

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: P243681

Luminaire Tested: **S125DR-H610D930-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243681  
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-H610D930-X4F0-XX-UDD-A-W  
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

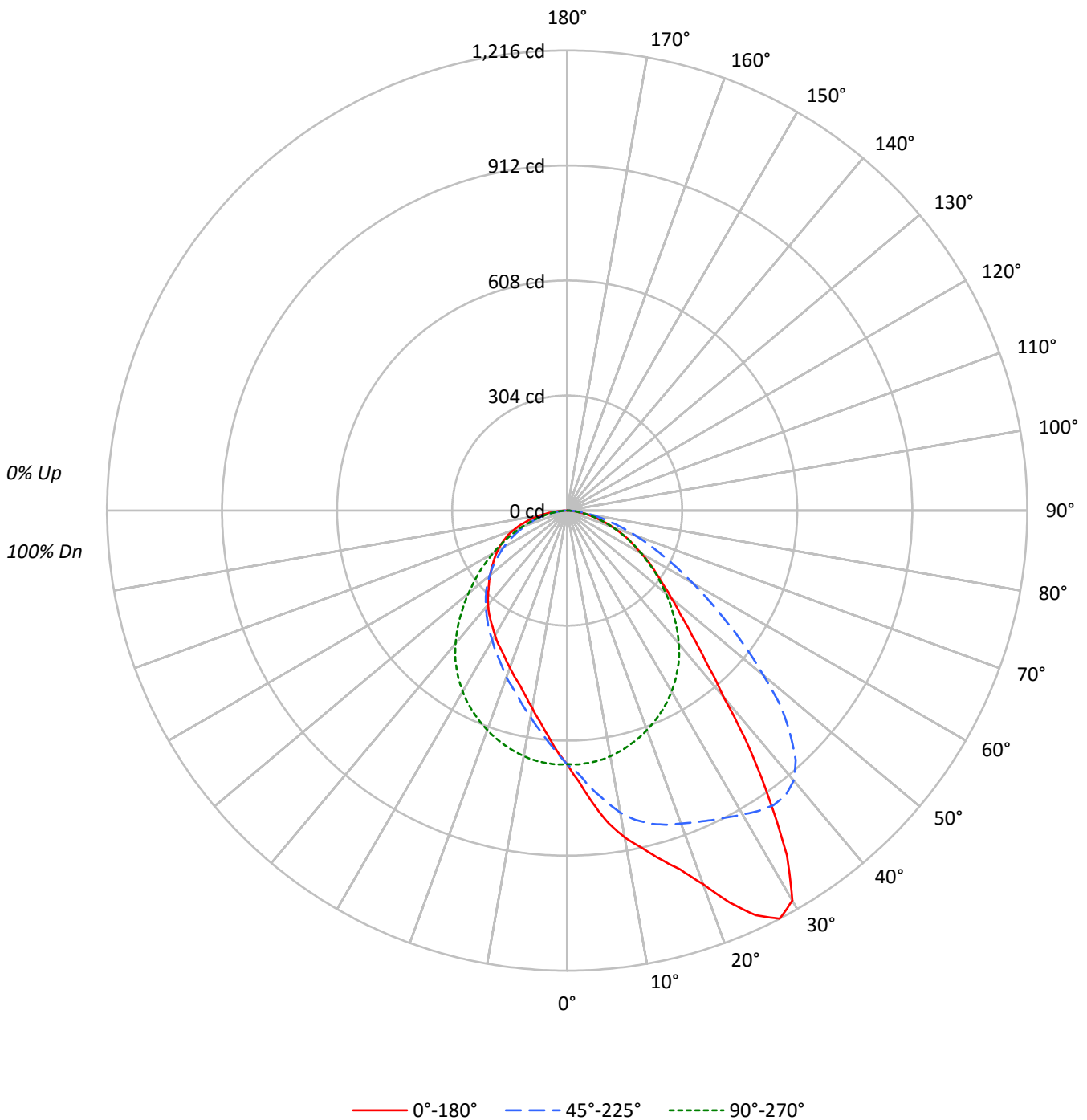
Lumens per Lamp: N/A  
Luminaire Lumens: 1910.0 lumens  
Efficiency: N/A  
Efficacy: 111.0 lumens/watt  
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53  
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.2  
Input Voltage (V): 120  
Input Current (Ain): 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



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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	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°	4763	4763	4763
5°	5534	4774	4242
10°	6331	4758	3829
15°	7019	4715	3527
20°	7946	4668	3346
25°	9254	4607	3205
30°	9769	4532	3127
35°	8079	4422	3060
40°	5976	4261	3015
45°	4698	4029	2950
50°	3978	3768	2939
55°	3543	3509	2950
60°	3214	3221	3014
65°	2980	2953	3099
70°	2677	2643	3117
75°	2285	2320	3076
80°	1870	1903	2869
85°	1288	1354	2438



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.7	3.4
10°-20°	193.5	10.1
20°-30°	314.5	16.5
30°-40°	382.6	20.0
40°-50°	350.1	18.3
50°-60°	280.2	14.7
60°-70°	195.2	10.2
70°-80°	103.7	5.4
80°-90°	25.5	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°	572.7	30.0
0°-40°	955.3	50.0
0°-60°	1585.7	83.0
0°-90°	1910.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1910.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	670	670	670	670	670	
5°	776	736	669	609	595	77
15°	954	857	641	507	479	274
25°	1180	902	588	429	409	539
35°	931	950	510	365	353	577
45°	467	833	401	302	294	369
55°	286	517	283	231	238	258
65°	177	276	176	155	184	174
75°	83	122	84	81	112	90
85°	16	23	17	19	30	20
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°	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2
2.5°	717.5	714.5	713.6	713.9	712.3	710.9	707.7	703.3	700.3	696.5	695.4
5°	775.6	768.3	769.6	767.5	763.9	759.3	755.2	748.7	742.5	736.5	728.6
7.5°	832.7	831.3	827.5	827.0	821.3	813.4	805.2	796.3	782.9	773.7	763.1
10°	877.2	880.0	874.5	874.8	864.7	856.9	849.8	838.1	823.2	810.7	795.2
12.5°	913.1	914.2	913.4	909.9	903.3	890.0	883.2	871.0	854.7	837.6	825.6
15°	953.9	950.9	946.3	941.9	932.4	922.9	908.8	894.4	873.7	856.6	839.2
17.5°	994.6	994.1	988.4	979.2	967.2	954.7	933.5	915.0	893.0	870.5	848.7
20°	1050.6	1047.6	1039.2	1028.6	1006.6	988.9	962.6	937.3	908.5	880.2	855.0
22.5°	1120.7	1111.0	1102.5	1086.2	1061.0	1030.2	1000.6	963.9	923.7	890.6	859.0
25°	1180.0	1175.6	1166.7	1148.5	1119.7	1082.7	1038.7	997.1	946.5	902.5	861.5
27.5°	1215.9	1214.0	1208.5	1191.4	1167.5	1130.8	1083.8	1030.8	973.4	913.9	864.7
30°	1190.3	1190.6	1193.6	1191.7	1181.1	1157.4	1115.6	1062.3	996.0	927.5	865.6
32.5°	1080.5	1087.9	1111.2	1122.4	1137.3	1142.2	1123.5	1079.2	1015.0	941.1	868.3
35°	931.1	949.0	964.8	997.4	1036.2	1068.0	1086.5	1072.1	1022.9	950.3	869.6
37.5°	790.3	788.9	813.4	848.7	890.0	944.1	996.5	1025.4	1009.3	948.4	867.2
40°	644.1	656.6	671.8	703.0	751.4	818.0	880.5	942.2	964.5	931.6	857.7
42.5°	544.1	549.8	565.0	589.5	624.2	692.2	753.9	833.2	890.3	894.1	836.8
45°	467.4	473.7	478.0	502.2	534.6	580.2	643.5	723.4	800.1	833.2	802.8
47.5°	406.0	409.5	419.1	433.7	454.9	495.4	546.0	618.5	702.0	766.4	756.0
50°	359.8	362.5	370.1	378.3	395.7	425.6	466.3	525.9	606.0	676.4	699.5
52.5°	319.0	322.6	326.4	334.3	350.3	370.4	403.6	450.0	524.5	596.5	633.2
55°	285.9	287.3	291.3	297.3	309.5	324.8	351.1	393.2	445.4	517.2	567.7
57.5°	257.1	255.7	260.1	264.2	272.3	285.1	304.1	335.4	385.1	446.2	499.0
60°	226.1	227.5	230.7	234.0	239.7	250.8	265.8	290.8	327.2	382.1	435.9
62.5°	199.5	200.6	201.4	206.0	211.2	219.0	231.3	251.7	281.8	327.2	375.3
65°	177.2	175.3	176.4	179.6	183.7	190.2	201.6	216.6	239.2	276.1	316.1
67.5°	151.1	151.6	151.9	153.8	157.3	163.6	171.8	184.0	202.5	231.5	266.6
70°	128.8	129.1	129.4	131.0	134.0	137.5	143.2	152.7	168.5	191.0	218.5
72.5°	106.0	107.1	107.1	108.4	110.6	112.5	117.9	125.8	137.8	155.7	178.8
75°	83.2	85.1	85.6	87.2	89.1	89.7	93.8	100.0	107.6	122.3	140.5
77.5°	64.7	64.7	65.8	67.7	67.7	69.3	73.6	76.4	82.3	92.4	106.3
80°	45.7	46.5	46.5	47.0	48.1	49.5	51.4	53.8	59.0	66.3	73.6
82.5°	29.9	30.2	30.4	31.8	31.3	32.6	33.4	36.4	38.9	42.4	47.0
85°	15.8	15.8	16.0	16.8	17.7	17.9	18.5	19.8	21.7	23.4	26.1
87.5°	6.5	6.3	6.3	6.8	6.8	7.1	7.3	7.9	9.0	9.0	10.1
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°	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2
2.5°	694.6	692.4	688.6	685.4	681.3	678.3	675.3	671.5	667.7	663.6	659.3
5°	722.3	715.8	708.5	701.1	692.4	685.4	677.8	669.1	661.7	653.6	644.9
7.5°	754.1	742.7	730.0	715.5	702.0	689.7	677.2	665.3	654.4	642.2	630.2
10°	784.8	765.0	749.0	729.4	710.1	692.2	675.1	659.3	643.5	628.3	613.6
12.5°	805.8	783.2	763.1	740.5	718.0	695.4	672.9	651.1	632.4	613.9	598.4
15°	820.2	804.4	777.8	750.6	721.0	691.6	666.1	640.8	618.5	597.1	578.6
17.5°	829.1	808.8	782.7	754.1	721.5	690.8	660.1	629.9	604.4	581.3	560.4
20°	831.6	807.7	780.5	750.9	718.3	684.6	650.1	617.2	589.5	563.1	541.9
22.5°	829.1	801.4	772.3	743.5	709.3	675.1	638.9	603.0	571.2	544.1	521.8
25°	825.1	791.6	761.2	727.2	695.4	662.8	625.6	587.5	554.4	526.1	501.1
27.5°	819.9	781.6	744.1	710.7	676.1	644.1	609.8	571.0	536.5	505.5	482.1
30°	813.9	768.3	726.7	687.0	654.4	622.3	588.9	552.2	517.4	487.8	462.5
32.5°	807.1	754.1	705.2	662.6	627.8	598.1	566.9	531.8	497.6	465.8	443.8
35°	797.6	734.8	682.1	635.9	599.8	567.7	540.3	509.6	475.6	446.0	423.1
37.5°	786.5	717.7	658.7	608.7	569.3	536.5	511.2	486.2	454.4	425.9	403.8
40°	771.5	697.1	634.0	579.9	537.8	505.5	480.7	459.3	432.9	404.1	384.3
42.5°	752.0	674.2	606.0	548.4	507.7	473.1	450.0	430.5	407.9	382.9	363.3
45°	729.7	648.2	574.8	518.2	474.0	441.1	418.5	400.8	383.7	361.4	343.2
47.5°	694.9	617.4	546.5	484.0	440.5	408.7	387.5	370.7	357.9	340.2	322.3
50°	653.6	582.7	513.1	450.3	406.3	375.6	355.5	340.8	329.9	316.3	302.7
52.5°	608.2	543.5	476.4	417.7	373.7	344.6	323.4	310.4	303.3	292.4	281.8
55°	555.2	499.5	437.0	383.5	340.2	310.6	292.4	283.2	275.3	269.9	260.3
57.5°	501.9	454.9	399.2	346.2	306.5	280.2	263.9	253.6	247.8	244.0	237.2
60°	443.8	406.8	355.7	309.8	274.5	249.5	235.1	226.6	221.5	219.3	214.7
62.5°	388.3	360.1	313.6	275.3	243.8	221.8	207.4	200.6	197.3	194.9	192.1
65°	333.7	311.4	274.8	238.9	212.2	192.4	181.0	175.6	173.1	170.4	170.1
67.5°	284.5	264.2	234.8	205.5	183.2	166.3	156.3	150.8	148.1	148.4	147.0
70°	236.2	220.4	196.5	172.6	153.5	140.2	130.7	127.2	126.1	125.8	124.7
72.5°	191.0	182.1	161.2	141.0	126.1	115.8	108.2	105.2	103.8	103.3	103.3
75°	151.4	144.8	126.9	111.7	100.3	91.9	86.7	84.5	82.6	83.7	82.9
77.5°	113.6	108.2	95.9	85.1	76.4	69.3	66.9	65.0	63.9	63.6	64.7
80°	79.9	76.6	69.0	60.3	53.8	49.7	48.1	46.5	45.7	45.1	45.7
82.5°	51.4	49.5	44.0	38.9	35.1	32.9	31.3	30.4	29.1	29.4	29.9
85°	28.0	27.4	23.9	22.3	18.8	18.5	17.4	16.6	16.8	16.3	17.1
87.5°	11.4	10.9	10.1	9.2	8.2	7.3	6.8	7.3	6.5	7.3	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



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2
2.5°	657.1	654.1	650.6	647.3	642.4	639.2	637.6	638.1	636.2	635.7	635.4
5°	639.7	632.9	626.4	621.0	615.3	608.7	604.1	602.8	602.2	600.9	597.9
7.5°	621.8	613.1	604.7	596.8	588.6	581.0	576.4	572.6	570.4	566.6	565.8
10°	602.8	592.2	583.2	571.8	562.0	554.1	548.1	544.9	543.0	539.4	536.5
12.5°	584.6	573.4	559.6	549.2	538.9	530.8	524.0	518.5	517.2	512.5	510.1
15°	565.0	551.4	538.9	526.9	517.2	506.8	502.8	497.9	493.0	488.9	488.1
17.5°	546.2	529.9	517.7	506.0	494.1	486.5	481.0	477.8	474.0	471.8	468.0
20°	523.7	510.4	496.8	485.9	475.6	469.1	461.7	458.7	456.0	450.9	449.2
22.5°	504.7	488.6	477.2	466.3	457.1	447.9	442.7	439.7	435.6	432.9	430.7
25°	484.8	471.5	457.1	446.2	438.4	429.1	425.6	421.8	418.2	415.8	413.6
27.5°	465.5	450.9	439.2	428.3	420.1	413.6	408.7	404.7	402.2	400.3	398.9
30°	445.4	431.8	421.0	410.9	401.7	396.2	391.6	390.0	387.3	385.9	383.7
32.5°	427.2	413.3	403.0	394.3	386.2	380.7	378.0	375.6	372.9	370.4	370.1
35°	406.6	394.6	385.1	375.6	369.6	365.2	362.3	359.8	357.6	355.7	354.6
37.5°	388.3	376.9	366.3	359.5	353.0	349.2	346.0	345.1	343.0	343.2	341.6
40°	368.8	358.5	349.5	342.7	338.3	334.3	332.1	329.4	328.0	328.3	326.9
42.5°	349.8	340.2	332.1	325.8	321.2	318.2	316.3	314.2	312.5	311.4	311.2
45°	330.5	322.0	315.2	309.0	305.2	302.5	300.0	297.3	295.9	295.4	295.1
47.5°	311.4	303.8	296.5	292.1	288.6	286.2	283.7	281.5	280.5	279.6	278.3
50°	291.9	284.3	279.1	273.7	270.7	267.4	264.7	263.6	262.2	262.0	263.3
52.5°	271.5	265.5	260.9	256.5	253.0	249.5	246.8	245.4	246.2	246.2	247.8
55°	252.2	245.9	241.6	238.1	234.3	231.0	228.3	228.3	228.3	229.9	232.1
57.5°	230.7	225.3	222.0	218.0	214.4	212.2	210.3	210.1	211.2	213.9	216.3
60°	209.0	205.2	201.6	198.4	194.9	193.2	193.0	192.4	194.0	196.8	201.9
62.5°	187.5	185.1	180.7	179.1	176.1	174.2	174.2	174.7	177.2	181.5	186.2
65°	166.9	163.3	160.1	158.4	156.5	154.9	154.9	157.1	160.6	164.7	170.4
67.5°	145.7	142.7	140.5	138.9	136.7	135.9	136.7	139.1	143.5	147.6	153.5
70°	122.8	122.3	120.4	118.2	117.1	117.1	117.9	120.7	123.9	130.2	135.3
72.5°	101.9	101.9	100.8	99.5	98.6	99.5	100.0	102.7	106.8	112.2	117.9
75°	82.9	82.1	81.3	80.7	80.4	81.0	81.8	84.0	88.9	94.0	98.6
77.5°	64.1	63.6	62.8	63.3	63.3	63.6	66.0	68.5	71.2	75.3	80.2
80°	46.2	46.5	45.7	45.4	46.7	47.3	49.2	51.1	53.0	57.6	61.1
82.5°	30.4	31.0	30.7	31.3	31.8	31.8	34.0	35.9	37.5	40.8	43.5
85°	17.4	17.7	17.7	18.5	19.0	18.8	20.7	21.7	22.6	25.0	26.6
87.5°	7.6	7.9	8.2	8.2	8.2	9.2	9.5	10.1	10.3	10.9	11.7
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: P243681

CATALOG NUMBER: S125DR-H610D930-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	670.2	670.2	670.2	670.2
2.5°	632.9	632.7	634.0	634.8
5°	596.0	595.2	594.1	594.6
7.5°	563.1	560.9	560.4	560.4
10°	534.0	531.8	531.3	530.5
12.5°	509.3	506.0	504.7	503.3
15°	485.9	485.4	482.4	479.4
17.5°	464.4	465.3	462.3	460.9
20°	446.5	444.1	443.0	442.4
22.5°	428.3	426.4	426.4	424.5
25°	412.0	410.4	410.6	408.7
27.5°	396.8	396.5	396.2	395.7
30°	382.6	381.6	380.5	381.0
32.5°	369.1	367.4	366.6	366.3
35°	354.9	354.4	353.3	352.7
37.5°	341.1	341.3	340.0	339.7
40°	326.1	325.8	325.6	325.0
42.5°	310.4	309.5	310.1	309.8
45°	294.6	293.8	294.3	293.5
47.5°	279.1	279.6	279.6	279.9
50°	263.9	265.0	265.0	265.8
52.5°	249.7	251.9	251.9	251.7
55°	234.5	237.0	237.8	238.1
57.5°	220.1	222.6	225.0	225.6
60°	204.6	209.0	211.4	212.0
62.5°	190.8	194.9	198.1	198.4
65°	175.3	180.2	183.2	184.3
67.5°	159.5	163.3	167.4	169.0
70°	141.6	146.2	148.9	150.0
72.5°	122.8	128.0	131.5	132.1
75°	104.9	108.7	111.4	112.0
77.5°	84.5	88.3	90.8	91.3
80°	64.1	67.4	69.0	70.1
82.5°	45.4	47.6	48.4	49.5
85°	28.0	29.6	29.9	29.9
87.5°	12.2	12.5	12.5	13.0
90°	0.0	0.0	0.0	0.0

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