

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: P243794

Luminaire Tested: **S125RDR-H610D940-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243794
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-71)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125RDR-H610D940-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1995.0 lumens
Efficiency: N/A
Efficacy: 116.0 lumens/watt
Spacing Criteria (0/90/45): 1.42 / 1.22 / 1.5
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

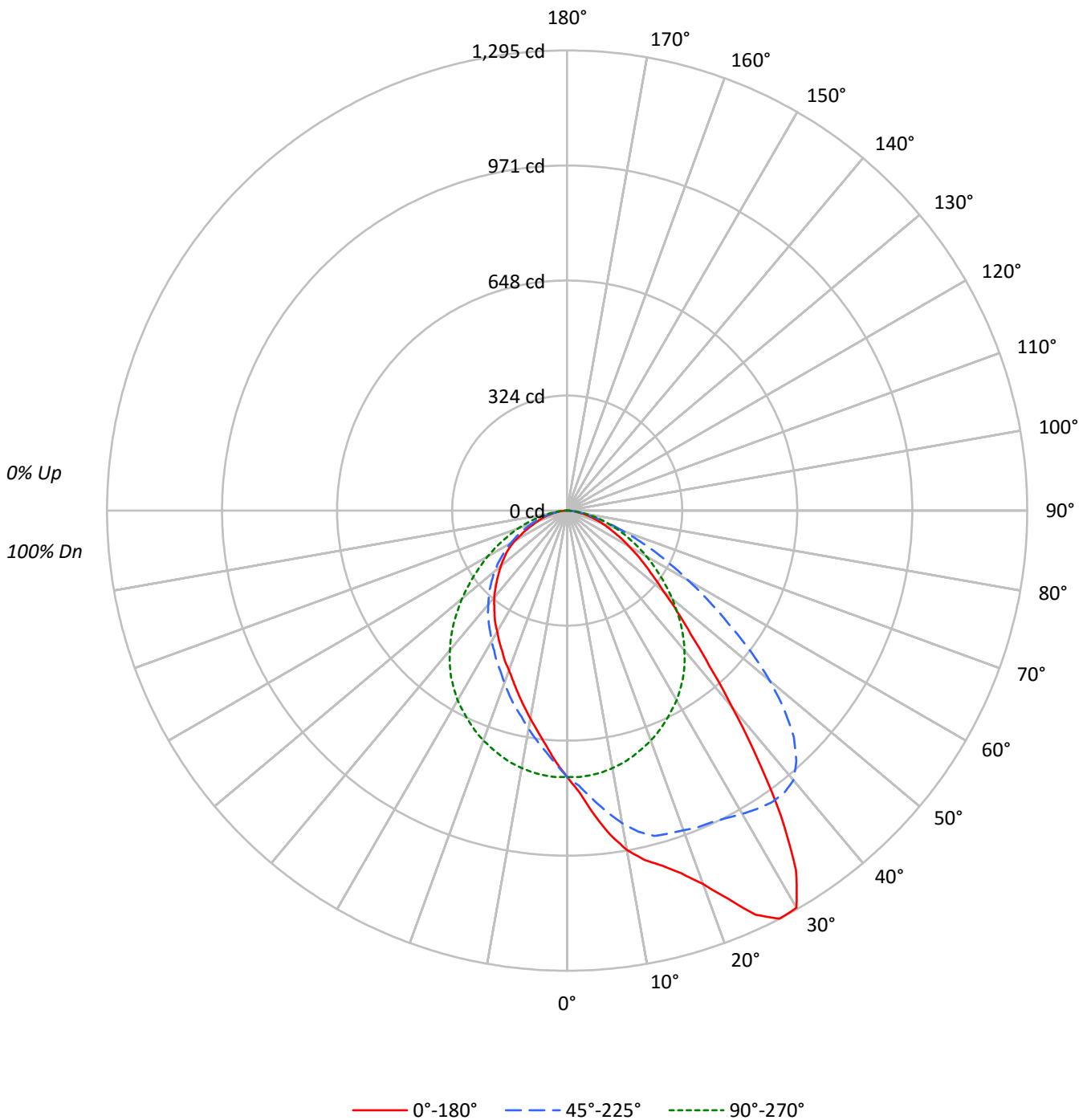
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P243794

CATALOG NUMBER: S125RDR-H610D940-X4F0-XX-UDD-A-W

Luminous Intensity Polar Plot





TEST NUMBER: P243794

CATALOG NUMBER: S125RDR-H610D940-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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	66	61	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	33
9	59	46	38	32	57	45	38	32	44	37	32	43	37	32	42	36	32	30
10	55	42	35	29	54	42	34	29	41	34	29	40	34	29	39	33	29	27

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5328	5328	5328
5°	6116	5335	4746
10°	6998	5310	4290
15°	7611	5266	3923
20°	8457	5207	3615
25°	9841	5133	3403
30°	10597	5057	3229
35°	9103	4944	3090
40°	6707	4765	2962
45°	4953	4544	2808
50°	3924	4272	2695
55°	3315	3959	2593
60°	2856	3667	2399
65°	2479	3340	2089
70°	2174	3057	1829
75°	1845	2677	1730
80°	1437	2239	1437
85°	1264	1794	1313



TEST NUMBER: P243794

CATALOG NUMBER: S125RDR-H610D940-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.2	3.6
10°-20°	213.5	10.7
20°-30°	340.5	17.1
30°-40°	413.4	20.7
40°-50°	372.5	18.7
50°-60°	286.5	14.4
60°-70°	185.9	9.3
70°-80°	89.4	4.5
80°-90°	21.2	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°	626.1	31.4
0°-40°	1039.5	52.1
0°-60°	1698.5	85.1
0°-90°	1995.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1995.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	750	750	750	750	750	
5°	857	814	748	682	665	85
15°	1034	948	716	570	533	297
25°	1255	967	654	469	434	574
35°	1049	1003	570	385	356	642
45°	493	902	452	307	279	391
55°	268	554	320	224	209	242
65°	147	269	199	142	124	148
75°	67	91	98	70	63	72
85°	16	16	22	18	16	18
90°	0	0	0	0	0	



TEST NUMBER: P243794

CATALOG NUMBER: S125RDR-H610D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6
2.5°	793.0	796.0	793.6	795.1	792.7	791.5	788.6	784.1	779.6	775.5	775.2
5°	857.2	856.6	854.2	851.0	848.6	842.7	839.7	829.6	822.7	814.4	810.3
7.5°	918.4	917.0	913.4	908.9	906.9	899.1	890.8	878.0	867.3	854.2	844.4
10°	969.6	969.3	966.6	963.6	955.6	947.0	939.0	925.6	909.5	893.2	879.5
12.5°	1007.0	1005.5	1002.3	997.2	990.7	984.7	974.0	961.8	942.2	925.6	906.9
15°	1034.4	1033.8	1029.0	1027.2	1014.5	1006.1	991.9	979.7	964.5	947.9	927.7
17.5°	1070.6	1071.8	1067.7	1057.6	1046.0	1033.2	1013.0	993.1	971.9	952.6	936.3
20°	1118.2	1115.2	1108.1	1095.9	1075.1	1059.3	1039.1	1014.5	985.9	957.4	933.9
22.5°	1181.8	1178.5	1167.2	1152.4	1126.2	1097.4	1066.5	1029.6	996.9	964.2	933.3
25°	1254.9	1248.7	1232.0	1216.0	1178.8	1148.2	1102.1	1058.1	1010.6	967.2	932.4
27.5°	1294.7	1294.7	1287.0	1269.5	1240.1	1194.9	1147.9	1089.4	1034.4	974.9	925.6
30°	1291.2	1289.1	1292.1	1284.6	1265.6	1231.7	1185.1	1123.5	1053.4	985.3	926.2
32.5°	1199.0	1199.9	1217.8	1229.9	1239.5	1231.1	1200.8	1145.2	1075.4	995.4	923.8
35°	1049.2	1051.6	1083.1	1103.9	1146.4	1170.8	1177.9	1147.9	1085.2	1002.6	919.6
37.5°	878.0	878.0	914.6	946.1	993.6	1053.7	1098.6	1109.9	1079.3	1002.3	916.1
40°	722.9	722.0	750.8	789.4	840.3	906.6	973.4	1030.8	1038.2	990.7	903.6
42.5°	591.5	590.0	621.5	642.9	696.4	755.6	844.4	925.6	971.9	954.7	885.2
45°	492.8	491.6	512.1	536.5	574.3	635.8	710.4	800.4	878.3	902.1	850.7
47.5°	418.5	419.1	430.1	450.6	482.7	526.7	593.6	677.1	773.4	828.4	807.3
50°	354.9	357.0	365.3	380.8	404.2	439.6	497.0	572.5	671.4	744.3	748.7
52.5°	307.3	310.3	319.2	327.6	347.2	372.1	416.7	482.1	563.8	651.2	682.4
55°	267.5	269.0	274.0	283.0	297.5	318.3	350.7	400.7	476.5	554.3	609.3
57.5°	234.2	234.2	237.5	243.7	255.3	274.0	295.7	337.1	401.0	471.4	530.0
60°	200.9	202.1	204.5	211.3	219.1	233.3	254.4	280.6	335.9	394.7	457.7
62.5°	173.0	175.1	177.4	180.7	187.9	198.0	212.8	236.9	274.0	328.4	384.6
65°	147.4	149.5	149.8	153.7	158.4	166.7	178.0	195.6	226.5	269.3	315.7
67.5°	124.8	125.7	126.6	129.6	134.1	139.4	146.8	159.9	184.3	213.1	258.3
70°	104.6	105.2	105.5	108.8	110.9	115.6	119.5	127.8	143.3	165.6	200.6
72.5°	85.6	84.7	84.4	87.1	88.0	91.8	96.6	102.5	110.9	126.6	152.8
75°	67.2	67.5	67.8	69.3	69.6	71.3	74.3	78.2	82.0	91.3	107.9
77.5°	51.7	50.5	50.5	52.3	52.9	53.2	55.3	57.4	59.4	64.8	71.3
80°	35.1	35.7	35.7	35.7	36.0	36.6	37.7	39.5	41.0	44.3	45.5
82.5°	25.0	25.0	24.7	25.3	25.6	25.9	25.9	25.9	26.8	27.6	28.8
85°	15.5	15.8	14.9	15.5	15.8	15.8	15.8	15.8	16.6	16.3	16.6
87.5°	6.5	6.8	6.8	7.1	7.1	7.4	7.1	7.4	7.1	7.1	7.4
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: P243794

CATALOG NUMBER: S125RDR-H610D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6
2.5°	774.3	770.7	768.9	765.4	760.6	757.6	754.7	750.5	747.2	742.2	737.7
5°	802.8	795.7	789.2	780.2	771.6	764.2	756.5	747.8	740.1	731.5	722.3
7.5°	834.6	823.3	809.7	793.9	780.5	768.9	755.9	743.1	731.5	717.8	705.3
10°	865.2	847.1	829.0	807.9	788.3	771.0	753.5	735.7	720.5	703.5	688.1
12.5°	889.0	871.8	844.7	818.6	793.0	770.7	748.7	727.0	707.1	688.4	670.0
15°	909.8	881.3	858.4	829.9	798.7	768.3	741.0	715.7	691.7	669.7	650.9
17.5°	915.8	890.2	865.2	832.0	798.4	763.9	732.4	702.4	675.6	651.2	630.1
20°	915.2	889.3	862.3	830.5	794.8	757.1	722.0	688.4	658.1	630.1	607.5
22.5°	906.3	881.3	853.9	821.8	785.6	746.6	709.8	672.6	639.6	610.5	587.3
25°	896.8	865.2	836.7	804.3	769.8	733.9	694.6	654.5	620.0	589.7	563.6
27.5°	888.4	850.7	815.6	783.8	748.4	716.0	677.1	635.2	599.8	568.0	541.0
30°	875.1	835.2	792.7	757.9	723.8	689.9	654.2	616.2	577.5	545.1	518.1
32.5°	863.5	813.2	767.2	727.9	693.7	664.0	629.8	593.3	555.5	524.6	495.5
35°	850.7	790.6	742.5	696.4	662.2	629.8	602.8	569.8	532.3	499.6	473.5
37.5°	835.5	767.5	712.2	665.2	629.8	596.5	572.2	542.7	508.9	476.5	450.6
40°	818.6	743.7	680.1	631.6	593.6	560.3	539.8	513.6	484.8	452.7	428.6
42.5°	797.2	718.4	650.9	598.0	555.8	525.8	505.3	483.6	457.1	429.2	403.0
45°	770.1	686.9	616.2	560.3	518.7	489.5	468.1	452.1	431.0	404.8	380.2
47.5°	737.1	653.9	580.5	522.5	482.4	454.5	434.6	418.5	402.5	379.9	356.4
50°	693.4	616.2	545.7	486.6	444.1	417.0	399.2	386.4	371.8	353.4	332.0
52.5°	645.3	573.7	504.7	449.4	408.4	381.3	362.9	352.2	341.2	326.1	307.6
55°	589.4	531.2	465.5	411.4	371.2	344.5	329.9	319.5	310.3	298.7	283.3
57.5°	530.3	479.1	422.1	372.1	334.4	309.1	296.3	287.7	280.0	271.7	258.9
60°	468.1	431.9	377.8	332.0	299.0	278.2	266.0	258.0	250.9	244.0	234.5
62.5°	403.3	373.3	332.9	294.0	264.5	244.9	236.0	229.2	221.7	215.8	209.0
65°	337.7	320.4	292.5	255.9	228.9	212.8	204.2	198.6	195.0	188.1	182.8
67.5°	277.9	268.4	244.6	220.0	199.1	184.6	176.6	172.4	168.5	165.3	159.3
70°	221.1	214.3	200.6	183.1	166.7	154.3	148.3	147.1	141.8	138.5	135.5
72.5°	168.5	166.7	155.5	147.7	138.5	128.7	124.2	121.9	118.3	115.3	114.1
75°	119.8	122.5	118.9	115.0	110.6	102.5	98.7	97.5	94.2	93.3	91.8
77.5°	81.7	85.6	86.8	85.0	82.9	80.3	77.6	76.4	73.1	72.5	71.6
80°	51.4	57.1	59.1	58.9	58.0	58.3	55.0	54.7	53.2	52.3	53.2
82.5°	31.2	34.2	38.0	38.9	37.7	38.3	37.5	36.3	36.3	36.9	35.7
85°	16.9	17.2	19.0	20.2	21.7	22.9	21.7	22.0	21.7	21.7	20.8
87.5°	7.4	7.7	7.7	7.4	8.0	8.6	9.8	10.4	10.1	9.2	8.0
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: P243794

CATALOG NUMBER: S125RDR-H610D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6
2.5°	734.2	732.1	728.5	725.5	718.7	714.0	713.4	713.7	713.1	712.5	712.2
5°	716.3	709.5	703.0	697.3	689.6	681.9	678.3	676.8	676.2	672.9	674.7
7.5°	697.3	686.9	679.2	668.5	659.3	652.7	646.5	643.5	642.9	638.5	637.3
10°	677.1	664.6	653.0	642.3	633.1	623.9	616.5	613.8	610.2	606.7	601.3
12.5°	657.2	641.7	628.9	617.1	604.6	594.2	588.2	584.4	579.9	576.6	574.8
15°	633.4	620.3	604.6	591.8	579.0	569.8	561.8	554.6	550.5	547.8	540.4
17.5°	612.0	594.8	579.9	567.7	553.7	543.3	535.0	529.1	521.9	516.6	511.8
20°	589.1	571.3	557.6	543.0	528.8	516.0	505.6	500.8	495.8	490.7	488.1
22.5°	564.4	549.0	533.5	518.4	503.2	489.5	483.0	476.2	471.7	466.7	463.1
25°	543.0	526.1	510.6	493.7	477.1	469.0	460.1	453.3	449.7	444.7	440.8
27.5°	520.2	503.8	485.4	467.8	458.0	444.4	438.4	433.1	428.3	423.3	420.6
30°	498.8	479.7	461.3	447.6	434.9	425.0	419.4	412.9	406.3	403.9	400.4
32.5°	476.2	455.7	439.6	425.9	415.2	403.3	398.0	392.6	386.4	383.4	380.2
35°	452.7	432.8	417.0	404.5	393.5	384.6	378.7	373.0	369.2	364.7	362.3
37.5°	428.0	410.8	395.6	383.1	373.0	365.9	358.5	354.0	348.7	344.5	342.7
40°	404.5	389.1	374.5	362.9	353.7	345.1	338.5	332.9	329.6	326.1	323.1
42.5°	383.4	367.4	354.9	342.7	334.4	326.1	319.5	315.4	309.7	308.2	304.1
45°	360.8	346.0	333.5	322.2	313.6	306.7	299.0	294.0	290.4	286.8	285.3
47.5°	338.0	324.3	312.7	302.3	293.4	285.6	279.7	274.3	270.5	267.2	265.4
50°	315.7	303.8	292.2	282.1	272.9	267.2	260.1	254.1	251.2	247.6	245.5
52.5°	292.2	282.4	269.9	261.3	252.6	245.2	238.1	234.2	231.2	228.3	226.8
55°	270.2	259.8	249.1	239.9	231.5	223.8	218.2	215.2	211.3	209.5	209.3
57.5°	247.6	236.9	228.0	219.7	210.1	204.2	199.1	195.6	192.3	190.8	190.8
60°	222.9	214.3	206.0	196.8	189.9	183.1	177.7	175.4	172.1	171.5	169.4
62.5°	200.3	192.3	184.3	175.7	169.4	162.6	158.7	155.5	153.7	151.3	148.9
65°	176.9	169.7	162.0	154.6	149.5	142.1	138.5	134.6	132.6	129.9	126.9
67.5°	154.3	147.4	140.3	133.5	129.3	122.2	119.8	115.0	113.5	110.6	107.9
70°	130.5	125.7	120.1	113.2	109.7	104.0	101.7	97.2	94.8	93.0	91.5
72.5°	110.0	105.5	99.0	94.5	90.1	86.5	82.6	80.5	78.5	77.0	76.7
75°	89.8	84.1	80.3	76.1	73.1	69.6	67.8	66.3	65.4	64.5	63.6
77.5°	68.7	66.3	62.4	58.3	55.9	54.4	53.2	52.6	51.7	51.4	50.5
80°	51.1	47.9	45.5	44.0	42.2	41.0	40.1	38.0	36.9	36.3	35.7
82.5°	33.9	33.0	31.2	29.7	28.2	27.9	27.0	26.5	26.2	26.2	25.9
85°	20.5	18.1	18.1	17.8	17.8	17.5	16.9	16.9	16.3	17.2	17.2
87.5°	8.3	8.3	7.7	7.7	8.0	7.4	7.1	7.1	7.1	6.8	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



TEST NUMBER: P243794

CATALOG NUMBER: S125RDR-H610D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	749.6	749.6	749.6	749.6
2.5°	712.2	710.7	711.0	709.2
5°	671.4	670.6	667.6	665.2
7.5°	634.3	630.4	630.1	627.8
10°	599.5	596.0	594.2	594.5
12.5°	569.2	565.3	565.3	563.0
15°	536.8	532.9	533.5	533.2
17.5°	510.1	507.4	505.3	503.5
20°	483.9	480.6	479.4	477.9
22.5°	459.8	457.4	457.7	457.7
25°	436.9	437.2	434.6	434.0
27.5°	416.7	416.1	415.5	414.3
30°	397.7	395.3	394.7	393.5
32.5°	378.1	377.8	375.4	376.3
35°	358.2	357.3	356.7	356.1
37.5°	339.7	338.0	337.7	337.1
40°	321.0	320.4	317.7	319.2
42.5°	300.8	299.6	299.6	299.6
45°	283.9	280.6	280.6	279.4
47.5°	264.8	263.6	263.1	261.0
50°	246.1	244.3	243.7	243.7
52.5°	226.8	226.5	227.1	225.9
55°	209.8	210.1	209.8	209.3
57.5°	191.4	189.9	189.9	190.2
60°	169.4	169.4	170.0	168.8
62.5°	148.3	147.7	145.6	145.0
65°	126.6	124.2	123.9	124.2
67.5°	107.3	106.4	104.9	105.2
70°	90.7	90.4	88.9	88.0
72.5°	75.8	75.8	74.9	74.9
75°	63.3	62.7	62.4	63.0
77.5°	48.7	47.3	47.9	47.0
80°	35.4	36.0	35.4	35.1
82.5°	26.2	25.6	25.9	25.6
85°	16.6	16.1	16.3	16.1
87.5°	6.8	7.1	7.1	6.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)