

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: P243676

Luminaire Tested: **S125DR-H610D840-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243676
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-H610D840-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2365.8 lumens
Efficiency: N/A
Efficacy: 137.5 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

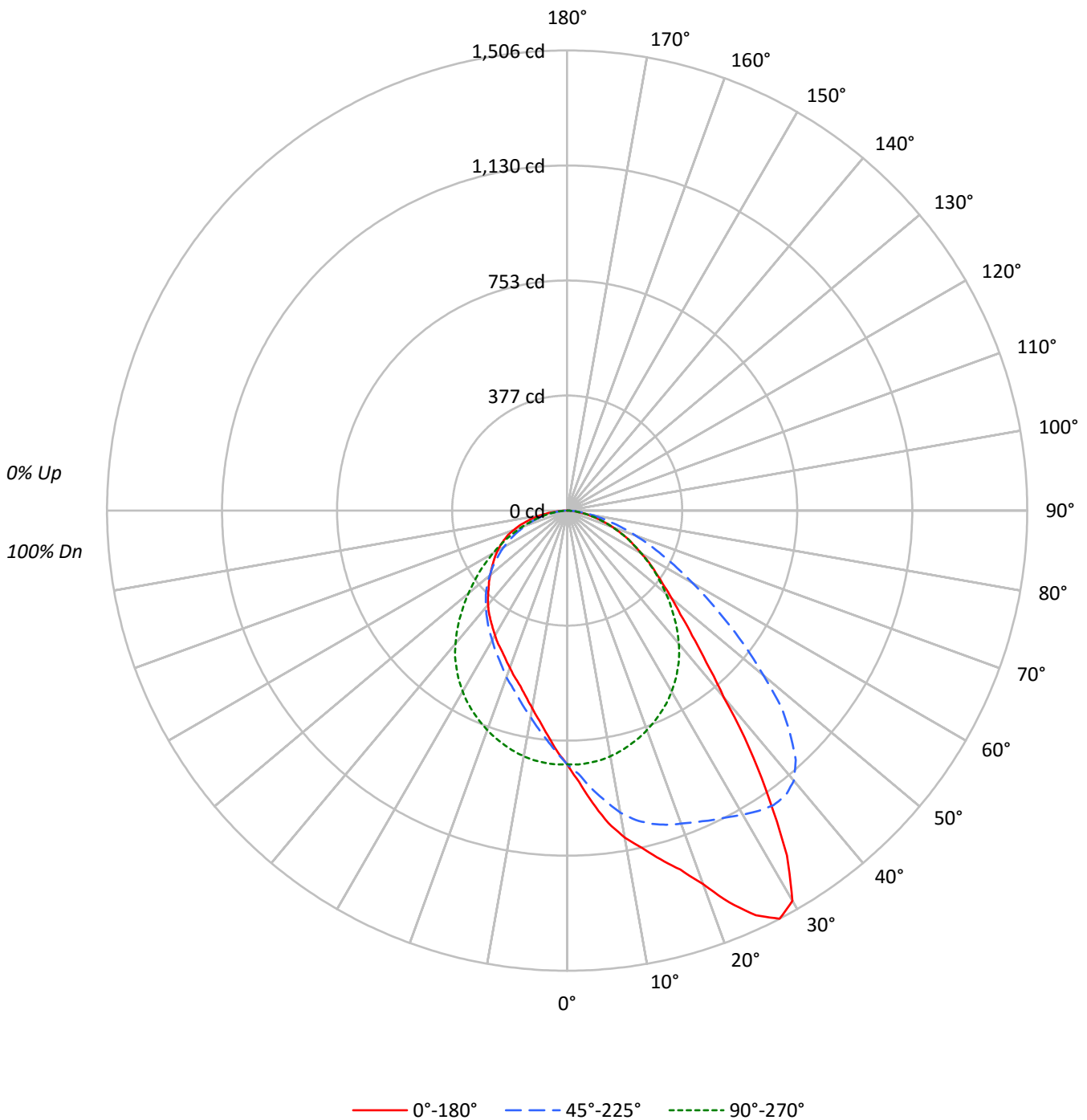
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5900	5900	5900
5°	6854	5912	5255
10°	7842	5893	4742
15°	8694	5840	4369
20°	9843	5782	4145
25°	11462	5707	3970
30°	12100	5613	3873
35°	10006	5477	3791
40°	7402	5278	3735
45°	5820	4990	3654
50°	4928	4667	3640
55°	4388	4347	3654
60°	3982	3990	3733
65°	3691	3658	3838
70°	3317	3273	3861
75°	2828	2875	3809
80°	2317	2358	3553
85°	1590	1672	3017



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.2	3.4
10°-20°	239.6	10.1
20°-30°	389.6	16.5
30°-40°	473.9	20.0
40°-50°	433.7	18.3
50°-60°	347.1	14.7
60°-70°	241.7	10.2
70°-80°	128.5	5.4
80°-90°	31.5	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°	709.4	30.0
0°-40°	1183.3	50.0
0°-60°	1964.1	83.0
0°-90°	2365.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2365.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	830	830	830	830	830	
5°	961	912	829	754	736	96
15°	1182	1061	794	628	594	339
25°	1462	1118	728	532	506	667
35°	1153	1177	631	452	437	715
45°	579	1032	496	375	364	457
55°	354	641	351	286	295	319
65°	220	342	218	192	228	216
75°	103	152	105	100	139	111
85°	20	29	20	23	37	25
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°	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1
2.5°	888.7	885.0	884.0	884.3	882.3	880.6	876.5	871.2	867.5	862.7	861.4
5°	960.7	951.6	953.3	950.6	946.2	940.5	935.5	927.4	919.6	912.2	902.5
7.5°	1031.4	1029.7	1025.0	1024.3	1017.3	1007.5	997.4	986.3	969.8	958.3	945.2
10°	1086.6	1090.0	1083.2	1083.6	1071.1	1061.3	1052.6	1038.1	1019.6	1004.1	984.9
12.5°	1131.0	1132.4	1131.4	1127.0	1118.9	1102.4	1094.0	1078.9	1058.7	1037.4	1022.6
15°	1181.5	1177.8	1172.1	1166.7	1154.9	1143.1	1125.6	1107.8	1082.2	1061.0	1039.5
17.5°	1232.0	1231.3	1224.3	1212.8	1198.0	1182.5	1156.3	1133.4	1106.1	1078.2	1051.3
20°	1301.4	1297.7	1287.2	1274.1	1246.8	1224.9	1192.3	1161.0	1125.3	1090.3	1059.0
22.5°	1388.2	1376.1	1365.6	1345.5	1314.1	1276.1	1239.4	1194.0	1144.2	1103.1	1064.0
25°	1461.6	1456.2	1445.1	1422.5	1386.9	1341.1	1286.5	1235.0	1172.4	1117.9	1067.1
27.5°	1506.0	1503.7	1496.9	1475.7	1446.1	1400.7	1342.4	1276.8	1205.8	1132.0	1071.1
30°	1474.4	1474.7	1478.4	1476.1	1462.9	1433.6	1381.8	1315.8	1233.7	1148.9	1072.1
32.5°	1338.4	1347.5	1376.4	1390.2	1408.7	1414.8	1391.6	1336.7	1257.3	1165.7	1075.5
35°	1153.2	1175.5	1195.0	1235.4	1283.5	1322.9	1345.8	1327.9	1267.0	1177.1	1077.2
37.5°	978.9	977.2	1007.5	1051.3	1102.4	1169.4	1234.4	1270.1	1250.2	1174.8	1074.1
40°	797.8	813.3	832.1	870.8	930.7	1013.2	1090.6	1167.0	1194.6	1153.9	1062.4
42.5°	673.9	681.0	699.8	730.1	773.2	857.4	933.8	1032.1	1102.8	1107.5	1036.4
45°	579.0	586.7	592.1	622.1	662.1	718.7	797.1	896.1	991.0	1032.1	994.4
47.5°	502.9	507.3	519.1	537.2	563.5	613.7	676.3	766.1	869.5	949.3	936.5
50°	445.7	449.0	458.5	468.6	490.1	527.1	577.6	651.4	750.7	837.8	866.4
52.5°	395.2	399.6	404.3	414.0	433.9	458.8	499.9	557.4	649.7	738.9	784.3
55°	354.1	355.8	360.9	368.3	383.4	402.3	434.9	487.1	551.7	640.6	703.2
57.5°	318.4	316.8	322.1	327.2	337.3	353.1	376.7	415.4	477.0	552.7	618.0
60°	280.1	281.7	285.8	289.8	296.9	310.7	329.2	360.2	405.3	473.3	539.9
62.5°	247.1	248.4	249.4	255.2	261.6	271.3	286.5	311.7	349.1	405.3	464.9
65°	219.5	217.1	218.5	222.5	227.6	235.6	249.8	268.3	296.2	342.0	391.5
67.5°	187.2	187.8	188.2	190.5	194.9	202.6	212.7	227.9	250.8	286.8	330.2
70°	159.6	159.9	160.2	162.2	166.0	170.3	177.4	189.2	208.7	236.6	270.6
72.5°	131.3	132.6	132.6	134.3	137.0	139.4	146.1	155.9	170.7	192.9	221.5
75°	103.0	105.4	106.0	108.1	110.4	111.1	116.1	123.9	133.3	151.5	174.0
77.5°	80.1	80.1	81.5	83.8	83.8	85.8	91.2	94.6	102.0	114.4	131.6
80°	56.6	57.6	57.6	58.2	59.6	61.3	63.6	66.6	73.0	82.1	91.2
82.5°	37.0	37.4	37.7	39.4	38.7	40.4	41.4	45.1	48.1	52.5	58.2
85°	19.5	19.5	19.9	20.9	21.9	22.2	22.9	24.6	26.9	28.9	32.3
87.5°	8.1	7.7	7.7	8.4	8.4	8.8	9.1	9.8	11.1	11.1	12.5
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°	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1
2.5°	860.4	857.7	853.0	848.9	843.9	840.2	836.5	831.8	827.1	822.0	816.6
5°	894.7	886.6	877.6	868.5	857.7	848.9	839.5	828.7	819.7	809.6	798.8
7.5°	934.1	920.0	904.1	886.3	869.5	854.3	838.8	824.0	810.6	795.4	780.6
10°	972.1	947.6	927.7	903.5	879.6	857.4	836.2	816.6	797.1	778.3	760.1
12.5°	998.1	970.1	945.2	917.3	889.3	861.4	833.5	806.5	783.3	760.4	741.2
15°	1015.9	996.4	963.4	929.7	893.0	856.7	825.0	793.7	766.1	739.5	716.7
17.5°	1027.0	1001.8	969.5	934.1	893.7	855.7	817.6	780.3	748.6	720.0	694.1
20°	1030.0	1000.4	966.8	930.1	889.7	847.9	805.2	764.5	730.1	697.5	671.2
22.5°	1027.0	992.7	956.7	921.0	878.6	836.2	791.4	746.9	707.6	673.9	646.3
25°	1022.0	980.6	942.9	900.8	861.4	821.0	774.9	727.8	686.7	651.7	620.7
27.5°	1015.6	968.1	921.7	880.2	837.5	797.8	755.4	707.2	664.5	626.1	597.2
30°	1008.2	951.6	900.1	851.0	810.6	770.8	729.4	684.0	640.9	604.2	572.9
32.5°	999.7	934.1	873.5	820.7	777.6	740.9	702.2	658.8	616.3	577.0	549.7
35°	988.0	910.2	844.9	787.7	742.9	703.2	669.2	631.2	589.1	552.4	524.1
37.5°	974.2	889.0	816.0	754.0	705.2	664.5	633.2	602.2	562.8	527.5	500.2
40°	955.7	863.4	785.3	718.3	666.2	626.1	595.5	568.9	536.2	500.5	476.0
42.5°	931.4	835.1	750.7	679.3	628.8	586.0	557.4	533.2	505.3	474.3	450.1
45°	903.8	802.8	711.9	641.9	587.1	546.3	518.4	496.5	475.3	447.7	425.1
47.5°	860.7	764.8	676.9	599.5	545.7	506.3	480.0	459.1	443.3	421.4	399.2
50°	809.6	721.7	635.5	557.8	503.2	465.2	440.3	422.1	408.7	391.8	375.0
52.5°	753.3	673.2	590.1	517.4	462.8	426.8	400.6	384.4	375.7	362.2	349.1
55°	687.7	618.7	541.3	475.0	421.4	384.8	362.2	350.8	341.0	334.3	322.5
57.5°	621.7	563.5	494.5	428.8	379.7	347.1	326.9	314.1	307.0	302.3	293.9
60°	549.7	503.9	440.6	383.7	340.0	309.0	291.2	280.7	274.3	271.6	265.9
62.5°	481.0	446.0	388.5	341.0	301.9	274.7	256.8	248.4	244.4	241.4	238.0
65°	413.4	385.8	340.3	295.9	262.9	238.3	224.2	217.5	214.4	211.1	210.7
67.5°	352.4	327.2	290.8	254.5	226.9	206.0	193.6	186.8	183.5	183.8	182.1
70°	292.5	273.0	243.4	213.8	190.2	173.7	161.9	157.5	156.2	155.9	154.5
72.5°	236.6	225.5	199.6	174.7	156.2	143.4	134.0	130.3	128.6	127.9	127.9
75°	187.5	179.4	157.2	138.3	124.2	113.8	107.4	104.7	102.3	103.7	102.7
77.5°	140.7	134.0	118.8	105.4	94.6	85.8	82.8	80.5	79.1	78.8	80.1
80°	99.0	94.9	85.5	74.7	66.6	61.6	59.6	57.6	56.6	55.9	56.6
82.5°	63.6	61.3	54.5	48.1	43.4	40.7	38.7	37.7	36.0	36.4	37.0
85°	34.7	34.0	29.6	27.6	23.2	22.9	21.5	20.5	20.9	20.2	21.2
87.5°	14.1	13.5	12.5	11.4	10.1	9.1	8.4	9.1	8.1	9.1	8.8
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°	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1
2.5°	813.9	810.2	805.9	801.8	795.8	791.7	789.7	790.4	788.0	787.3	787.0
5°	792.4	784.0	775.9	769.2	762.1	754.0	748.3	746.6	745.9	744.3	740.6
7.5°	770.2	759.4	749.0	739.2	729.1	719.7	714.0	709.2	706.6	701.8	700.8
10°	746.6	733.5	722.4	708.2	696.1	686.4	679.0	674.9	672.6	668.2	664.5
12.5°	724.1	710.3	693.1	680.3	667.5	657.4	649.0	642.3	640.6	634.9	631.8
15°	699.8	683.0	667.5	652.7	640.6	627.8	622.7	616.7	610.6	605.6	604.6
17.5°	676.6	656.4	641.3	626.8	612.0	602.5	595.8	591.8	587.1	584.4	579.7
20°	648.7	632.2	615.3	601.9	589.1	581.0	571.9	568.2	564.8	558.4	556.4
22.5°	625.1	605.2	591.1	577.6	566.2	554.7	548.3	544.6	539.6	536.2	533.5
25°	600.5	584.0	566.2	552.7	543.0	531.5	527.1	522.4	518.1	515.0	512.3
27.5°	576.6	558.4	544.0	530.5	520.4	512.3	506.3	501.2	498.2	495.8	494.2
30°	551.7	534.9	521.4	509.0	497.5	490.8	485.1	483.0	479.7	478.0	475.3
32.5°	529.2	512.0	499.2	488.4	478.3	471.6	468.2	465.2	461.8	458.8	458.5
35°	503.6	488.8	477.0	465.2	457.8	452.4	448.7	445.7	443.0	440.6	439.3
37.5°	481.0	466.9	453.8	445.3	437.3	432.6	428.5	427.5	424.8	425.1	423.1
40°	456.8	444.0	432.9	424.5	419.1	414.0	411.3	408.0	406.3	406.6	404.9
42.5°	433.2	421.4	411.3	403.6	397.9	394.2	391.8	389.1	387.1	385.8	385.4
45°	409.3	398.9	390.5	382.7	378.0	374.7	371.6	368.3	366.6	365.9	365.6
47.5°	385.8	376.3	367.2	361.9	357.5	354.5	351.4	348.7	347.4	346.4	344.7
50°	361.5	352.1	345.7	339.0	335.3	331.2	327.9	326.5	324.8	324.5	326.2
52.5°	336.3	328.9	323.2	317.8	313.4	309.0	305.6	304.0	305.0	305.0	307.0
55°	312.4	304.6	299.3	294.9	290.2	286.1	282.8	282.8	282.8	284.8	287.5
57.5°	285.8	279.1	275.0	270.0	265.6	262.9	260.5	260.2	261.6	264.9	267.9
60°	258.9	254.1	249.8	245.7	241.4	239.3	239.0	238.3	240.3	243.7	250.1
62.5°	232.3	229.2	223.8	221.8	218.1	215.8	215.8	216.4	219.5	224.9	230.6
65°	206.7	202.3	198.3	196.2	193.9	191.9	191.9	194.6	198.9	204.0	211.1
67.5°	180.4	176.7	174.0	172.0	169.3	168.3	169.3	172.3	177.7	182.8	190.2
70°	152.2	151.5	149.1	146.4	145.1	145.1	146.1	149.5	153.5	161.2	167.6
72.5°	126.2	126.2	124.9	123.2	122.2	123.2	123.9	127.2	132.3	139.0	146.1
75°	102.7	101.7	100.6	100.0	99.6	100.3	101.3	104.0	110.1	116.5	122.2
77.5°	79.4	78.8	77.8	78.4	78.4	78.8	81.8	84.8	88.2	93.2	99.3
80°	57.2	57.6	56.6	56.2	57.9	58.6	60.9	63.3	65.6	71.4	75.7
82.5°	37.7	38.4	38.0	38.7	39.4	39.4	42.1	44.4	46.5	50.5	53.9
85°	21.5	21.9	21.9	22.9	23.6	23.2	25.6	26.9	27.9	31.0	33.0
87.5°	9.4	9.8	10.1	10.1	10.1	11.4	11.8	12.5	12.8	13.5	14.5
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: P243676

CATALOG NUMBER: S125DR-H610D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	830.1	830.1	830.1	830.1
2.5°	784.0	783.6	785.3	786.3
5°	738.2	737.2	735.8	736.5
7.5°	697.5	694.8	694.1	694.1
10°	661.4	658.8	658.1	657.1
12.5°	630.8	626.8	625.1	623.4
15°	601.9	601.2	597.5	593.8
17.5°	575.3	576.3	572.6	570.9
20°	553.1	550.0	548.7	548.0
22.5°	530.5	528.1	528.1	525.8
25°	510.3	508.3	508.6	506.3
27.5°	491.5	491.1	490.8	490.1
30°	474.0	472.6	471.3	471.9
32.5°	457.1	455.1	454.1	453.8
35°	439.6	438.9	437.6	436.9
37.5°	422.5	422.8	421.1	420.8
40°	403.9	403.6	403.3	402.6
42.5°	384.4	383.4	384.1	383.7
45°	364.9	363.9	364.6	363.5
47.5°	345.7	346.4	346.4	346.7
50°	326.9	328.2	328.2	329.2
52.5°	309.3	312.0	312.0	311.7
55°	290.5	293.5	294.5	294.9
57.5°	272.7	275.7	278.7	279.4
60°	253.5	258.9	261.9	262.6
62.5°	236.3	241.4	245.4	245.7
65°	217.1	223.2	226.9	228.2
67.5°	197.6	202.3	207.4	209.4
70°	175.4	181.1	184.5	185.8
72.5°	152.2	158.5	162.9	163.6
75°	129.9	134.6	138.0	138.7
77.5°	104.7	109.4	112.4	113.1
80°	79.4	83.5	85.5	86.8
82.5°	56.2	58.9	59.9	61.3
85°	34.7	36.7	37.0	37.0
87.5°	15.1	15.5	15.5	16.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)