

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: P243765

Luminaire Tested: **S125RDR-H850D927-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243765
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-H850D927-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2482.1 lumens
Efficiency: N/A
Efficacy: 105.2 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

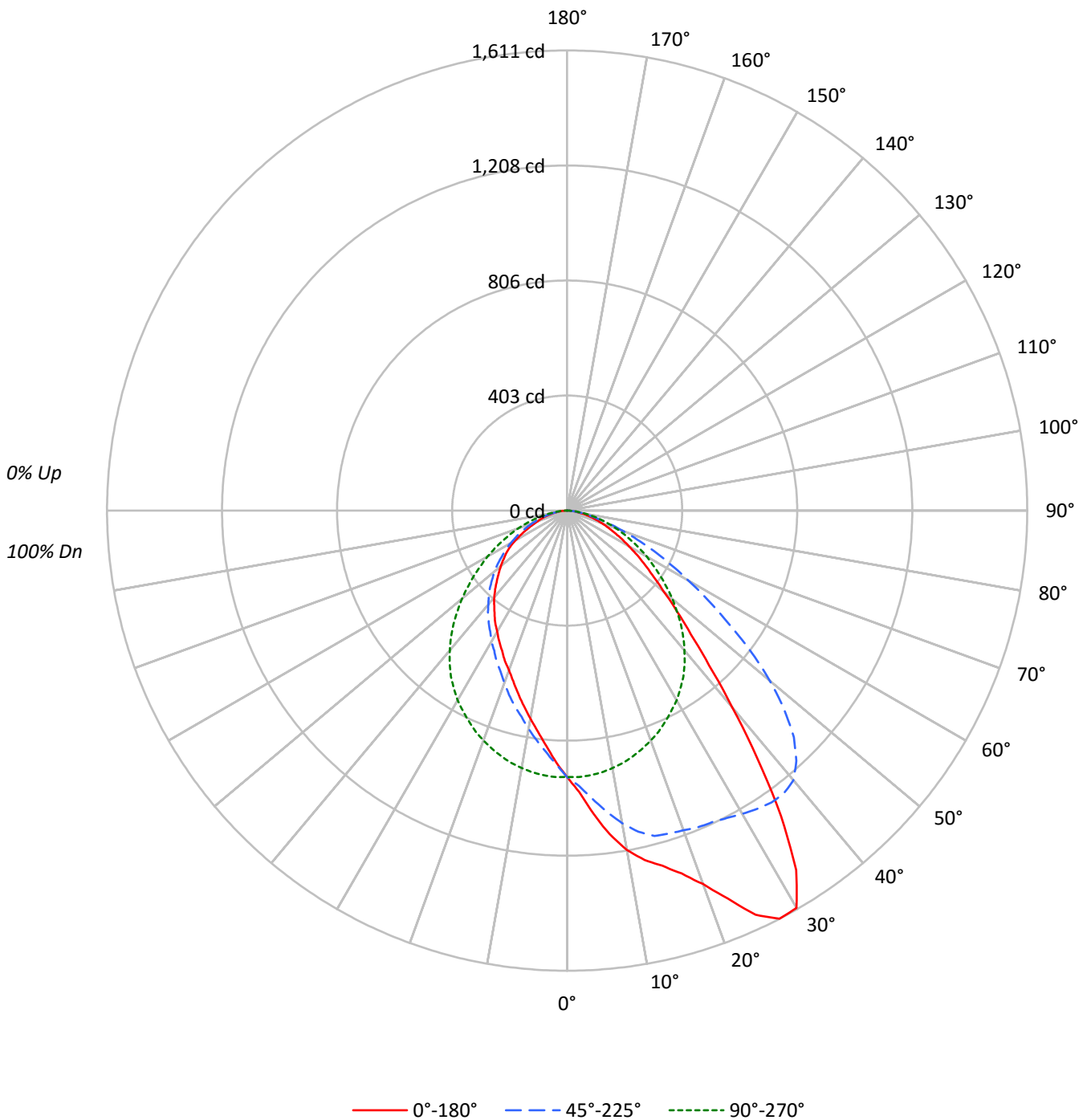
Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	6629	6629	6629
5°	7609	6638	5905
10°	8706	6606	5338
15°	9469	6552	4881
20°	10522	6478	4498
25°	12244	6386	4234
30°	13183	6291	4018
35°	11326	6151	3844
40°	8345	5929	3685
45°	6162	5654	3494
50°	4883	5316	3353
55°	4124	4926	3225
60°	3554	4563	2987
65°	3084	4154	2600
70°	2706	3805	2275
75°	2296	3331	2153
80°	1785	2783	1785
85°	1566	2234	1631



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.8	3.6
10°-20°	265.6	10.7
20°-30°	423.6	17.1
30°-40°	514.4	20.7
40°-50°	463.5	18.7
50°-60°	356.4	14.4
60°-70°	231.3	9.3
70°-80°	111.3	4.5
80°-90°	26.3	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°	779.0	31.4
0°-40°	1293.3	52.1
0°-60°	2113.2	85.1
0°-90°	2482.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2482.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	933	933	933	933	933	
5°	1066	1013	930	848	828	106
15°	1287	1179	890	709	663	369
25°	1561	1203	814	584	540	714
35°	1305	1247	709	478	443	799
45°	613	1122	562	382	348	487
55°	333	690	398	278	260	302
65°	183	335	247	177	155	184
75°	84	114	121	86	78	90
85°	19	20	27	22	20	22
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°	932.7	932.7	932.7	932.7	932.7	932.7	932.7	932.7	932.7	932.7	932.7
2.5°	986.6	990.3	987.4	989.2	986.3	984.8	981.1	975.6	970.0	964.8	964.5
5°	1066.5	1065.8	1062.8	1058.8	1055.8	1048.4	1044.7	1032.1	1023.6	1013.3	1008.1
7.5°	1142.7	1140.9	1136.4	1130.9	1128.3	1118.7	1108.3	1092.4	1079.1	1062.8	1050.6
10°	1206.3	1205.9	1202.6	1198.9	1188.9	1178.2	1168.2	1151.6	1131.6	1111.3	1094.3
12.5°	1252.9	1251.1	1247.0	1240.7	1232.6	1225.2	1211.9	1196.7	1172.3	1151.6	1128.3
15°	1286.9	1286.2	1280.3	1278.1	1262.2	1251.8	1234.1	1218.9	1200.0	1179.3	1154.2
17.5°	1332.1	1333.5	1328.4	1315.8	1301.4	1285.5	1260.3	1235.5	1209.3	1185.2	1164.9
20°	1391.2	1387.5	1378.6	1363.5	1337.6	1318.0	1292.9	1262.2	1226.7	1191.2	1161.9
22.5°	1470.4	1466.3	1452.2	1433.7	1401.2	1365.3	1326.9	1281.0	1240.3	1199.7	1161.2
25°	1561.3	1553.6	1532.9	1512.9	1466.7	1428.6	1371.3	1316.5	1257.3	1203.4	1160.1
27.5°	1610.9	1610.9	1601.3	1579.5	1542.8	1486.6	1428.2	1355.3	1286.9	1213.0	1151.6
30°	1606.4	1603.9	1607.6	1598.3	1574.6	1532.5	1474.4	1397.9	1310.6	1225.9	1152.3
32.5°	1491.8	1492.9	1515.1	1530.3	1542.1	1531.7	1494.0	1424.9	1338.0	1238.5	1149.4
35°	1305.4	1308.4	1347.6	1373.5	1426.4	1456.7	1465.6	1428.2	1350.2	1247.4	1144.2
37.5°	1092.4	1092.4	1137.9	1177.1	1236.3	1311.0	1366.8	1380.9	1342.8	1247.0	1139.8
40°	899.4	898.3	934.1	982.2	1045.4	1127.9	1211.1	1282.5	1291.7	1232.6	1124.2
42.5°	735.9	734.1	773.3	799.9	866.5	940.1	1050.6	1151.6	1209.3	1187.8	1101.3
45°	613.1	611.7	637.2	667.5	714.5	791.0	883.8	995.9	1092.8	1122.4	1058.4
47.5°	520.7	521.4	535.1	560.6	600.6	655.3	738.5	842.4	962.2	1030.7	1004.4
50°	441.6	444.1	454.5	473.7	502.9	546.9	618.3	712.3	835.4	926.0	931.5
52.5°	382.4	386.1	397.2	407.5	431.9	463.0	518.5	599.8	701.5	810.3	849.1
55°	332.8	334.7	341.0	352.1	370.2	396.1	436.4	498.5	592.8	689.7	758.1
57.5°	291.4	291.4	295.5	303.2	317.7	341.0	368.0	419.4	498.9	586.5	659.4
60°	250.0	251.5	254.4	262.9	272.5	290.3	316.6	349.1	417.9	491.1	569.5
62.5°	215.2	217.8	220.8	224.8	233.7	246.3	264.8	294.7	341.0	408.6	478.5
65°	183.4	186.0	186.4	191.2	197.1	207.5	221.5	243.3	281.8	335.0	392.7
67.5°	155.3	156.4	157.5	161.2	166.8	173.4	182.7	199.0	229.3	265.2	321.4
70°	130.2	130.9	131.3	135.3	137.9	143.9	148.7	159.0	178.2	206.0	249.6
72.5°	106.5	105.4	105.0	108.4	109.5	114.3	120.2	127.6	137.9	157.5	190.1
75°	83.6	83.9	84.3	86.2	86.5	88.8	92.5	97.3	102.1	113.5	134.2
77.5°	64.3	62.9	62.9	65.1	65.8	66.2	68.8	71.4	74.0	80.6	88.8
80°	43.6	44.4	44.4	44.4	44.7	45.5	47.0	49.2	51.0	55.1	56.6
82.5°	31.1	31.1	30.7	31.4	31.8	32.2	32.2	32.2	33.3	34.4	35.9
85°	19.2	19.6	18.5	19.2	19.6	19.6	19.6	19.6	20.7	20.3	20.7
87.5°	8.1	8.5	8.5	8.9	8.9	9.2	8.9	9.2	8.9	8.9	9.2
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°	932.7	932.7	932.7	932.7	932.7	932.7	932.7	932.7	932.7	932.7	932.7
2.5°	963.4	958.9	956.7	952.3	946.3	942.6	938.9	933.8	929.7	923.4	917.9
5°	998.9	990.0	981.8	970.7	960.0	950.8	941.2	930.4	920.8	910.1	898.6
7.5°	1038.4	1024.4	1007.4	987.8	971.1	956.7	940.4	924.5	910.1	893.1	877.6
10°	1076.5	1054.0	1031.4	1005.1	980.7	959.3	937.5	915.3	896.4	875.3	856.1
12.5°	1106.1	1084.6	1051.0	1018.5	986.6	958.9	931.5	904.6	879.8	856.5	833.5
15°	1132.0	1096.5	1068.0	1032.5	993.7	956.0	921.9	890.5	860.5	833.2	809.9
17.5°	1139.4	1107.6	1076.5	1035.1	993.3	950.4	911.2	873.9	840.6	810.3	784.0
20°	1138.6	1106.5	1072.8	1033.2	988.9	941.9	898.3	856.5	818.8	784.0	755.9
22.5°	1127.5	1096.5	1062.5	1022.5	977.4	929.0	883.1	836.9	795.8	759.6	730.7
25°	1115.7	1076.5	1041.0	1000.7	957.8	913.1	864.2	814.3	771.4	733.7	701.2
27.5°	1105.4	1058.4	1014.8	975.2	931.2	890.9	842.4	790.3	746.3	706.7	673.1
30°	1088.7	1039.2	986.3	943.0	900.5	858.3	813.9	766.6	718.5	678.2	644.6
32.5°	1074.3	1011.8	954.5	905.7	863.1	826.2	783.6	738.1	691.2	652.7	616.5
35°	1058.4	983.7	923.8	866.5	823.9	783.6	750.0	708.9	662.3	621.6	589.1
37.5°	1039.5	954.8	886.1	827.6	783.6	742.2	711.9	675.3	633.1	592.8	560.6
40°	1018.5	925.3	846.1	785.8	738.5	697.1	671.6	639.0	603.2	563.2	533.3
42.5°	991.8	893.8	809.9	744.1	691.5	654.2	628.7	601.7	568.8	534.0	501.5
45°	958.2	854.6	766.6	697.1	645.3	609.1	582.4	562.5	536.2	503.7	473.0
47.5°	917.1	813.6	722.2	650.1	600.2	565.4	540.7	520.7	500.7	472.6	443.4
50°	862.8	766.6	679.0	605.4	552.5	518.8	496.7	480.8	462.6	439.7	413.1
52.5°	802.9	713.7	627.9	559.2	508.1	474.5	451.5	438.2	424.5	405.7	382.8
55°	733.3	660.8	579.1	511.8	461.9	428.6	410.5	397.5	386.1	371.7	352.4
57.5°	659.7	596.1	525.1	463.0	416.0	384.6	368.7	358.0	348.4	338.0	322.1
60°	582.4	537.3	470.0	413.1	372.0	346.1	331.0	321.0	312.1	303.6	291.8
62.5°	501.8	464.5	414.2	365.7	329.1	304.7	293.6	285.1	275.9	268.5	260.0
65°	420.1	398.7	363.9	318.4	284.8	264.8	254.1	247.0	242.6	234.1	227.4
67.5°	345.8	333.9	304.4	273.7	247.8	229.7	219.7	214.5	209.7	205.6	198.2
70°	275.1	266.6	249.6	227.8	207.5	191.9	184.5	183.1	176.4	172.3	168.6
72.5°	209.7	207.5	193.4	183.8	172.3	160.1	154.6	151.6	147.2	143.5	142.0
75°	149.0	152.4	147.9	143.1	137.6	127.6	122.8	121.3	117.2	116.1	114.3
77.5°	101.7	106.5	108.0	105.8	103.2	99.8	96.5	95.0	91.0	90.2	89.1
80°	64.0	71.0	73.6	73.2	72.1	72.5	68.4	68.0	66.2	65.1	66.2
82.5°	38.8	42.5	47.3	48.4	47.0	47.7	46.6	45.1	45.1	45.9	44.4
85°	21.1	21.4	23.7	25.1	27.0	28.5	27.0	27.4	27.0	27.0	25.9
87.5°	9.2	9.6	9.6	9.2	10.0	10.7	12.2	12.9	12.6	11.5	10.0
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	932.7	932.7	932.7	932.7	932.7	932.7	932.7	932.7	932.7	932.7	932.7
2.5°	913.4	910.8	906.4	902.7	894.2	888.3	887.5	887.9	887.2	886.4	886.1
5°	891.2	882.7	874.6	867.6	858.0	848.3	843.9	842.1	841.3	837.2	839.5
7.5°	867.6	854.6	845.0	831.7	820.2	812.1	804.3	800.6	799.9	794.3	792.9
10°	842.4	826.9	812.5	799.2	787.7	776.2	767.0	763.7	759.2	754.8	748.1
12.5°	817.6	798.4	782.5	767.7	752.2	739.2	731.9	727.0	721.5	717.4	715.2
15°	788.1	771.8	752.2	736.3	720.4	708.9	698.9	690.1	684.9	681.6	672.3
17.5°	761.4	740.0	721.5	706.3	689.0	676.0	665.7	658.3	649.4	642.7	636.8
20°	733.0	710.8	693.8	675.6	657.9	642.0	629.0	623.1	616.8	610.6	607.2
22.5°	702.3	683.0	663.8	644.9	626.1	609.1	600.9	592.4	586.9	580.6	576.2
25°	675.6	654.6	635.3	614.3	593.5	583.6	572.5	564.0	559.5	553.2	548.4
27.5°	647.2	626.8	603.9	582.1	569.9	552.9	545.5	538.8	532.9	526.6	523.3
30°	620.5	596.9	573.9	556.9	541.0	528.8	521.8	513.7	505.5	502.6	498.1
32.5°	592.4	566.9	546.9	529.9	516.6	501.8	495.2	488.5	480.8	477.1	473.0
35°	563.2	538.4	518.8	503.3	489.6	478.5	471.1	464.1	459.3	453.8	450.8
37.5°	532.5	511.1	492.2	476.7	464.1	455.2	446.0	440.4	433.8	428.6	426.4
40°	503.3	484.1	466.0	451.5	440.1	429.3	421.2	414.2	410.1	405.7	402.0
42.5°	477.1	457.1	441.6	426.4	416.0	405.7	397.5	392.4	385.3	383.5	378.3
45°	448.9	430.5	414.9	400.9	390.1	381.6	372.0	365.7	361.3	356.9	355.0
47.5°	420.5	403.5	389.0	376.1	365.0	355.4	348.0	341.3	336.5	332.5	330.2
50°	392.7	377.9	363.5	350.9	339.5	332.5	323.6	316.2	312.5	308.1	305.5
52.5°	363.5	351.3	335.8	325.1	314.3	305.1	296.2	291.4	287.7	284.0	282.2
55°	336.2	323.2	309.9	298.4	288.1	278.5	271.4	267.7	262.9	260.7	260.3
57.5°	308.1	294.7	283.6	273.3	261.5	254.1	247.8	243.3	239.3	237.4	237.4
60°	277.4	266.6	256.3	244.8	236.3	227.8	221.1	218.2	214.1	213.4	210.8
62.5°	249.3	239.3	229.3	218.6	210.8	202.3	197.5	193.4	191.2	188.2	185.3
65°	220.0	211.2	201.5	192.3	186.0	176.8	172.3	167.5	164.9	161.6	157.9
67.5°	191.9	183.4	174.5	166.0	160.9	152.0	149.0	143.1	141.3	137.6	134.2
70°	162.3	156.4	149.4	140.9	136.5	129.4	126.5	120.9	118.0	115.8	113.9
72.5°	136.8	131.3	123.1	117.6	112.1	107.6	102.8	100.2	97.6	95.8	95.4
75°	111.7	104.7	99.8	94.7	91.0	86.5	84.3	82.5	81.4	80.2	79.1
77.5°	85.4	82.5	77.7	72.5	69.5	67.7	66.2	65.5	64.3	64.0	62.9
80°	63.6	59.5	56.6	54.7	52.5	51.0	49.9	47.3	45.9	45.1	44.4
82.5°	42.2	41.0	38.8	37.0	35.1	34.8	33.7	32.9	32.5	32.5	32.2
85°	25.5	22.6	22.6	22.2	22.2	21.8	21.1	21.1	20.3	21.4	21.4
87.5°	10.4	10.4	9.6	9.6	10.0	9.2	8.9	8.9	8.9	8.5	8.9
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: P243765

CATALOG NUMBER: S125RDR-H850D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	932.7	932.7	932.7	932.7
2.5°	886.1	884.2	884.6	882.4
5°	835.4	834.3	830.6	827.6
7.5°	789.2	784.4	784.0	781.0
10°	745.9	741.5	739.2	739.6
12.5°	708.2	703.4	703.4	700.4
15°	667.9	663.1	663.8	663.4
17.5°	634.6	631.3	628.7	626.5
20°	602.0	598.0	596.5	594.7
22.5°	572.1	569.1	569.5	569.5
25°	543.6	544.0	540.7	539.9
27.5°	518.5	517.7	517.0	515.5
30°	494.8	491.8	491.1	489.6
32.5°	470.4	470.0	467.1	468.2
35°	445.6	444.5	443.8	443.0
37.5°	422.7	420.5	420.1	419.4
40°	399.4	398.7	395.3	397.2
42.5°	374.2	372.8	372.8	372.8
45°	353.2	349.1	349.1	347.6
47.5°	329.5	328.0	327.3	324.7
50°	306.2	304.0	303.2	303.2
52.5°	282.2	281.8	282.5	281.1
55°	261.1	261.5	261.1	260.3
57.5°	238.2	236.3	236.3	236.7
60°	210.8	210.8	211.5	210.1
62.5°	184.5	183.8	181.2	180.5
65°	157.5	154.6	154.2	154.6
67.5°	133.5	132.4	130.5	130.9
70°	112.8	112.4	110.6	109.5
72.5°	94.3	94.3	93.2	93.2
75°	78.8	78.0	77.7	78.4
77.5°	60.6	58.8	59.5	58.4
80°	44.0	44.7	44.0	43.6
82.5°	32.5	31.8	32.2	31.8
85°	20.7	20.0	20.3	20.0
87.5°	8.5	8.9	8.9	8.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)