

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: P243774

Luminaire Tested: **S125RDR-H610D835-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243774
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-H610D835-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2237.3 lumens
Efficiency: N/A
Efficacy: 130.1 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

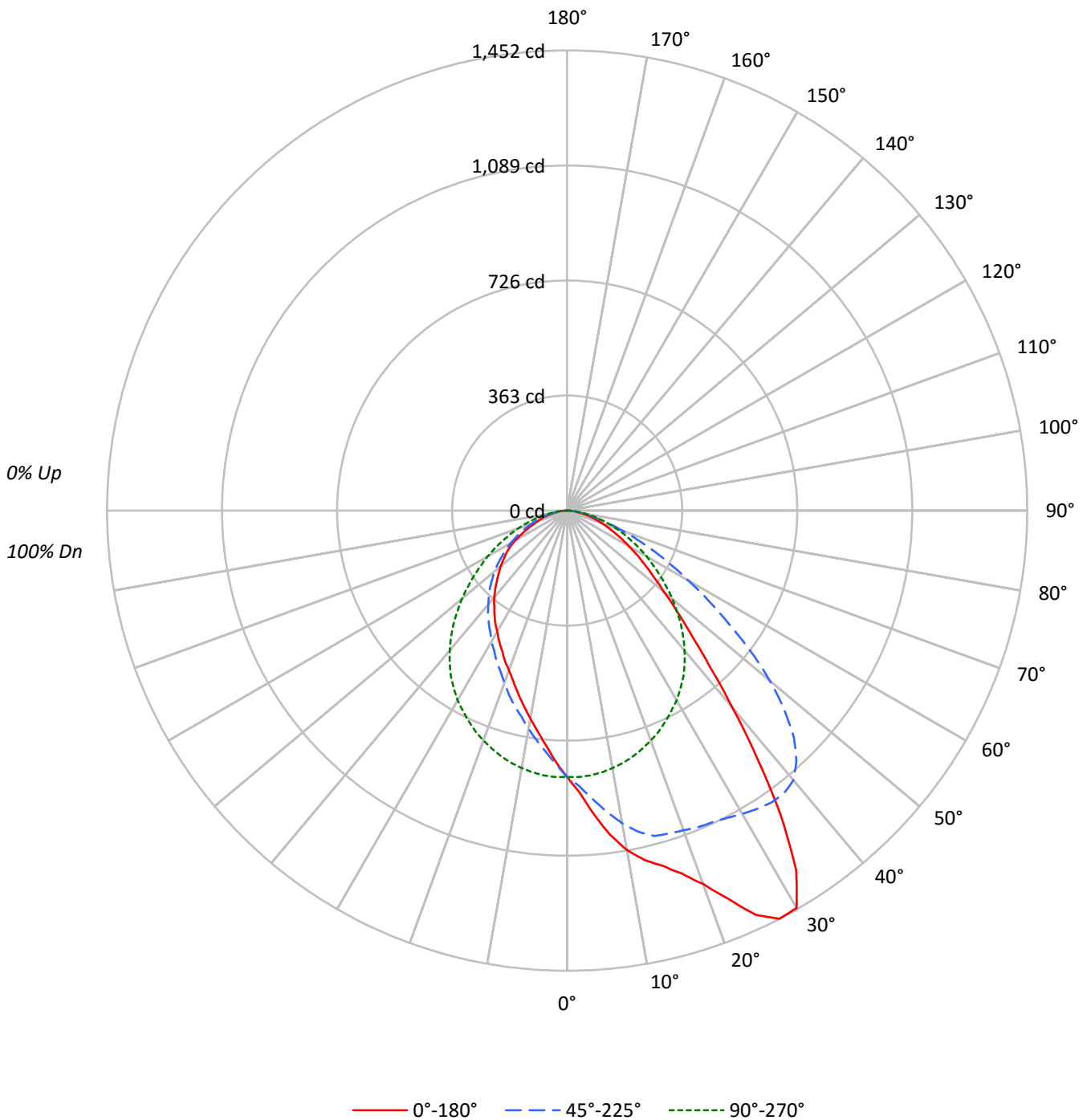
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P243774

CATALOG NUMBER: S125RDR-H610D835-X4F0-XX-UDD-A-W

Luminous Intensity Polar Plot





TEST NUMBER: P243774

CATALOG NUMBER: S125RDR-H610D835-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°	5975	5975	5975
5°	6858	5984	5322
10°	7847	5954	4812
15°	8535	5906	4400
20°	9485	5839	4054
25°	11036	5756	3817
30°	11884	5671	3622
35°	10209	5544	3465
40°	7522	5344	3322
45°	5555	5096	3149
50°	4401	4791	3022
55°	3717	4440	2908
60°	3203	4112	2691
65°	2780	3745	2343
70°	2438	3429	2051
75°	2068	3001	1941
80°	1609	2509	1609
85°	1411	2014	1468



TEST NUMBER: P243774

CATALOG NUMBER: S125RDR-H610D835-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.9	3.6
10°-20°	239.4	10.7
20°-30°	381.8	17.1
30°-40°	463.6	20.7
40°-50°	417.8	18.7
50°-60°	321.3	14.4
60°-70°	208.5	9.3
70°-80°	100.3	4.5
80°-90°	23.7	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°	702.1	31.4
0°-40°	1165.8	52.1
0°-60°	1904.8	85.1
0°-90°	2237.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2237.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	841	841	841	841	841	
5°	961	913	839	765	746	96
15°	1160	1063	803	639	598	333
25°	1407	1085	734	526	487	644
35°	1177	1124	639	431	399	720
45°	553	1012	507	344	313	439
55°	300	622	358	251	235	272
65°	165	302	223	159	139	166
75°	75	102	109	78	71	81
85°	17	18	25	20	18	20
90°	0	0	0	0	0	



TEST NUMBER: P243774

CATALOG NUMBER: S125RDR-H610D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7
2.5°	889.3	892.7	890.0	891.7	889.0	887.7	884.3	879.3	874.3	869.7	869.3
5°	961.3	960.7	958.0	954.3	951.7	945.0	941.7	930.3	922.7	913.3	908.7
7.5°	1030.0	1028.3	1024.3	1019.3	1017.0	1008.3	999.0	984.7	972.7	958.0	947.0
10°	1087.3	1087.0	1084.0	1080.7	1071.7	1062.0	1053.0	1038.0	1020.0	1001.7	986.3
12.5°	1129.3	1127.6	1124.0	1118.3	1111.0	1104.3	1092.3	1078.7	1056.7	1038.0	1017.0
15°	1160.0	1159.3	1154.0	1152.0	1137.6	1128.3	1112.3	1098.6	1081.7	1063.0	1040.3
17.5°	1200.6	1202.0	1197.3	1186.0	1173.0	1158.6	1136.0	1113.6	1090.0	1068.3	1050.0
20°	1254.0	1250.6	1242.6	1229.0	1205.6	1188.0	1165.3	1137.6	1105.6	1073.7	1047.3
22.5°	1325.3	1321.6	1309.0	1292.3	1263.0	1230.6	1196.0	1154.6	1118.0	1081.3	1046.7
25°	1407.3	1400.3	1381.6	1363.6	1322.0	1287.6	1236.0	1186.6	1133.3	1084.7	1045.7
27.5°	1452.0	1452.0	1443.3	1423.6	1390.6	1340.0	1287.3	1221.6	1160.0	1093.3	1038.0
30°	1448.0	1445.6	1449.0	1440.6	1419.3	1381.3	1329.0	1260.0	1181.3	1105.0	1038.7
32.5°	1344.6	1345.6	1365.6	1379.3	1390.0	1380.6	1346.6	1284.3	1206.0	1116.3	1036.0
35°	1176.6	1179.3	1214.6	1238.0	1285.6	1313.0	1321.0	1287.3	1217.0	1124.3	1031.3
37.5°	984.7	984.7	1025.7	1061.0	1114.3	1181.6	1232.0	1244.6	1210.3	1124.0	1027.3
40°	810.7	809.7	842.0	885.3	942.3	1016.7	1091.7	1156.0	1164.3	1111.0	1013.3
42.5°	663.3	661.7	697.0	721.0	781.0	847.3	947.0	1038.0	1090.0	1070.7	992.7
45°	552.7	551.3	574.3	601.7	644.0	713.0	796.7	897.7	985.0	1011.7	954.0
47.5°	469.3	470.0	482.3	505.3	541.3	590.7	665.7	759.3	867.3	929.0	905.3
50°	398.0	400.3	409.7	427.0	453.3	493.0	557.3	642.0	753.0	834.7	839.7
52.5°	344.7	348.0	358.0	367.3	389.3	417.3	467.3	540.7	632.3	730.3	765.3
55°	300.0	301.7	307.3	317.3	333.7	357.0	393.3	449.3	534.3	621.7	683.3
57.5°	262.7	262.7	266.3	273.3	286.3	307.3	331.7	378.0	449.7	528.7	594.3
60°	225.3	226.7	229.3	237.0	245.7	261.7	285.3	314.7	376.7	442.7	513.3
62.5°	194.0	196.3	199.0	202.7	210.7	222.0	238.7	265.7	307.3	368.3	431.3
65°	165.3	167.7	168.0	172.3	177.7	187.0	199.7	219.3	254.0	302.0	354.0
67.5°	140.0	141.0	142.0	145.3	150.3	156.3	164.7	179.3	206.7	239.0	289.7
70°	117.3	118.0	118.3	122.0	124.3	129.7	134.0	143.3	160.7	185.7	225.0
72.5°	96.0	95.0	94.7	97.7	98.7	103.0	108.3	115.0	124.3	142.0	171.3
75°	75.3	75.7	76.0	77.7	78.0	80.0	83.3	87.7	92.0	102.3	121.0
77.5°	58.0	56.7	56.7	58.7	59.3	59.7	62.0	64.3	66.7	72.7	80.0
80°	39.3	40.0	40.0	40.0	40.3	41.0	42.3	44.3	46.0	49.7	51.0
82.5°	28.0	28.0	27.7	28.3	28.7	29.0	29.0	29.0	30.0	31.0	32.3
85°	17.3	17.7	16.7	17.3	17.7	17.7	17.7	17.7	18.7	18.3	18.7
87.5°	7.3	7.7	7.7	8.0	8.0	8.3	8.0	8.3	8.0	8.0	8.3
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: P243774

CATALOG NUMBER: S125RDR-H610D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7
2.5°	868.3	864.3	862.3	858.3	853.0	849.7	846.3	841.7	838.0	832.3	827.3
5°	900.3	892.3	885.0	875.0	865.3	857.0	848.3	838.7	830.0	820.3	810.0
7.5°	936.0	923.3	908.0	890.3	875.3	862.3	847.7	833.3	820.3	805.0	791.0
10°	970.3	950.0	929.7	906.0	884.0	864.7	845.0	825.0	808.0	789.0	771.7
12.5°	997.0	977.7	947.3	918.0	889.3	864.3	839.7	815.3	793.0	772.0	751.3
15°	1020.3	988.3	962.7	930.7	895.7	861.7	831.0	802.7	775.7	751.0	730.0
17.5°	1027.0	998.3	970.3	933.0	895.3	856.7	821.3	787.7	757.7	730.3	706.7
20°	1026.3	997.3	967.0	931.3	891.3	849.0	809.7	772.0	738.0	706.7	681.3
22.5°	1016.3	988.3	957.7	921.7	881.0	837.3	796.0	754.3	717.3	684.7	658.7
25°	1005.7	970.3	938.3	902.0	863.3	823.0	779.0	734.0	695.3	661.3	632.0
27.5°	996.3	954.0	914.7	879.0	839.3	803.0	759.3	712.3	672.7	637.0	606.7
30°	981.3	936.7	889.0	850.0	811.7	773.7	733.7	691.0	647.7	611.3	581.0
32.5°	968.3	912.0	860.3	816.3	778.0	744.7	706.3	665.3	623.0	588.3	555.7
35°	954.0	886.7	832.7	781.0	742.7	706.3	676.0	639.0	597.0	560.3	531.0
37.5°	937.0	860.7	798.7	746.0	706.3	669.0	641.7	608.7	570.7	534.3	505.3
40°	918.0	834.0	762.7	708.3	665.7	628.3	605.3	576.0	543.7	507.7	480.7
42.5°	894.0	805.7	730.0	670.7	623.3	589.7	566.7	542.3	512.7	481.3	452.0
45°	863.7	770.3	691.0	628.3	581.7	549.0	525.0	507.0	483.3	454.0	426.3
47.5°	826.7	733.3	651.0	586.0	541.0	509.7	487.3	469.3	451.3	426.0	399.7
50°	777.7	691.0	612.0	545.7	498.0	467.7	447.7	433.3	417.0	396.3	372.3
52.5°	723.7	643.3	566.0	504.0	458.0	427.7	407.0	395.0	382.7	365.7	345.0
55°	661.0	595.7	522.0	461.3	416.3	386.3	370.0	358.3	348.0	335.0	317.7
57.5°	594.7	537.3	473.3	417.3	375.0	346.7	332.3	322.7	314.0	304.7	290.3
60°	525.0	484.3	423.7	372.3	335.3	312.0	298.3	289.3	281.3	273.7	263.0
62.5°	452.3	418.7	373.3	329.7	296.7	274.7	264.7	257.0	248.7	242.0	234.3
65°	378.7	359.3	328.0	287.0	256.7	238.7	229.0	222.7	218.7	211.0	205.0
67.5°	311.7	301.0	274.3	246.7	223.3	207.0	198.0	193.3	189.0	185.3	178.7
70°	248.0	240.3	225.0	205.3	187.0	173.0	166.3	165.0	159.0	155.3	152.0
72.5°	189.0	187.0	174.3	165.7	155.3	144.3	139.3	136.7	132.7	129.3	128.0
75°	134.3	137.3	133.3	129.0	124.0	115.0	110.7	109.3	105.7	104.7	103.0
77.5°	91.7	96.0	97.3	95.3	93.0	90.0	87.0	85.7	82.0	81.3	80.3
80°	57.7	64.0	66.3	66.0	65.0	65.3	61.7	61.3	59.7	58.7	59.7
82.5°	35.0	38.3	42.7	43.7	42.3	43.0	42.0	40.7	40.7	41.3	40.0
85°	19.0	19.3	21.3	22.7	24.3	25.7	24.3	24.7	24.3	24.3	23.3
87.5°	8.3	8.7	8.7	8.3	9.0	9.7	11.0	11.7	11.3	10.3	9.0
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: P243774

CATALOG NUMBER: S125RDR-H610D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7
2.5°	823.3	821.0	817.0	813.7	806.0	800.7	800.0	800.3	799.7	799.0	798.7
5°	803.3	795.7	788.3	782.0	773.3	764.7	760.7	759.0	758.3	754.7	756.7
7.5°	782.0	770.3	761.7	749.7	739.3	732.0	725.0	721.7	721.0	716.0	714.7
10°	759.3	745.3	732.3	720.3	710.0	699.7	691.3	688.3	684.3	680.3	674.3
12.5°	737.0	719.7	705.3	692.0	678.0	666.3	659.7	655.3	650.3	646.7	644.7
15°	710.3	695.7	678.0	663.7	649.3	639.0	630.0	622.0	617.3	614.3	606.0
17.5°	686.3	667.0	650.3	636.7	621.0	609.3	600.0	593.3	585.3	579.3	574.0
20°	660.7	640.7	625.3	609.0	593.0	578.7	567.0	561.7	556.0	550.3	547.3
22.5°	633.0	615.7	598.3	581.3	564.3	549.0	541.7	534.0	529.0	523.3	519.3
25°	609.0	590.0	572.7	553.7	535.0	526.0	516.0	508.3	504.3	498.7	494.3
27.5°	583.3	565.0	544.3	524.7	513.7	498.3	491.7	485.7	480.3	474.7	471.7
30°	559.3	538.0	517.3	502.0	487.7	476.7	470.3	463.0	455.7	453.0	449.0
32.5°	534.0	511.0	493.0	477.7	465.7	452.3	446.3	440.3	433.3	430.0	426.3
35°	507.7	485.3	467.7	453.7	441.3	431.3	424.7	418.3	414.0	409.0	406.3
37.5°	480.0	460.7	443.7	429.7	418.3	410.3	402.0	397.0	391.0	386.3	384.3
40°	453.7	436.3	420.0	407.0	396.7	387.0	379.7	373.3	369.7	365.7	362.3
42.5°	430.0	412.0	398.0	384.3	375.0	365.7	358.3	353.7	347.3	345.7	341.0
45°	404.7	388.0	374.0	361.3	351.7	344.0	335.3	329.7	325.7	321.7	320.0
47.5°	379.0	363.7	350.7	339.0	329.0	320.3	313.7	307.7	303.3	299.7	297.7
50°	354.0	340.7	327.7	316.3	306.0	299.7	291.7	285.0	281.7	277.7	275.3
52.5°	327.7	316.7	302.7	293.0	283.3	275.0	267.0	262.7	259.3	256.0	254.3
55°	303.0	291.3	279.3	269.0	259.7	251.0	244.7	241.3	237.0	235.0	234.7
57.5°	277.7	265.7	255.7	246.3	235.7	229.0	223.3	219.3	215.7	214.0	214.0
60°	250.0	240.3	231.0	220.7	213.0	205.3	199.3	196.7	193.0	192.3	190.0
62.5°	224.7	215.7	206.7	197.0	190.0	182.3	178.0	174.3	172.3	169.7	167.0
65°	198.3	190.3	181.7	173.3	167.7	159.3	155.3	151.0	148.7	145.7	142.3
67.5°	173.0	165.3	157.3	149.7	145.0	137.0	134.3	129.0	127.3	124.0	121.0
70°	146.3	141.0	134.7	127.0	123.0	116.7	114.0	109.0	106.3	104.3	102.7
72.5°	123.3	118.3	111.0	106.0	101.0	97.0	92.7	90.3	88.0	86.3	86.0
75°	100.7	94.3	90.0	85.3	82.0	78.0	76.0	74.3	73.3	72.3	71.3
77.5°	77.0	74.3	70.0	65.3	62.7	61.0	59.7	59.0	58.0	57.7	56.7
80°	57.3	53.7	51.0	49.3	47.3	46.0	45.0	42.7	41.3	40.7	40.0
82.5°	38.0	37.0	35.0	33.3	31.7	31.3	30.3	29.7	29.3	29.3	29.0
85°	23.0	20.3	20.3	20.0	20.0	19.7	19.0	19.0	18.3	19.3	19.3
87.5°	9.3	9.3	8.7	8.7	9.0	8.3	8.0	8.0	8.0	7.7	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: P243774

CATALOG NUMBER: S125RDR-H610D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	840.7	840.7	840.7	840.7
2.5°	798.7	797.0	797.3	795.3
5°	753.0	752.0	748.7	746.0
7.5°	711.3	707.0	706.7	704.0
10°	672.3	668.3	666.3	666.7
12.5°	638.3	634.0	634.0	631.3
15°	602.0	597.7	598.3	598.0
17.5°	572.0	569.0	566.7	564.7
20°	542.7	539.0	537.7	536.0
22.5°	515.7	513.0	513.3	513.3
25°	490.0	490.3	487.3	486.7
27.5°	467.3	466.7	466.0	464.7
30°	446.0	443.3	442.7	441.3
32.5°	424.0	423.7	421.0	422.0
35°	401.7	400.7	400.0	399.3
37.5°	381.0	379.0	378.7	378.0
40°	360.0	359.3	356.3	358.0
42.5°	337.3	336.0	336.0	336.0
45°	318.3	314.7	314.7	313.3
47.5°	297.0	295.7	295.0	292.7
50°	276.0	274.0	273.3	273.3
52.5°	254.3	254.0	254.7	253.3
55°	235.3	235.7	235.3	234.7
57.5°	214.7	213.0	213.0	213.3
60°	190.0	190.0	190.7	189.3
62.5°	166.3	165.7	163.3	162.7
65°	142.0	139.3	139.0	139.3
67.5°	120.3	119.3	117.7	118.0
70°	101.7	101.3	99.7	98.7
72.5°	85.0	85.0	84.0	84.0
75°	71.0	70.3	70.0	70.7
77.5°	54.7	53.0	53.7	52.7
80°	39.7	40.3	39.7	39.3
82.5°	29.3	28.7	29.0	28.7
85°	18.7	18.0	18.3	18.0
87.5°	7.7	8.0	8.0	7.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)