	383.4
27.5°	500.8	470.1	439.9	420.0	403.6	391.1	382.0	376.7	370.9	366.8	363.5
30°	473.3	442.0	415.6	396.9	380.2	370.3	363.2	356.8	352.4	349.2	346.9
32.5°	446.1	414.8	393.7	373.2	360.9	351.2	343.6	339.2	336.0	331.6	330.5
35°	420.0	392.2	372.9	354.8	341.3	332.5	326.7	321.7	318.8	317.6	316.7
37.5°	394.6	371.4	350.1	335.4	322.9	316.1	308.5	306.2	304.1	301.5	302.7
40°	370.6	349.2	330.8	314.9	305.3	297.7	293.6	290.7	288.9	288.9	288.9
42.5°	349.8	329.0	311.1	297.4	287.7	281.6	276.9	274.6	274.3	274.0	275.7
45°	328.1	308.8	290.7	278.9	270.8	264.3	261.7	259.6	259.6	260.8	261.1
47.5°	306.5	288.3	273.7	260.2	252.6	248.5	246.2	245.0	245.0	246.5	247.6
50°	286.8	269.0	254.7	242.9	235.9	232.1	230.1	229.5	230.1	230.1	232.1
52.5°	265.5	250.0	235.9	226.6	218.4	214.8	214.0	213.1	213.4	214.6	215.1
55°	244.7	230.4	216.9	207.5	201.7	199.3	196.7	197.0	196.4	197.0	197.0
57.5°	223.6	211.0	197.9	190.3	185.3	181.8	178.8	179.7	178.8	178.8	178.5
60°	203.4	189.4	179.4	172.7	166.8	163.9	161.3	161.9	161.0	160.4	159.2
62.5°	181.5	170.4	161.0	154.5	150.2	146.6	144.0	143.1	140.8	138.4	135.5
65°	160.4	150.7	142.3	136.1	131.7	129.1	127.0	125.3	120.9	116.2	113.9
67.5°	139.6	132.6	124.4	119.1	115.6	112.1	108.3	105.1	100.7	97.8	96.3
70°	119.7	113.0	106.3	101.3	97.5	94.3	89.9	87.8	84.9	83.7	82.2
72.5°	100.7	94.5	88.4	84.0	79.9	77.6	74.3	72.3	71.4	71.1	69.7
75°	81.4	76.4	71.7	67.6	64.4	62.6	61.2	59.7	59.1	56.5	55.0
77.5°	62.6	59.1	56.2	53.0	50.9	49.8	46.5	44.5	43.3	41.9	41.6
80°	46.2	43.9	41.0	39.2	36.0	34.8	33.7	33.4	33.1	32.8	32.5
82.5°	31.9	29.6	26.6	25.8	25.5	24.9	24.3	24.0	23.7	24.0	24.0
85°	17.6	16.4	16.4	16.1	15.8	15.5	15.2	15.2	14.9	15.2	14.9
87.5°	7.3	7.0	7.0	6.4	6.7	6.7	6.4	6.4	6.7	6.1	6.1
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: P242752

CATALOG NUMBER: S124RDR-S575D930-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	726.5	726.5	726.5	726.5
2.5°	685.2	685.8	683.8	683.2
5°	643.4	642.8	641.3	641.6
7.5°	607.1	605.0	606.5	604.1
10°	574.3	571.1	568.4	566.1
12.5°	529.5	526.9	523.1	524.5
15°	487.6	483.3	476.2	477.1
17.5°	450.2	450.8	446.7	447.8
20°	422.4	420.3	420.6	419.7
22.5°	403.1	400.4	397.8	395.7
25°	380.8	379.1	376.4	375.8
27.5°	361.2	360.9	359.7	358.3
30°	344.5	343.9	343.3	342.5
32.5°	329.6	329.3	328.7	329.0
35°	315.5	315.2	314.7	314.4
37.5°	302.4	303.2	302.7	302.7
40°	288.6	288.9	289.5	289.2
42.5°	277.2	277.2	278.1	276.9
45°	263.1	264.9	264.6	264.6
47.5°	248.2	250.3	250.6	250.6
50°	233.6	233.0	233.9	233.6
52.5°	215.7	216.0	215.7	215.4
55°	197.3	197.6	197.0	197.3
57.5°	177.7	176.5	177.4	176.8
60°	156.3	154.0	153.4	152.2
62.5°	132.3	130.8	128.5	130.0
65°	111.5	110.3	109.5	110.6
67.5°	94.8	94.3	94.3	93.7
70°	82.2	81.4	81.4	80.8
72.5°	69.4	68.5	68.8	68.5
75°	53.3	51.8	51.8	52.1
77.5°	41.6	41.3	41.9	41.0
80°	32.5	32.2	31.9	32.8
82.5°	23.4	23.4	23.4	24.6
85°	15.2	14.6	15.2	14.6
87.5°	6.7	6.4	6.1	6.4
90°	0.0	0.0	0.0	0.0

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