

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: P242831

Luminaire Tested: **S125DR-S610D940-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242831
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-22)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DR-S610D940-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2128.4 lumens
Efficiency: N/A
Efficacy: 113.2 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.23 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

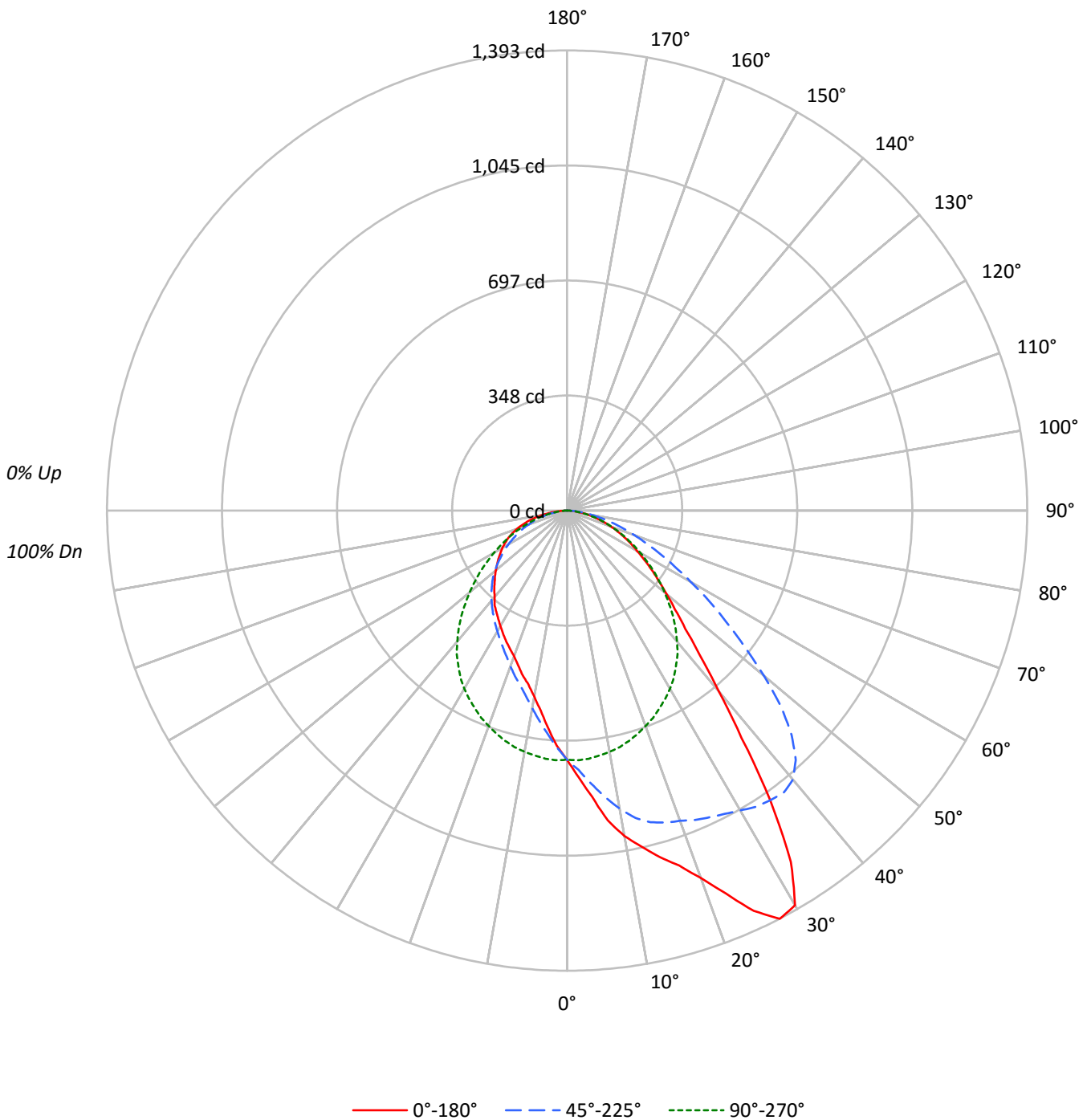
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242831

CATALOG NUMBER: S125DR-S610D940-X4F0-XX-UDD-A-W

Luminous Intensity Polar Plot





TEST NUMBER: P242831

CATALOG NUMBER: S125DR-S610D940-X4F0-XX-UDD-A-W

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	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	98	90	84	79	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61
4	84	73	64	58	82	71	63	57	69	62	57	67	61	56	64	59	55	53
5	78	65	56	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5360	5360	5360
5°	6208	5379	4709
10°	7222	5351	4126
15°	7995	5312	3806
20°	8949	5249	3550
25°	10483	5179	3424
30°	11323	5110	3316
35°	9310	4980	3244
40°	6617	4799	3166
45°	5084	4556	3121
50°	4340	4255	3115
55°	3864	3959	3141
60°	3485	3636	3221
65°	3219	3311	3306
70°	2928	2974	3352
75°	2584	2620	3323
80°	2173	2137	3041
85°	1721	1541	2455



TEST NUMBER: P242831

CATALOG NUMBER: S125DR-S610D940-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.6	3.4
10°-20°	216.2	10.2
20°-30°	351.2	16.5
30°-40°	429.2	20.2
40°-50°	389.4	18.3
50°-60°	310.1	14.6
60°-70°	216.0	10.1
70°-80°	115.1	5.4
80°-90°	28.5	1.3
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°	640.0	30.1
0°-40°	1069.2	50.2
0°-60°	1768.7	83.1
0°-90°	2128.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2128.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	754	754	754	754	754	
5°	870	829	754	678	660	87
15°	1086	977	722	547	517	311
25°	1337	1024	660	459	437	612
35°	1073	1071	574	389	374	658
45°	506	961	453	322	310	402
55°	312	589	320	245	254	280
65°	191	312	197	166	197	190
75°	94	139	95	87	121	101
85°	21	28	19	20	30	25
90°	0	0	0	0	0	



TEST NUMBER: P242831

CATALOG NUMBER: S125DR-S610D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2
2.5°	808.6	807.3	806.1	803.5	805.4	800.0	797.4	792.9	787.5	785.6	783.3
5°	870.1	871.7	873.3	866.6	867.2	862.7	852.5	844.2	837.4	828.8	822.7
7.5°	946.3	941.5	941.8	937.6	930.3	924.2	914.3	900.5	888.0	873.9	861.8
10°	1000.7	1001.0	998.1	993.0	985.0	979.2	965.2	951.7	935.4	916.2	902.4
12.5°	1041.7	1043.3	1039.4	1032.1	1029.2	1014.5	1004.2	987.6	967.4	953.0	930.3
15°	1086.5	1083.0	1080.4	1071.8	1065.0	1051.6	1034.0	1017.3	996.2	976.7	957.2
17.5°	1126.2	1129.1	1124.9	1118.5	1098.7	1083.0	1061.2	1040.1	1014.8	990.5	967.7
20°	1183.2	1185.7	1178.4	1164.6	1139.6	1123.9	1092.9	1063.4	1033.0	999.4	973.8
22.5°	1254.2	1251.0	1240.5	1217.7	1196.9	1164.6	1130.3	1092.9	1052.9	1013.8	977.6
25°	1336.8	1323.4	1317.3	1291.4	1262.9	1220.3	1174.2	1121.7	1074.3	1024.1	980.5
27.5°	1393.2	1387.7	1379.1	1358.0	1325.3	1277.0	1222.5	1159.8	1096.1	1034.6	979.9
30°	1379.7	1380.4	1381.0	1375.2	1356.0	1321.8	1267.7	1198.9	1119.5	1048.1	982.1
32.5°	1260.6	1275.0	1288.8	1306.7	1318.3	1318.6	1289.8	1229.3	1147.0	1063.4	980.9
35°	1073.0	1076.6	1112.7	1148.6	1197.3	1235.0	1260.3	1232.8	1164.0	1070.8	979.9
37.5°	867.5	885.1	912.3	952.7	1025.7	1085.2	1163.3	1190.2	1157.9	1076.9	979.6
40°	713.2	729.2	745.6	786.9	846.1	922.3	1014.1	1092.6	1110.8	1063.4	970.0
42.5°	594.1	606.0	624.6	653.0	700.1	765.4	852.2	960.7	1035.0	1024.4	949.8
45°	505.8	513.8	527.9	552.5	588.4	641.2	718.7	830.7	928.4	960.7	915.5
47.5°	443.0	443.4	454.9	472.5	499.7	548.4	606.3	698.5	803.8	878.4	867.8
50°	392.5	390.9	399.5	414.2	434.7	464.5	519.2	589.3	689.5	776.9	801.3
52.5°	348.9	349.6	354.1	364.0	380.3	404.6	442.1	503.5	585.5	675.8	727.0
55°	311.8	310.5	316.6	324.0	336.4	353.1	382.5	430.9	500.3	588.7	648.2
57.5°	275.9	279.5	282.0	287.1	298.0	309.6	335.8	372.9	430.2	508.7	571.7
60°	245.2	248.7	250.7	255.8	264.1	273.7	292.9	321.7	368.1	433.4	495.9
62.5°	217.7	220.2	220.6	225.0	231.4	240.7	254.8	277.9	312.1	367.2	428.0
65°	191.4	191.4	192.7	197.5	200.7	209.0	220.6	238.2	267.6	312.1	364.3
67.5°	165.8	167.4	167.1	169.3	172.2	179.3	187.9	202.6	226.0	259.6	302.8
70°	140.9	142.1	141.8	143.4	146.6	150.8	157.5	171.3	187.0	214.8	250.7
72.5°	118.4	118.8	117.8	120.0	121.6	125.2	132.9	138.6	153.0	175.4	203.3
75°	94.1	94.8	95.4	96.7	98.6	100.5	104.4	111.7	121.3	138.9	157.8
77.5°	74.9	73.3	75.2	74.9	75.9	77.5	81.0	85.2	93.5	105.3	121.0
80°	53.1	53.5	53.5	53.8	55.4	56.3	59.2	62.1	68.2	76.5	86.8
82.5°	35.2	36.2	35.5	36.2	37.5	38.1	39.4	41.6	44.5	50.6	57.3
85°	21.1	19.5	20.2	20.8	20.8	21.1	22.4	23.4	25.3	27.9	30.7
87.5°	7.7	8.3	8.6	8.6	9.0	9.0	10.2	10.2	11.2	12.2	13.4
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: P242831

CATALOG NUMBER: S125DR-S610D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2
2.5°	781.4	779.2	776.6	772.1	766.7	763.8	759.3	756.4	750.7	745.9	740.8
5°	815.3	807.0	799.3	789.4	778.5	771.5	763.2	753.9	744.3	734.4	723.5
7.5°	849.3	835.5	820.5	804.8	789.4	775.0	761.6	747.8	735.3	719.6	706.5
10°	883.5	865.0	845.1	821.8	799.0	779.2	759.0	741.4	723.5	704.3	687.3
12.5°	917.8	891.5	861.4	835.2	806.7	781.7	757.1	733.4	709.7	687.9	667.5
15°	930.3	908.5	882.6	846.1	815.3	782.4	751.0	721.9	694.7	671.0	646.0
17.5°	942.4	914.6	887.1	851.8	811.8	776.3	740.8	709.1	679.0	649.2	626.5
20°	945.3	916.5	887.4	853.1	811.8	769.6	734.0	694.0	661.0	630.0	600.5
22.5°	944.4	910.7	878.4	842.9	802.9	764.8	720.0	679.0	642.5	612.1	581.0
25°	937.3	902.4	862.7	827.2	787.5	746.2	702.7	660.4	623.9	589.0	558.6
27.5°	933.2	889.0	845.4	804.5	766.4	728.3	686.0	642.5	602.5	566.9	538.8
30°	923.9	874.2	823.7	780.5	741.1	704.3	664.9	622.6	580.4	545.8	515.1
32.5°	915.5	855.7	801.6	753.6	711.3	675.8	640.2	600.5	559.3	524.0	493.3
35°	904.3	837.4	776.3	723.2	678.7	641.8	611.4	574.0	535.9	501.9	472.5
37.5°	891.2	813.7	749.1	693.7	645.4	606.9	578.1	549.0	510.9	477.6	451.4
40°	875.2	788.1	718.7	661.7	611.1	570.8	544.5	517.3	486.9	456.5	428.3
42.5°	855.0	765.1	687.9	625.5	575.6	536.5	508.7	486.6	460.7	432.8	407.2
45°	829.4	736.3	654.3	588.4	537.8	499.1	470.6	453.3	433.1	406.2	384.1
47.5°	795.5	703.6	619.1	550.9	498.7	462.9	435.7	418.7	404.0	382.9	362.1
50°	747.2	666.2	580.4	512.8	460.7	424.5	399.8	384.8	372.6	357.3	340.3
52.5°	693.1	619.1	542.3	475.7	424.2	388.6	364.6	351.8	342.2	332.3	315.6
55°	635.1	571.1	498.1	434.7	387.0	352.1	331.0	319.5	311.2	302.8	292.6
57.5°	572.7	520.8	453.9	394.7	350.5	317.9	298.0	286.2	279.5	275.0	268.6
60°	506.1	463.2	407.5	354.7	311.8	283.6	264.4	255.8	250.3	246.8	242.3
62.5°	444.3	411.0	360.5	313.4	277.2	251.0	234.3	226.0	220.9	219.6	216.1
65°	383.8	356.6	314.0	274.0	242.0	219.3	204.9	196.9	193.7	191.8	192.1
67.5°	323.0	305.4	269.9	234.6	208.4	188.2	176.4	170.3	168.7	165.8	165.8
70°	268.3	255.8	227.0	197.2	174.5	159.7	149.5	143.1	141.5	140.2	139.9
72.5°	219.9	209.4	185.3	162.9	143.1	130.6	122.6	119.4	116.5	115.9	115.9
75°	172.5	166.5	146.6	127.7	113.6	104.7	98.9	95.4	93.5	93.2	93.5
77.5°	130.3	124.5	110.8	96.7	87.4	80.4	74.9	73.9	71.4	71.7	71.1
80°	92.2	88.7	80.7	70.1	62.7	57.0	54.4	52.2	51.5	50.6	51.5
82.5°	60.5	56.7	51.9	46.1	40.3	37.5	34.9	34.6	34.3	33.9	33.9
85°	33.0	33.3	30.1	25.0	22.4	20.5	18.9	18.9	18.6	18.2	18.6
87.5°	14.1	13.4	12.2	11.2	9.6	8.6	8.3	8.6	7.7	7.4	7.7
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: P242831

CATALOG NUMBER: S125DR-S610D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2
2.5°	737.9	734.4	731.5	725.1	721.6	716.8	712.9	717.1	712.6	714.5	711.6
5°	718.0	709.1	702.7	693.4	685.4	678.0	672.6	671.6	669.1	667.8	663.9
7.5°	694.3	684.1	673.5	662.0	652.4	642.2	636.1	630.3	626.8	622.3	618.8
10°	673.9	658.8	646.0	631.3	618.5	607.3	598.3	593.8	589.7	583.6	581.3
12.5°	648.6	632.9	616.6	600.5	588.4	575.6	568.2	560.9	558.3	551.2	550.9
15°	629.4	606.0	590.6	574.6	557.7	547.4	541.0	533.6	530.4	525.6	522.1
17.5°	605.7	584.5	565.3	549.0	533.6	525.3	517.0	511.9	506.4	502.9	497.1
20°	579.4	559.6	540.4	522.8	511.6	501.6	495.2	490.4	484.7	483.1	477.3
22.5°	557.3	534.9	516.7	502.6	490.1	478.6	471.5	468.7	465.1	459.4	459.4
25°	533.0	510.3	494.6	479.9	469.0	458.7	453.9	449.8	445.9	442.4	441.1
27.5°	512.5	492.3	473.1	459.7	450.4	440.8	436.6	431.2	428.3	425.4	421.6
30°	490.7	469.9	453.6	440.8	430.6	422.2	417.8	414.2	411.7	409.1	407.2
32.5°	468.3	449.4	433.8	421.3	411.0	405.3	401.4	399.2	396.3	393.1	390.5
35°	449.1	428.0	412.6	401.8	393.7	388.9	384.5	382.2	379.0	379.0	376.5
37.5°	426.4	407.8	394.1	384.1	377.1	372.6	367.5	366.2	364.0	362.7	361.7
40°	406.6	389.6	376.8	366.9	359.2	355.7	351.8	349.3	348.0	346.4	345.7
42.5°	386.1	370.1	357.9	348.9	342.5	339.6	336.1	334.5	331.6	329.4	329.1
45°	365.3	349.6	338.4	331.0	325.2	321.7	319.5	315.6	314.4	311.8	311.5
47.5°	346.1	330.7	319.5	313.4	308.3	305.7	302.2	298.0	296.4	294.8	294.5
50°	324.0	310.2	300.0	294.2	289.4	285.2	281.7	279.1	278.2	278.2	278.8
52.5°	301.6	290.3	282.0	274.7	270.2	265.7	262.5	261.2	259.6	261.5	262.8
55°	279.8	267.9	261.5	254.8	250.3	245.2	243.6	243.0	242.0	244.6	245.9
57.5°	256.4	248.4	240.7	233.7	229.8	226.6	224.1	223.8	225.7	226.3	230.2
60°	234.3	224.7	218.0	212.9	208.1	206.2	205.5	204.9	206.2	209.7	215.1
62.5°	210.0	202.6	195.3	191.8	188.6	185.0	185.0	185.7	188.6	192.7	198.2
65°	186.3	179.6	174.8	170.3	167.4	165.5	166.1	167.4	170.3	175.7	181.8
67.5°	162.0	157.5	153.0	148.9	146.0	146.3	146.6	148.2	151.7	158.1	163.9
70°	138.6	133.5	130.0	128.4	126.1	124.8	126.8	130.0	132.9	138.6	143.4
72.5°	115.2	111.1	108.5	107.6	106.9	106.0	106.3	109.8	114.0	119.7	125.5
75°	92.2	90.6	88.7	87.4	86.4	87.1	87.7	90.9	94.1	100.2	106.6
77.5°	71.4	69.5	68.2	67.9	67.2	67.5	69.1	71.7	74.9	79.4	84.5
80°	50.9	50.3	49.6	49.3	49.3	49.6	52.2	53.8	56.7	60.8	64.7
82.5°	33.6	33.3	33.3	33.3	33.6	33.6	34.9	37.1	39.4	42.3	45.5
85°	19.5	18.9	19.8	20.2	19.5	20.5	21.1	22.4	23.4	25.0	26.6
87.5°	8.0	8.6	8.3	8.6	8.6	9.3	9.0	10.2	10.9	11.5	11.2
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: P242831

CATALOG NUMBER: S125DR-S610D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	754.2	754.2	754.2	754.2
2.5°	709.7	711.9	710.0	712.6
5°	662.3	659.4	661.4	660.1
7.5°	618.5	615.9	612.1	610.8
10°	577.8	574.3	574.0	571.7
12.5°	548.0	544.8	540.4	539.7
15°	520.2	517.6	515.4	517.3
17.5°	496.5	494.3	493.6	491.7
20°	474.4	472.8	473.5	469.3
22.5°	456.8	453.3	452.7	452.7
25°	438.2	436.6	435.0	436.6
27.5°	421.9	420.3	419.7	420.0
30°	407.2	404.0	404.3	404.0
32.5°	391.2	389.3	388.6	388.0
35°	375.5	375.5	373.9	373.9
37.5°	361.1	360.8	359.8	360.5
40°	344.4	344.1	343.2	341.2
42.5°	328.4	327.2	326.8	326.5
45°	311.5	311.5	310.8	310.5
47.5°	294.8	295.5	296.8	296.4
50°	280.1	280.4	281.4	281.7
52.5°	263.8	266.0	267.3	267.0
55°	248.7	251.0	253.2	253.5
57.5°	233.7	236.6	238.8	239.5
60°	218.3	222.5	225.4	226.6
62.5°	203.6	208.4	211.3	211.3
65°	187.3	192.1	194.6	196.6
67.5°	170.3	175.1	177.7	179.3
70°	151.4	156.2	160.1	161.3
72.5°	132.9	137.0	139.9	141.5
75°	110.8	116.5	119.4	121.0
77.5°	89.6	95.4	97.0	98.0
80°	68.5	71.7	73.9	74.3
82.5°	48.7	51.2	51.5	52.5
85°	28.8	30.1	30.4	30.1
87.5°	11.8	11.5	11.5	12.2
90°	0.0	0.0	0.0	0.0

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