

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: P243666

Luminaire Tested: **S125DR-H610D830-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243666
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-61)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DR-H610D830-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2208.1 lumens
Efficiency: N/A
Efficacy: 128.4 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

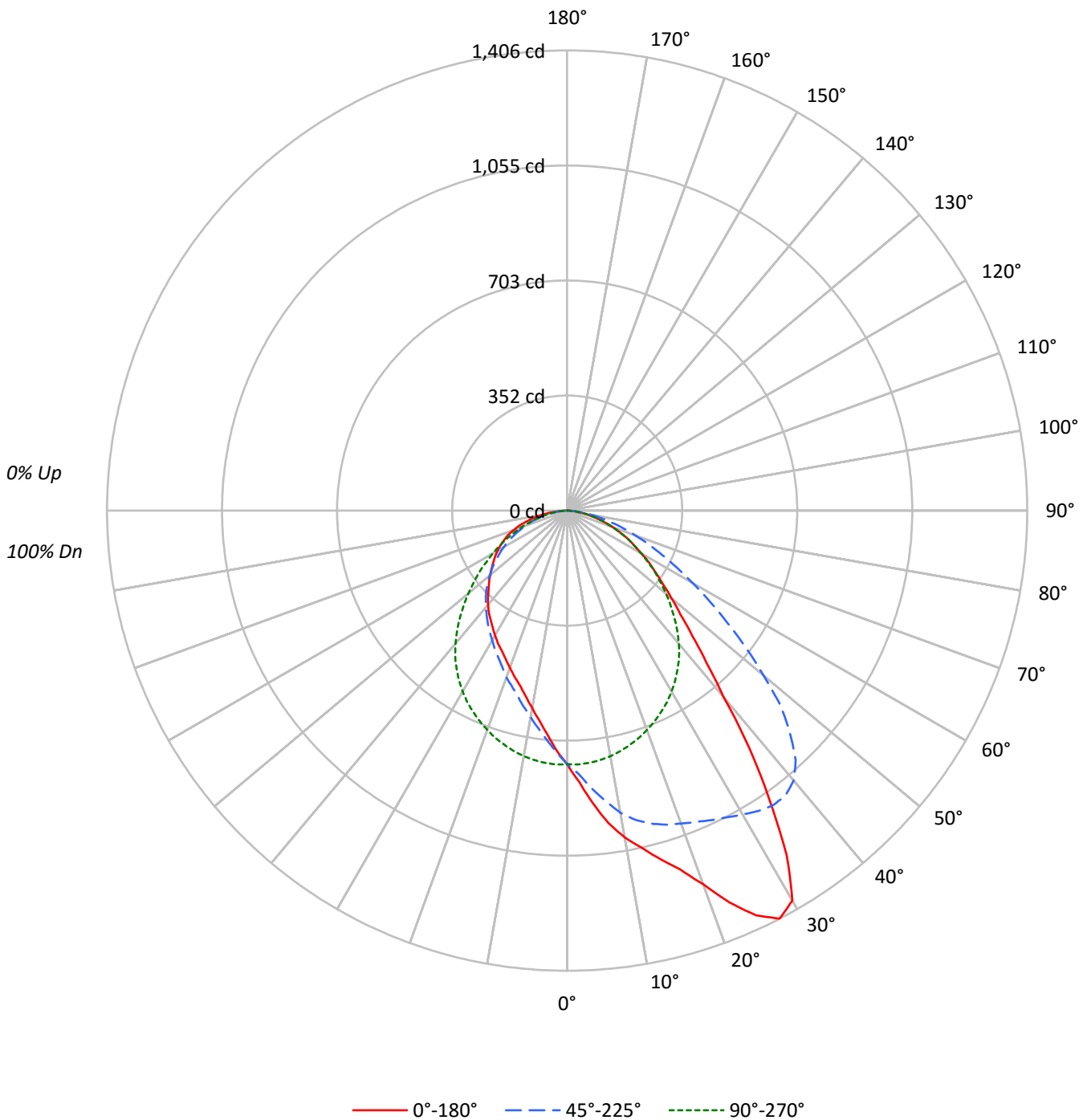
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P243666

CATALOG NUMBER: S125DR-H610D830-X4F0-XX-UDD-A-W

Luminous Intensity Polar Plot





TEST NUMBER: P243666

CATALOG NUMBER: S125DR-H610D830-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	97	90	84	79	87	82	78		84	79	76		81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66		74	69	65		72	67	63	61
4	84	73	64	58	82	71	63	57	69	62	56		66	61	56		64	59	55	53
5	78	65	56	50	75	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	40
7	67	53	45	39	65	53	44	39	51	44	38		50	43	38		48	42	38	36
8	62	49	40	35	60	48	40	35	47	40	34		46	39	34		44	38	34	32
9	58	45	37	31	57	44	36	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°	5507	5507	5507
5°	6397	5519	4904
10°	7319	5501	4426
15°	8114	5451	4078
20°	9187	5397	3869
25°	10697	5326	3705
30°	11293	5239	3615
35°	9339	5111	3538
40°	6908	4927	3487
45°	5432	4658	3410
50°	4600	4356	3398
55°	4095	4057	3410
60°	3716	3724	3484
65°	3444	3414	3582
70°	3094	3055	3603
75°	2639	2683	3553
80°	2161	2198	3319
85°	1484	1566	2822



TEST NUMBER: P243666

CATALOG NUMBER: S125DR-H610D830-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.8	3.4
10°-20°	223.6	10.1
20°-30°	363.6	16.5
30°-40°	442.4	20.0
40°-50°	404.8	18.3
50°-60°	323.9	14.7
60°-70°	225.6	10.2
70°-80°	119.9	5.4
80°-90°	29.4	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°	662.1	30.0
0°-40°	1104.4	50.0
0°-60°	1833.1	83.0
0°-90°	2208.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2208.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	775	775	775	775	775	
5°	897	851	774	704	687	89
15°	1103	990	741	586	554	316
25°	1364	1043	679	496	472	623
35°	1076	1099	589	422	408	667
45°	540	963	463	350	339	426
55°	330	598	327	267	275	298
65°	205	319	203	179	213	202
75°	96	141	98	94	129	104
85°	18	27	19	22	35	24
90°	0	0	0	0	0	



TEST NUMBER: P243666

CATALOG NUMBER: S125DR-H610D830-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8
2.5°	829.4	826.0	825.0	825.3	823.5	821.9	818.1	813.1	809.6	805.2	804.0
5°	896.7	888.2	889.7	887.2	883.1	877.8	873.1	865.6	858.3	851.4	842.3
7.5°	962.6	961.1	956.7	956.0	949.4	940.3	930.9	920.5	905.1	894.5	882.2
10°	1014.2	1017.3	1011.0	1011.3	999.7	990.6	982.4	968.9	951.6	937.2	919.3
12.5°	1055.6	1056.9	1055.9	1051.9	1044.3	1028.9	1021.1	1006.9	988.1	968.3	954.5
15°	1102.8	1099.3	1094.0	1088.9	1077.9	1066.9	1050.6	1034.0	1010.1	990.3	970.2
17.5°	1149.9	1149.3	1142.7	1132.0	1118.1	1103.7	1079.2	1057.8	1032.4	1006.3	981.2
20°	1214.6	1211.1	1201.4	1189.2	1163.7	1143.3	1112.8	1083.6	1050.3	1017.6	988.4
22.5°	1295.7	1284.3	1274.6	1255.8	1226.5	1191.0	1156.8	1114.4	1067.9	1029.6	993.1
25°	1364.1	1359.1	1348.8	1327.7	1294.4	1251.7	1200.8	1152.7	1094.3	1043.4	995.9
27.5°	1405.6	1403.4	1397.1	1377.3	1349.7	1307.3	1252.9	1191.7	1125.4	1056.6	999.7
30°	1376.1	1376.4	1379.9	1377.7	1365.4	1338.1	1289.7	1228.1	1151.5	1072.3	1000.6
32.5°	1249.2	1257.6	1284.7	1297.5	1314.8	1320.5	1298.8	1247.6	1173.4	1088.0	1003.8
35°	1076.4	1097.1	1115.3	1153.0	1197.9	1234.7	1256.1	1239.4	1182.6	1098.7	1005.4
37.5°	913.6	912.1	940.3	981.2	1028.9	1091.4	1152.1	1185.4	1166.8	1096.5	1002.5
40°	744.6	759.0	776.6	812.8	868.7	945.7	1017.9	1089.2	1115.0	1077.0	991.5
42.5°	629.0	635.6	653.2	681.4	721.7	800.2	871.5	963.3	1029.2	1033.6	967.3
45°	540.4	547.6	552.6	580.6	618.0	670.8	744.0	836.3	924.9	963.3	928.1
47.5°	469.4	473.5	484.5	501.4	525.9	572.7	631.2	715.1	811.5	886.0	874.0
50°	416.0	419.1	427.9	437.3	457.4	492.0	539.1	607.9	700.6	782.0	808.7
52.5°	368.8	372.9	377.3	386.4	405.0	428.2	466.6	520.3	606.4	689.6	732.0
55°	330.5	332.1	336.8	343.7	357.8	375.4	405.9	454.6	514.9	597.9	656.3
57.5°	297.2	295.6	300.7	305.4	314.8	329.6	351.6	387.7	445.2	515.9	576.8
60°	261.4	263.0	266.7	270.5	277.1	290.0	307.3	336.2	378.3	441.7	503.9
62.5°	230.6	231.9	232.8	238.1	244.1	253.2	267.4	290.9	325.8	378.3	433.9
65°	204.8	202.6	203.9	207.7	212.4	219.9	233.1	250.4	276.5	319.2	365.4
67.5°	174.7	175.3	175.6	177.8	181.9	189.1	198.6	212.7	234.1	267.7	308.2
70°	148.9	149.2	149.5	151.4	154.9	159.0	165.6	176.6	194.8	220.9	252.6
72.5°	122.5	123.8	123.8	125.4	127.9	130.1	136.4	145.5	159.3	180.0	206.7
75°	96.1	98.3	99.0	100.9	103.0	103.7	108.4	115.6	124.4	141.4	162.4
77.5°	74.8	74.8	76.0	78.2	78.2	80.1	85.1	88.3	95.2	106.8	122.8
80°	52.8	53.7	53.7	54.4	55.6	57.2	59.4	62.2	68.2	76.7	85.1
82.5°	34.6	34.9	35.2	36.8	36.1	37.7	38.6	42.1	44.9	49.0	54.4
85°	18.2	18.2	18.5	19.5	20.4	20.7	21.4	22.9	25.1	27.0	30.2
87.5°	7.5	7.2	7.2	7.9	7.9	8.2	8.5	9.1	10.4	10.4	11.6
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: P243666

CATALOG NUMBER: S125DR-H610D830-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8
2.5°	803.0	800.5	796.1	792.3	787.6	784.2	780.7	776.3	771.9	767.2	762.2
5°	835.1	827.5	819.1	810.6	800.5	792.3	783.6	773.5	765.0	755.6	745.5
7.5°	871.8	858.6	843.9	827.2	811.5	797.4	782.9	769.1	756.5	742.4	728.6
10°	907.3	884.4	865.9	843.2	820.9	800.2	780.4	762.2	744.0	726.4	709.4
12.5°	931.5	905.5	882.2	856.1	830.1	804.0	777.9	752.8	731.1	709.7	691.8
15°	948.2	930.0	899.2	867.8	833.5	799.6	770.0	740.8	715.1	690.2	668.9
17.5°	958.5	935.0	904.8	871.8	834.1	798.6	763.1	728.3	698.7	672.0	647.8
20°	961.4	933.7	902.3	868.1	830.4	791.4	751.5	713.5	681.4	651.0	626.5
22.5°	958.5	926.5	892.9	859.6	820.0	780.4	738.6	697.2	660.4	629.0	603.2
25°	953.8	915.2	880.0	840.7	804.0	766.3	723.2	679.2	640.9	608.2	579.3
27.5°	947.9	903.6	860.2	821.6	781.7	744.6	705.0	660.1	620.2	584.4	557.3
30°	941.0	888.2	840.1	794.2	756.5	719.5	680.8	638.4	598.2	563.9	534.7
32.5°	933.1	871.8	815.3	766.0	725.7	691.5	655.4	614.8	575.3	538.5	513.0
35°	922.1	849.5	788.6	735.2	693.4	656.3	624.6	589.1	549.8	515.6	489.2
37.5°	909.2	829.7	761.6	703.8	658.2	620.2	591.0	562.1	525.3	492.3	466.9
40°	891.9	805.9	733.0	670.4	621.8	584.4	555.8	531.0	500.5	467.2	444.2
42.5°	869.3	779.5	700.6	634.0	586.9	547.0	520.3	497.7	471.6	442.7	420.1
45°	843.6	749.3	664.5	599.1	547.9	509.9	483.8	463.4	443.6	417.9	396.8
47.5°	803.3	713.8	631.8	559.5	509.3	472.5	448.0	428.5	413.8	393.3	372.6
50°	755.6	673.6	593.2	520.6	469.7	434.2	410.9	394.0	381.4	365.7	350.0
52.5°	703.1	628.4	550.7	482.9	432.0	398.4	373.9	358.8	350.6	338.1	325.8
55°	641.9	577.5	505.2	443.3	393.3	359.1	338.1	327.4	318.3	312.0	301.0
57.5°	580.3	525.9	461.5	400.3	354.4	323.9	305.1	293.1	286.5	282.1	274.3
60°	513.0	470.3	411.3	358.2	317.3	288.4	271.8	262.0	256.1	253.5	248.2
62.5°	449.0	416.3	362.6	318.3	281.8	256.4	239.7	231.9	228.1	225.3	222.1
65°	385.8	360.0	317.6	276.2	245.4	222.4	209.2	203.0	200.1	197.0	196.7
67.5°	328.9	305.4	271.4	237.5	211.8	192.3	180.7	174.4	171.2	171.5	170.0
70°	273.0	254.8	227.1	199.5	177.5	162.1	151.1	147.0	145.8	145.5	144.2
72.5°	220.9	210.5	186.3	163.1	145.8	133.8	125.0	121.6	120.0	119.4	119.4
75°	175.0	167.5	146.7	129.1	115.9	106.2	100.2	97.7	95.5	96.8	95.8
77.5°	131.3	125.0	110.9	98.3	88.3	80.1	77.3	75.1	73.8	73.5	74.8
80°	92.4	88.6	79.8	69.7	62.2	57.5	55.6	53.7	52.8	52.2	52.8
82.5°	59.4	57.2	50.9	44.9	40.5	38.0	36.1	35.2	33.6	33.9	34.6
85°	32.4	31.7	27.6	25.8	21.7	21.4	20.1	19.2	19.5	18.9	19.8
87.5°	13.2	12.6	11.6	10.7	9.4	8.5	7.9	8.5	7.5	8.5	8.2
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: P243666

CATALOG NUMBER: S125DR-H610D830-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8
2.5°	759.7	756.2	752.1	748.4	742.7	738.9	737.1	737.7	735.5	734.9	734.5
5°	739.6	731.7	724.2	717.9	711.3	703.8	698.4	696.8	696.2	694.6	691.2
7.5°	718.8	708.8	699.0	689.9	680.5	671.7	666.4	662.0	659.5	655.1	654.1
10°	696.8	684.6	674.2	661.0	649.7	640.6	633.7	629.9	627.7	623.6	620.2
12.5°	675.8	662.9	646.9	634.9	623.0	613.6	605.7	599.4	597.9	592.5	589.7
15°	653.2	637.5	623.0	609.2	597.9	585.9	581.2	575.6	569.9	565.2	564.3
17.5°	631.5	612.6	598.5	585.0	571.2	562.4	556.1	552.3	547.9	545.4	541.0
20°	605.4	590.0	574.3	561.7	549.8	542.3	533.8	530.3	527.2	521.2	519.3
22.5°	583.4	564.9	551.7	539.1	528.4	517.8	511.8	508.3	503.6	500.5	498.0
25°	560.5	545.1	528.4	515.9	506.8	496.1	492.0	487.6	483.5	480.7	478.2
27.5°	538.2	521.2	507.7	495.1	485.7	478.2	472.5	467.8	465.0	462.8	461.2
30°	514.9	499.2	486.7	475.0	464.4	458.1	452.7	450.8	447.7	446.1	443.6
32.5°	493.9	477.9	465.9	455.9	446.4	440.2	437.0	434.2	431.0	428.2	427.9
35°	470.0	456.2	445.2	434.2	427.3	422.3	418.8	416.0	413.5	411.3	410.0
37.5°	449.0	435.8	423.5	415.7	408.1	403.7	399.9	399.0	396.5	396.8	394.9
40°	426.3	414.4	404.0	396.2	391.1	386.4	383.9	380.8	379.2	379.5	378.0
42.5°	404.3	393.3	383.9	376.7	371.4	367.9	365.7	363.2	361.3	360.0	359.7
45°	382.0	372.3	364.4	357.2	352.8	349.7	346.8	343.7	342.1	341.5	341.2
47.5°	360.0	351.2	342.8	337.7	333.7	330.8	328.0	325.5	324.2	323.3	321.7
50°	337.4	328.6	322.7	316.4	312.9	309.1	306.0	304.7	303.2	302.9	304.4
52.5°	313.9	306.9	301.6	296.6	292.5	288.4	285.3	283.7	284.6	284.6	286.5
55°	291.6	284.3	279.3	275.2	270.8	267.0	263.9	263.9	263.9	265.8	268.3
57.5°	266.7	260.5	256.7	252.0	247.9	245.4	243.2	242.9	244.1	247.3	250.1
60°	241.6	237.2	233.1	229.3	225.3	223.4	223.1	222.4	224.3	227.5	233.4
62.5°	216.8	214.0	208.9	207.0	203.6	201.4	201.4	202.0	204.8	209.9	215.2
65°	192.9	188.8	185.0	183.2	181.0	179.1	179.1	181.6	185.7	190.4	197.0
67.5°	168.4	164.9	162.4	160.5	158.0	157.1	158.0	160.9	165.9	170.6	177.5
70°	142.0	141.4	139.2	136.7	135.4	135.4	136.4	139.5	143.3	150.5	156.5
72.5°	117.8	117.8	116.6	115.0	114.0	115.0	115.6	118.8	123.5	129.8	136.4
75°	95.8	94.9	93.9	93.3	93.0	93.6	94.6	97.1	102.7	108.7	114.0
77.5°	74.1	73.5	72.6	73.2	73.2	73.5	76.3	79.2	82.3	87.0	92.7
80°	53.4	53.7	52.8	52.5	54.0	54.7	56.9	59.1	61.3	66.6	70.7
82.5°	35.2	35.8	35.5	36.1	36.8	36.8	39.3	41.5	43.4	47.1	50.3
85°	20.1	20.4	20.4	21.4	22.0	21.7	23.9	25.1	26.1	28.9	30.8
87.5°	8.8	9.1	9.4	9.4	9.4	10.7	11.0	11.6	11.9	12.6	13.5
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: P243666

CATALOG NUMBER: S125DR-H610D830-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	774.8	774.8	774.8	774.8
2.5°	731.7	731.4	733.0	733.9
5°	689.0	688.0	686.8	687.4
7.5°	651.0	648.5	647.8	647.8
10°	617.4	614.8	614.2	613.3
12.5°	588.8	585.0	583.4	581.9
15°	561.7	561.1	557.7	554.2
17.5°	536.9	537.9	534.4	532.8
20°	516.2	513.4	512.1	511.5
22.5°	495.1	492.9	492.9	490.7
25°	476.3	474.4	474.7	472.5
27.5°	458.7	458.4	458.1	457.4
30°	442.4	441.1	439.8	440.5
32.5°	426.6	424.8	423.8	423.5
35°	410.3	409.7	408.4	407.8
37.5°	394.3	394.6	393.0	392.7
40°	377.0	376.7	376.4	375.8
42.5°	358.8	357.8	358.5	358.2
45°	340.6	339.6	340.3	339.3
47.5°	322.7	323.3	323.3	323.6
50°	305.1	306.3	306.3	307.3
52.5°	288.7	291.2	291.2	290.9
55°	271.1	274.0	274.9	275.2
57.5°	254.5	257.3	260.1	260.8
60°	236.6	241.6	244.4	245.1
62.5°	220.6	225.3	229.0	229.3
65°	202.6	208.3	211.8	213.0
67.5°	184.4	188.8	193.5	195.4
70°	163.7	169.0	172.2	173.4
72.5°	142.0	148.0	152.1	152.7
75°	121.3	125.7	128.8	129.4
77.5°	97.7	102.1	104.9	105.6
80°	74.1	77.9	79.8	81.1
82.5°	52.5	55.0	55.9	57.2
85°	32.4	34.2	34.6	34.6
87.5°	14.1	14.5	14.5	15.1
90°	0.0	0.0	0.0	0.0

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