

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: P242811

Luminaire Tested: **S125DR-S610D835-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242811
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-S610D835-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2386.8 lumens
Efficiency: N/A
Efficacy: 127.0 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

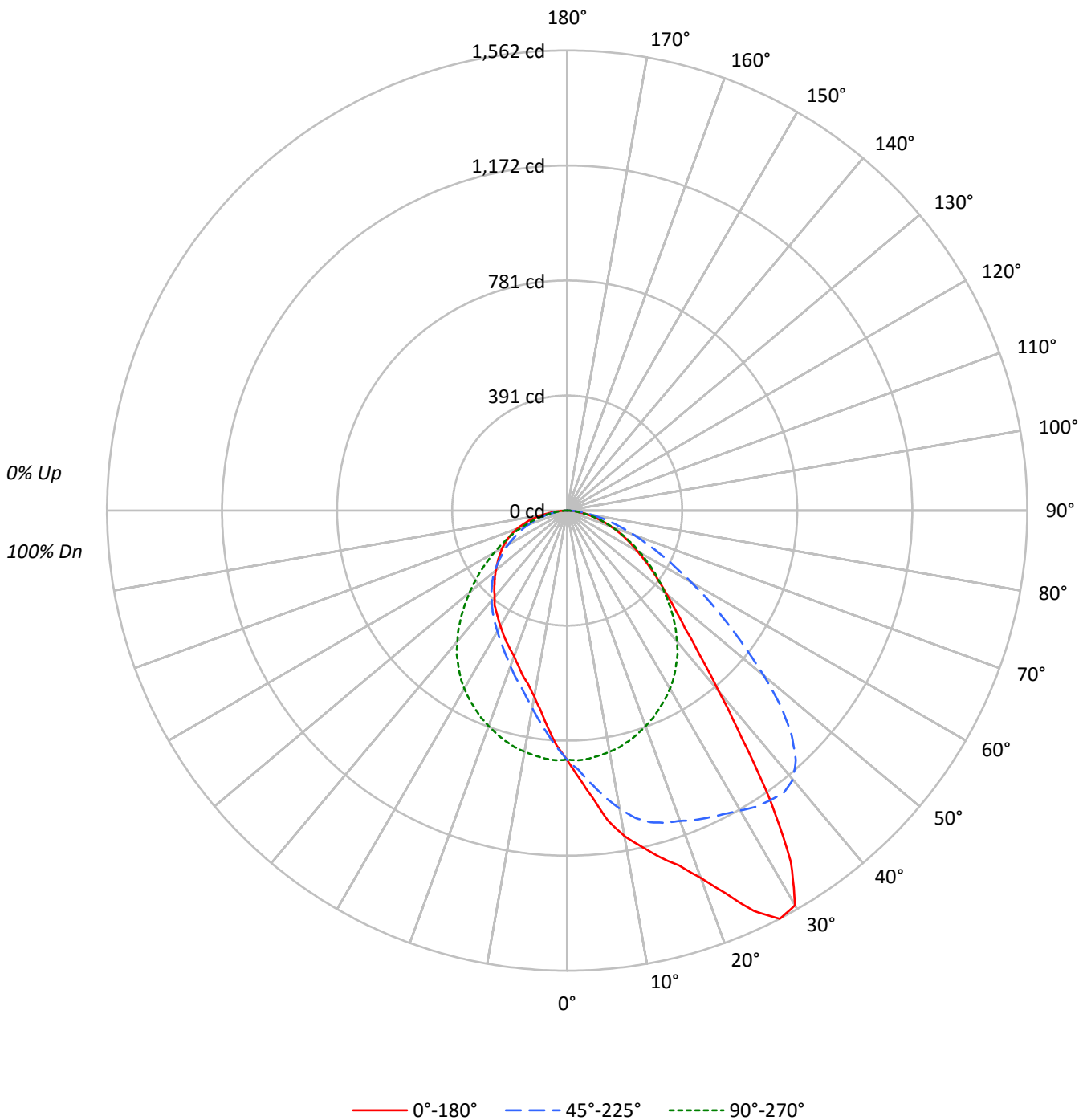
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242811

CATALOG NUMBER: S125DR-S610D835-X4F0-XX-UDD-A-W

Luminous Intensity Polar Plot





TEST NUMBER: P242811

CATALOG NUMBER: S125DR-S610D835-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°	6011	6011	6011
5°	6962	6032	5282
10°	8099	6000	4628
15°	8965	5956	4268
20°	10035	5887	3981
25°	11757	5808	3840
30°	12698	5730	3719
35°	10441	5585	3638
40°	7421	5382	3551
45°	5701	5109	3500
50°	4866	4771	3493
55°	4333	4440	3523
60°	3909	4077	3613
65°	3611	3713	3707
70°	3283	3335	3759
75°	2897	2938	3726
80°	2439	2394	3409
85°	1933	1729	2748



TEST NUMBER: P242811

CATALOG NUMBER: S125DR-S610D835-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	3.4
10°-20°	242.5	10.2
20°-30°	393.9	16.5
30°-40°	481.3	20.2
40°-50°	436.7	18.3
50°-60°	347.8	14.6
60°-70°	242.2	10.1
70°-80°	129.0	5.4
80°-90°	32.0	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°	717.7	30.1
0°-40°	1199.1	50.2
0°-60°	1983.5	83.1
0°-90°	2386.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2386.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	846	846	846	846	846	
5°	976	929	845	760	740	98
15°	1218	1095	810	614	580	348
25°	1499	1148	741	514	490	687
35°	1203	1201	644	436	419	738
45°	567	1077	508	361	348	451
55°	350	660	358	275	284	314
65°	215	350	221	186	220	213
75°	106	156	107	98	136	114
85°	24	31	21	23	34	28
90°	0	0	0	0	0	



TEST NUMBER: P242811

CATALOG NUMBER: S125DR-S610D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8
2.5°	906.8	905.4	904.0	901.1	903.2	897.1	894.3	889.2	883.1	881.0	878.5
5°	975.8	977.5	979.3	971.8	972.5	967.5	956.0	946.7	939.1	929.4	922.6
7.5°	1061.2	1055.8	1056.2	1051.5	1043.2	1036.4	1025.3	1009.9	995.9	980.1	966.4
10°	1122.2	1122.6	1119.4	1113.6	1104.6	1098.2	1082.4	1067.3	1049.0	1027.4	1012.0
12.5°	1168.2	1170.0	1165.7	1157.4	1154.2	1137.7	1126.2	1107.5	1084.9	1068.7	1043.2
15°	1218.4	1214.5	1211.6	1201.9	1194.4	1179.3	1159.6	1140.9	1117.2	1095.3	1073.4
17.5°	1262.9	1266.2	1261.5	1254.3	1232.1	1214.5	1190.1	1166.4	1138.0	1110.7	1085.2
20°	1326.8	1329.7	1321.5	1306.0	1278.0	1260.4	1225.6	1192.6	1158.5	1120.8	1092.1
22.5°	1406.5	1403.0	1391.1	1365.6	1342.3	1306.0	1267.6	1225.6	1180.7	1136.9	1096.4
25°	1499.2	1484.1	1477.3	1448.2	1416.2	1368.5	1316.8	1257.9	1204.8	1148.4	1099.6
27.5°	1562.4	1556.2	1546.6	1522.9	1486.2	1432.0	1371.0	1300.6	1229.2	1160.3	1098.9
30°	1547.3	1548.0	1548.7	1542.2	1520.7	1482.3	1421.6	1344.4	1255.4	1175.4	1101.4
32.5°	1413.7	1429.9	1445.3	1465.4	1478.3	1478.7	1446.4	1378.5	1286.3	1192.6	1100.0
35°	1203.4	1207.3	1247.9	1288.1	1342.6	1385.0	1413.4	1382.5	1305.3	1200.8	1098.9
37.5°	972.9	992.6	1023.1	1068.4	1150.2	1217.0	1304.6	1334.7	1298.5	1207.7	1098.5
40°	799.8	817.8	836.1	882.4	948.8	1034.3	1137.3	1225.3	1245.7	1192.6	1087.8
42.5°	666.3	679.6	700.4	732.4	785.1	858.4	955.6	1077.3	1160.6	1148.8	1065.1
45°	567.2	576.2	592.0	619.6	659.8	719.1	805.9	931.6	1041.1	1077.3	1026.7
47.5°	496.9	497.2	510.1	529.9	560.4	615.0	679.9	783.3	901.4	985.1	973.2
50°	440.1	438.3	448.0	464.5	487.5	520.9	582.3	660.9	773.3	871.3	898.6
52.5°	391.3	392.0	397.0	408.2	426.5	453.8	495.8	564.7	656.6	757.8	815.3
55°	349.7	348.2	355.0	363.3	377.3	396.0	429.0	483.2	561.1	660.2	727.0
57.5°	309.5	313.4	316.3	322.0	334.2	347.1	376.6	418.2	482.5	570.4	641.2
60°	275.0	278.9	281.1	286.8	296.2	306.9	328.5	360.8	412.8	486.1	556.1
62.5°	244.1	247.0	247.3	252.4	259.6	270.0	285.8	311.6	350.0	411.8	480.0
65°	214.7	214.7	216.1	221.5	225.1	234.4	247.3	267.1	300.1	350.0	408.5
67.5°	186.0	187.8	187.4	189.9	193.1	201.0	210.7	227.2	253.5	291.1	339.6
70°	158.0	159.4	159.0	160.8	164.4	169.1	176.6	192.1	209.7	240.9	281.1
72.5°	132.8	133.2	132.1	134.6	136.4	140.4	149.0	155.4	171.6	196.7	228.0
75°	105.5	106.3	107.0	108.4	110.6	112.7	117.0	125.3	136.1	155.8	177.0
77.5°	84.0	82.2	84.4	84.0	85.1	86.9	90.8	95.5	104.8	118.1	135.7
80°	59.6	60.0	60.0	60.3	62.1	63.2	66.4	69.6	76.5	85.8	97.3
82.5°	39.5	40.6	39.8	40.6	42.0	42.7	44.2	46.7	49.9	56.7	64.3
85°	23.7	21.9	22.6	23.3	23.3	23.7	25.1	26.2	28.4	31.2	34.5
87.5°	8.6	9.3	9.7	9.7	10.1	10.1	11.5	11.5	12.6	13.6	15.1
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: P242811

CATALOG NUMBER: S125DR-S610D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8
2.5°	876.3	873.8	870.9	865.9	859.8	856.6	851.5	848.3	841.8	836.5	830.7
5°	914.4	905.0	896.4	885.3	873.1	865.2	855.8	845.4	834.7	823.5	811.3
7.5°	952.4	937.0	920.1	902.5	885.3	869.1	854.1	838.6	824.6	807.0	792.3
10°	990.8	970.0	947.7	921.5	896.1	873.8	851.2	831.4	811.3	789.8	770.8
12.5°	1029.2	999.8	966.1	936.6	904.7	876.7	849.0	822.5	795.9	771.5	748.5
15°	1043.2	1018.8	989.8	948.8	914.4	877.4	842.2	809.5	779.0	752.5	724.5
17.5°	1056.9	1025.7	994.8	955.3	910.4	870.6	830.7	795.2	761.4	728.0	702.6
20°	1060.1	1027.8	995.1	956.7	910.4	863.0	823.2	778.3	741.3	706.5	673.5
22.5°	1059.0	1021.3	985.1	945.2	900.4	857.6	807.4	761.4	720.5	686.4	651.6
25°	1051.1	1012.0	967.5	927.6	883.1	836.8	788.0	740.6	699.7	660.6	626.4
27.5°	1046.5	996.9	948.1	902.2	859.4	816.7	769.3	720.5	675.6	635.8	604.2
30°	1036.1	980.4	923.7	875.2	831.1	789.8	745.6	698.2	650.9	612.1	577.6
32.5°	1026.7	959.6	898.9	845.1	797.7	757.8	718.0	673.5	627.2	587.7	553.2
35°	1014.2	939.1	870.6	811.0	761.1	719.8	685.7	643.7	601.0	562.9	529.9
37.5°	999.4	912.6	840.1	777.9	723.7	680.7	648.3	615.7	573.0	535.6	506.2
40°	981.5	883.8	805.9	742.0	685.3	640.1	610.7	580.1	546.0	511.9	480.3
42.5°	958.9	858.0	771.5	701.5	645.5	601.7	570.4	545.7	516.6	485.4	456.6
45°	930.2	825.7	733.8	659.8	603.1	559.7	527.7	508.3	485.7	455.6	430.8
47.5°	892.1	789.1	694.3	617.8	559.3	519.1	488.6	469.6	453.1	429.4	406.0
50°	837.9	747.1	650.9	575.1	516.6	476.0	448.4	431.5	417.9	400.6	381.6
52.5°	777.2	694.3	608.1	533.5	475.7	435.8	408.9	394.5	383.8	372.6	354.0
55°	712.2	640.4	558.6	487.5	434.0	394.9	371.2	358.3	348.9	339.6	328.1
57.5°	642.2	584.1	509.1	442.6	393.1	356.5	334.2	320.9	313.4	308.4	301.2
60°	567.6	519.5	457.0	397.8	349.7	318.1	296.5	286.8	280.7	276.8	271.8
62.5°	498.3	461.0	404.2	351.5	310.9	281.5	262.8	253.5	247.7	246.3	242.3
65°	430.4	399.9	352.2	307.3	271.4	245.9	229.8	220.8	217.2	215.0	215.4
67.5°	362.2	342.5	302.6	263.1	233.7	211.1	197.8	191.0	189.2	186.0	186.0
70°	300.8	286.8	254.5	221.1	195.7	179.1	167.7	160.5	158.7	157.2	156.9
72.5°	246.6	234.8	207.9	182.7	160.5	146.5	137.5	133.9	130.7	130.0	130.0
75°	193.5	186.7	164.4	143.2	127.4	117.4	110.9	107.0	104.8	104.5	104.8
77.5°	146.1	139.6	124.2	108.4	98.0	90.1	84.0	82.9	80.1	80.4	79.7
80°	103.4	99.4	90.5	78.6	70.4	63.9	61.0	58.5	57.8	56.7	57.8
82.5°	67.9	63.5	58.2	51.7	45.2	42.0	39.1	38.8	38.4	38.1	38.1
85°	37.0	37.3	33.7	28.0	25.1	23.0	21.2	21.2	20.8	20.5	20.8
87.5°	15.8	15.1	13.6	12.6	10.8	9.7	9.3	9.7	8.6	8.3	8.6
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: P242811

CATALOG NUMBER: S125DR-S610D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8
2.5°	827.5	823.5	820.3	813.1	809.2	803.8	799.5	804.2	799.1	801.3	798.0
5°	805.2	795.2	788.0	777.6	768.6	760.4	754.3	753.2	750.3	748.9	744.6
7.5°	778.7	767.2	755.3	742.4	731.6	720.1	713.3	706.9	702.9	697.9	693.9
10°	755.7	738.8	724.5	707.9	693.6	681.0	671.0	665.9	661.3	654.5	651.9
12.5°	727.3	709.7	691.4	673.5	659.8	645.5	637.2	629.0	626.1	618.2	617.8
15°	705.8	679.6	662.3	644.4	625.4	613.9	606.7	598.4	594.9	589.5	585.5
17.5°	679.2	655.5	634.0	615.7	598.4	589.1	579.8	574.0	567.9	564.0	557.5
20°	649.8	627.5	606.0	586.2	573.7	562.5	555.4	550.0	543.5	541.7	535.3
22.5°	625.0	599.9	579.4	563.6	549.6	536.7	528.8	525.6	521.6	515.2	515.2
25°	597.7	572.2	554.6	538.1	525.9	514.4	509.1	504.4	500.1	496.1	494.7
27.5°	574.8	552.1	530.6	515.5	505.1	494.3	489.7	483.6	480.3	477.1	472.8
30°	550.3	527.0	508.7	494.3	482.8	473.5	468.5	464.5	461.7	458.8	456.6
32.5°	525.2	504.0	486.4	472.4	461.0	454.5	450.2	447.7	444.4	440.8	438.0
35°	503.7	480.0	462.7	450.5	441.6	436.2	431.2	428.6	425.1	425.1	422.2
37.5°	478.2	457.4	441.9	430.8	422.9	417.9	412.1	410.7	408.2	406.7	405.7
40°	455.9	436.9	422.5	411.4	402.8	398.8	394.5	391.7	390.2	388.4	387.7
42.5°	432.9	415.0	401.4	391.3	384.1	380.9	376.9	375.2	371.9	369.4	369.0
45°	409.6	392.0	379.5	371.2	364.7	360.8	358.3	354.0	352.5	349.7	349.3
47.5°	388.1	370.8	358.3	351.5	345.7	342.8	338.9	334.2	332.4	330.6	330.3
50°	363.3	347.9	336.4	329.9	324.5	319.9	315.9	313.0	312.0	312.0	312.7
52.5°	338.2	325.6	316.3	308.0	303.0	298.0	294.4	292.9	291.1	293.3	294.7
55°	313.8	300.5	293.3	285.8	280.7	275.0	273.2	272.5	271.4	274.3	275.7
57.5°	287.6	278.6	270.0	262.1	257.8	254.2	251.3	250.9	253.1	253.8	258.1
60°	262.8	252.0	244.5	238.7	233.3	231.2	230.5	229.8	231.2	235.1	241.2
62.5°	235.5	227.2	219.0	215.0	211.4	207.5	207.5	208.2	211.4	216.1	222.2
65°	208.9	201.4	196.0	191.0	187.8	185.6	186.3	187.8	191.0	197.1	203.9
67.5°	181.7	176.6	171.6	166.9	163.7	164.1	164.4	166.2	170.2	177.3	183.8
70°	155.4	149.7	145.8	144.0	141.4	140.0	142.2	145.8	149.0	155.4	160.8
72.5°	129.2	124.6	121.7	120.6	119.9	118.8	119.2	123.1	127.8	134.3	140.7
75°	103.4	101.6	99.4	98.0	96.9	97.6	98.4	102.0	105.5	112.4	119.5
77.5°	80.1	77.9	76.5	76.1	75.4	75.7	77.5	80.4	84.0	89.0	94.8
80°	57.1	56.4	55.6	55.3	55.3	55.6	58.5	60.3	63.5	68.2	72.5
82.5°	37.7	37.3	37.3	37.3	37.7	37.7	39.1	41.6	44.2	47.4	51.0
85°	21.9	21.2	22.3	22.6	21.9	23.0	23.7	25.1	26.2	28.0	29.8
87.5°	9.0	9.7	9.3	9.7	9.7	10.4	10.1	11.5	12.2	12.9	12.6
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: P242811

CATALOG NUMBER: S125DR-S610D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	845.8	845.8	845.8	845.8
2.5°	795.9	798.4	796.3	799.1
5°	742.8	739.5	741.7	740.3
7.5°	693.6	690.7	686.4	685.0
10°	648.0	644.0	643.7	641.2
12.5°	614.6	611.0	606.0	605.3
15°	583.4	580.5	578.0	580.1
17.5°	556.8	554.3	553.6	551.4
20°	532.0	530.2	531.0	526.3
22.5°	512.3	508.3	507.6	507.6
25°	491.5	489.7	487.9	489.7
27.5°	473.2	471.4	470.6	471.0
30°	456.6	453.1	453.4	453.1
32.5°	438.7	436.5	435.8	435.1
35°	421.1	421.1	419.3	419.3
37.5°	404.9	404.6	403.5	404.2
40°	386.3	385.9	384.8	382.7
42.5°	368.3	366.9	366.5	366.2
45°	349.3	349.3	348.6	348.2
47.5°	330.6	331.4	332.8	332.4
50°	314.1	314.5	315.6	315.9
52.5°	295.8	298.3	299.8	299.4
55°	278.9	281.5	284.0	284.3
57.5°	262.1	265.3	267.8	268.5
60°	244.8	249.5	252.7	254.2
62.5°	228.3	233.7	236.9	236.9
65°	210.0	215.4	218.3	220.4
67.5°	191.0	196.4	199.2	201.0
70°	169.8	175.2	179.5	180.9
72.5°	149.0	153.7	156.9	158.7
75°	124.2	130.7	133.9	135.7
77.5°	100.5	107.0	108.8	109.9
80°	76.8	80.4	82.9	83.3
82.5°	54.6	57.4	57.8	58.9
85°	32.3	33.7	34.1	33.7
87.5°	13.3	12.9	12.9	13.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)