

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: P243769

Luminaire Tested: **S125RDR-H610D830-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243769
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-H610D830-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED 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: 2108.7 lumens
Efficiency: N/A
Efficacy: 122.6 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

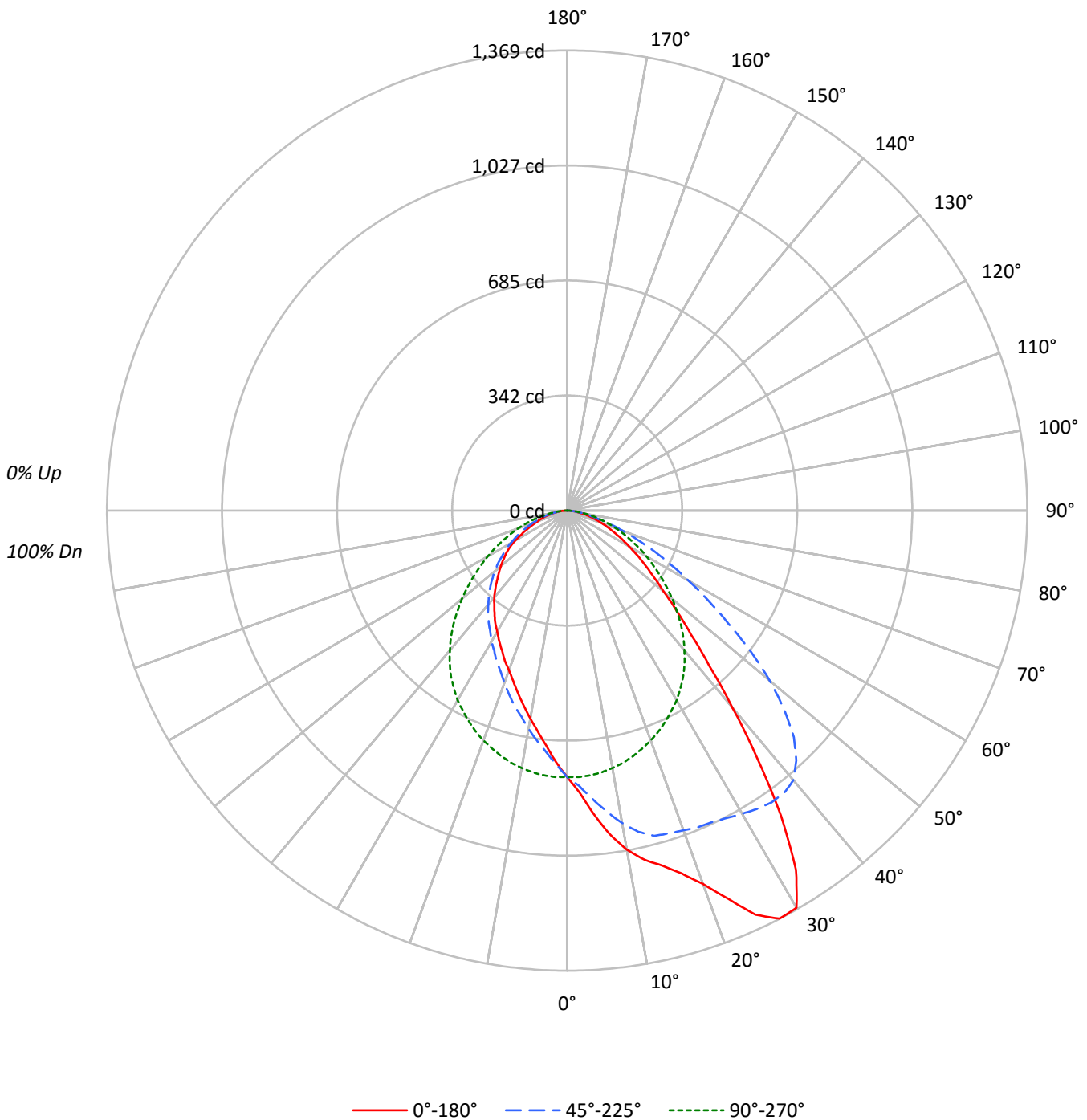
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73					73			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63					63			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	66	61	56	54					54			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48					48			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42					42			
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	33					33			
9	59	46	38	32	57	45	38	32	44	37	32	43	37	32	42	36	32	30					30			
10	55	42	35	29	54	42	34	29	41	34	29	40	34	29	39	33	29	27					27			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5632	5632	5632
5°	6465	5640	5016
10°	7396	5612	4535
15°	8045	5566	4147
20°	8939	5503	3821
25°	10403	5425	3597
30°	11201	5345	3414
35°	9622	5226	3266
40°	7089	5037	3130
45°	5236	4804	2968
50°	4148	4516	2848
55°	3504	4185	2741
60°	3019	3876	2537
65°	2620	3530	2208
70°	2298	3231	1933
75°	1950	2828	1829
80°	1518	2366	1518
85°	1329	1892	1386



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.3	3.6
10°-20°	225.6	10.7
20°-30°	359.9	17.1
30°-40°	437.0	20.7
40°-50°	393.8	18.7
50°-60°	302.8	14.4
60°-70°	196.5	9.3
70°-80°	94.5	4.5
80°-90°	22.4	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°	661.8	31.4
0°-40°	1098.8	52.1
0°-60°	1795.3	85.1
0°-90°	2108.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2108.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	792	792	792	792	792	
5°	906	861	790	721	703	90
15°	1093	1002	756	602	564	313
25°	1326	1022	692	496	459	607
35°	1109	1060	602	406	376	678
45°	521	954	478	324	295	414
55°	283	586	338	237	221	256
65°	156	285	210	150	131	156
75°	71	96	103	74	67	76
85°	16	17	23	18	17	19
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°	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4
2.5°	838.2	841.4	838.9	840.4	837.9	836.7	833.5	828.8	824.1	819.7	819.4
5°	906.1	905.5	902.9	899.5	897.0	890.7	887.5	876.9	869.6	860.8	856.4
7.5°	970.8	969.2	965.5	960.8	958.6	950.4	941.6	928.1	916.8	902.9	892.6
10°	1024.8	1024.5	1021.7	1018.6	1010.1	1001.0	992.5	978.3	961.4	944.1	929.6
12.5°	1064.4	1062.9	1059.4	1054.1	1047.1	1040.9	1029.6	1016.7	995.9	978.3	958.6
15°	1093.3	1092.7	1087.7	1085.8	1072.3	1063.5	1048.4	1035.5	1019.5	1001.9	980.5
17.5°	1131.7	1132.9	1128.5	1117.8	1105.6	1092.1	1070.7	1049.7	1027.4	1006.9	989.7
20°	1181.9	1178.8	1171.2	1158.4	1136.4	1119.7	1098.4	1072.3	1042.1	1012.0	987.1
22.5°	1249.2	1245.7	1233.8	1218.1	1190.4	1159.9	1127.3	1088.3	1053.7	1019.2	986.5
25°	1326.5	1319.9	1302.3	1285.3	1246.0	1213.7	1165.0	1118.5	1068.2	1022.3	985.6
27.5°	1368.6	1368.6	1360.4	1341.8	1310.7	1263.0	1213.3	1151.5	1093.3	1030.5	978.3
30°	1364.8	1362.6	1365.7	1357.9	1337.8	1301.9	1252.6	1187.6	1113.4	1041.5	979.0
32.5°	1267.4	1268.3	1287.2	1300.1	1310.1	1301.3	1269.3	1210.5	1136.7	1052.2	976.5
35°	1109.0	1111.6	1144.9	1166.8	1211.8	1237.5	1245.1	1213.3	1147.1	1059.7	972.1
37.5°	928.1	928.1	966.7	1000.0	1050.3	1113.8	1161.2	1173.1	1140.8	1059.4	968.3
40°	764.1	763.1	793.6	834.5	888.2	958.2	1028.9	1089.6	1097.4	1047.1	955.1
42.5°	625.2	623.6	656.9	679.6	736.1	798.6	892.6	978.3	1027.4	1009.1	935.6
45°	520.9	519.6	541.3	567.1	607.0	672.0	750.9	846.1	928.4	953.5	899.2
47.5°	442.4	443.0	454.6	476.3	510.2	556.7	627.4	715.7	817.5	875.6	853.3
50°	375.1	377.3	386.1	402.5	427.3	464.7	525.3	605.1	709.7	786.7	791.4
52.5°	324.9	328.0	337.4	346.2	367.0	393.3	440.5	509.6	596.0	688.4	721.3
55°	282.8	284.3	289.7	299.1	314.5	336.5	370.7	423.5	503.6	585.9	644.1
57.5°	247.6	247.6	251.0	257.6	269.9	289.7	312.6	356.3	423.8	498.3	560.2
60°	212.4	213.6	216.2	223.4	231.5	246.6	268.9	296.6	355.0	417.2	483.8
62.5°	182.9	185.0	187.6	191.0	198.6	209.2	225.0	250.4	289.7	347.2	406.5
65°	155.8	158.0	158.3	162.4	167.5	176.3	188.2	206.7	239.4	284.6	333.7
67.5°	132.0	132.9	133.8	137.0	141.7	147.3	155.2	169.0	194.8	225.3	273.0
70°	110.6	111.2	111.5	115.0	117.2	122.2	126.3	135.1	151.4	175.0	212.1
72.5°	90.5	89.5	89.2	92.1	93.0	97.1	102.1	108.4	117.2	133.8	161.5
75°	71.0	71.3	71.6	73.2	73.5	75.4	78.5	82.6	86.7	96.5	114.0
77.5°	54.7	53.4	53.4	55.3	55.9	56.2	58.4	60.6	62.8	68.5	75.4
80°	37.1	37.7	37.7	37.7	38.0	38.6	39.9	41.8	43.4	46.8	48.1
82.5°	26.4	26.4	26.1	26.7	27.0	27.3	27.3	27.3	28.3	29.2	30.5
85°	16.3	16.7	15.7	16.3	16.7	16.7	16.7	16.7	17.6	17.3	17.6
87.5°	6.9	7.2	7.2	7.5	7.5	7.9	7.5	7.9	7.5	7.5	7.9
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°	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4
2.5°	818.4	814.7	812.8	809.0	804.0	800.8	797.7	793.3	789.8	784.5	779.8
5°	848.6	841.0	834.1	824.7	815.6	807.7	799.6	790.5	782.3	773.2	763.4
7.5°	882.2	870.3	855.8	839.2	825.0	812.8	798.9	785.4	773.2	758.7	745.5
10°	914.6	895.4	876.2	853.9	833.2	815.0	796.4	777.6	761.6	743.7	727.3
12.5°	939.7	921.5	892.9	865.2	838.2	814.7	791.4	768.5	747.4	727.6	708.2
15°	961.7	931.5	907.3	877.2	844.2	812.1	783.2	756.5	731.1	707.8	688.0
17.5°	968.0	941.0	914.6	879.4	843.9	807.4	774.1	742.4	714.1	688.4	666.1
20°	967.3	940.0	911.4	877.8	840.1	800.2	763.1	727.6	695.6	666.1	642.2
22.5°	957.9	931.5	902.6	868.7	830.4	789.2	750.3	711.0	676.1	645.3	620.8
25°	947.9	914.6	884.4	850.2	813.7	775.7	734.2	691.8	655.4	623.3	595.7
27.5°	939.1	899.2	862.1	828.5	791.1	756.9	715.7	671.4	634.0	600.4	571.8
30°	924.9	882.8	837.9	801.1	765.0	729.2	691.5	651.3	610.4	576.2	547.6
32.5°	912.7	859.6	810.9	769.4	733.3	701.9	665.7	627.1	587.2	554.5	523.7
35°	899.2	835.7	784.8	736.1	700.0	665.7	637.1	602.3	562.7	528.1	500.5
37.5°	883.1	811.2	752.8	703.1	665.7	630.6	604.8	573.7	537.9	503.6	476.3
40°	865.2	786.1	718.8	667.6	627.4	592.2	570.5	542.9	512.4	478.5	453.0
42.5°	842.6	759.4	688.0	632.1	587.5	555.8	534.1	511.2	483.2	453.7	426.0
45°	814.0	726.1	651.3	592.2	548.2	517.4	494.8	477.9	455.6	427.9	401.8
47.5°	779.2	691.2	613.6	552.3	509.9	480.4	459.3	442.4	425.4	401.5	376.7
50°	733.0	651.3	576.8	514.3	469.4	440.8	421.9	408.4	393.0	373.6	350.9
52.5°	682.1	606.4	533.5	475.0	431.7	403.1	383.6	372.3	360.7	344.7	325.2
55°	623.0	561.4	492.0	434.8	392.4	364.1	348.7	337.7	328.0	315.7	299.4
57.5°	560.5	506.5	446.1	393.3	353.4	326.7	313.2	304.1	296.0	287.2	273.6
60°	494.8	456.5	399.3	350.9	316.1	294.1	281.2	272.7	265.2	257.9	247.9
62.5°	426.3	394.6	351.9	310.7	279.6	258.9	249.5	242.2	234.4	228.1	220.9
65°	356.9	338.7	309.1	270.5	241.9	225.0	215.8	209.9	206.1	198.9	193.2
67.5°	293.8	283.7	258.6	232.5	210.5	195.1	186.6	182.2	178.1	174.7	168.4
70°	233.7	226.5	212.1	193.5	176.3	163.1	156.8	155.5	149.9	146.4	143.3
72.5°	178.1	176.3	164.3	156.1	146.4	136.0	131.3	128.8	125.0	121.9	120.6
75°	126.6	129.4	125.7	121.6	116.9	108.4	104.3	103.0	99.6	98.7	97.1
77.5°	86.4	90.5	91.7	89.9	87.7	84.8	82.0	80.7	77.3	76.7	75.7
80°	54.4	60.3	62.5	62.2	61.3	61.6	58.1	57.8	56.2	55.3	56.2
82.5°	33.0	36.1	40.2	41.2	39.9	40.5	39.6	38.3	38.3	39.0	37.7
85°	17.9	18.2	20.1	21.4	22.9	24.2	22.9	23.2	22.9	22.9	22.0
87.5°	7.9	8.2	8.2	7.9	8.5	9.1	10.4	11.0	10.7	9.7	8.5
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4
2.5°	776.0	773.8	770.0	766.9	759.7	754.7	754.0	754.3	753.7	753.1	752.8
5°	757.2	749.9	743.0	737.1	728.9	720.7	716.9	715.4	714.8	711.3	713.2
7.5°	737.1	726.1	717.9	706.6	696.8	689.9	683.3	680.2	679.6	674.9	673.6
10°	715.7	702.5	690.2	678.9	669.2	659.5	651.6	648.8	645.0	641.2	635.6
12.5°	694.6	678.3	664.8	652.2	639.0	628.0	621.8	617.7	613.0	609.5	607.6
15°	669.5	655.7	639.0	625.5	612.0	602.3	593.8	586.3	581.9	579.0	571.2
17.5°	646.9	628.7	613.0	600.1	585.3	574.3	565.5	559.2	551.7	546.0	541.0
20°	622.7	603.8	589.4	574.0	558.9	545.4	534.4	529.4	524.0	518.7	515.9
22.5°	596.6	580.3	563.9	547.9	531.9	517.4	510.5	503.3	498.6	493.3	489.5
25°	574.0	556.1	539.8	521.8	504.3	495.8	486.3	479.1	475.3	470.0	465.9
27.5°	549.8	532.5	513.0	494.5	484.1	469.7	463.4	457.8	452.7	447.4	444.6
30°	527.2	507.1	487.6	473.1	459.6	449.3	443.3	436.4	429.5	427.0	423.2
32.5°	503.3	481.6	464.7	450.2	438.9	426.3	420.7	415.0	408.4	405.3	401.8
35°	478.5	457.4	440.8	427.6	416.0	406.5	400.3	394.3	390.2	385.5	383.0
37.5°	452.4	434.2	418.2	405.0	394.3	386.8	378.9	374.2	368.5	364.1	362.2
40°	427.6	411.3	395.9	383.6	373.9	364.8	357.8	351.9	348.4	344.7	341.5
42.5°	405.3	388.3	375.1	362.2	353.4	344.7	337.7	333.3	327.4	325.8	321.4
45°	381.4	365.7	352.5	340.6	331.5	324.2	316.1	310.7	307.0	303.2	301.6
47.5°	357.2	342.8	330.5	319.5	310.1	301.9	295.6	290.0	285.9	282.4	280.6
50°	333.7	321.1	308.8	298.2	288.4	282.4	274.9	268.6	265.5	261.7	259.5
52.5°	308.8	298.5	285.3	276.2	267.0	259.2	251.7	247.6	244.4	241.3	239.7
55°	285.6	274.6	263.3	253.5	244.7	236.6	230.6	227.5	223.4	221.5	221.2
57.5°	261.7	250.4	241.0	232.2	222.1	215.8	210.5	206.7	203.3	201.7	201.7
60°	235.6	226.5	217.7	208.0	200.8	193.5	187.9	185.4	181.9	181.3	179.1
62.5°	211.8	203.3	194.8	185.7	179.1	171.9	167.8	164.3	162.4	159.9	157.4
65°	186.9	179.4	171.2	163.4	158.0	150.2	146.4	142.3	140.1	137.3	134.2
67.5°	163.1	155.8	148.3	141.1	136.7	129.1	126.6	121.6	120.0	116.9	114.0
70°	137.9	132.9	126.9	119.7	115.9	110.0	107.4	102.7	100.2	98.3	96.8
72.5°	116.2	111.5	104.6	99.9	95.2	91.4	87.3	85.1	82.9	81.4	81.1
75°	94.9	88.9	84.8	80.4	77.3	73.5	71.6	70.1	69.1	68.2	67.2
77.5°	72.6	70.1	66.0	61.6	59.1	57.5	56.2	55.6	54.7	54.4	53.4
80°	54.0	50.6	48.1	46.5	44.6	43.4	42.4	40.2	39.0	38.3	37.7
82.5°	35.8	34.9	33.0	31.4	29.8	29.5	28.6	28.0	27.6	27.6	27.3
85°	21.7	19.2	19.2	18.9	18.9	18.5	17.9	17.9	17.3	18.2	18.2
87.5°	8.8	8.8	8.2	8.2	8.5	7.9	7.5	7.5	7.5	7.2	7.5
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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CATALOG NUMBER: S125RDR-H610D830-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	792.4	792.4	792.4	792.4
2.5°	752.8	751.2	751.5	749.6
5°	709.7	708.8	705.6	703.1
7.5°	670.5	666.4	666.1	663.5
10°	633.7	629.9	628.0	628.4
12.5°	601.6	597.6	597.6	595.0
15°	567.4	563.3	563.9	563.6
17.5°	539.1	536.3	534.1	532.2
20°	511.5	508.0	506.8	505.2
22.5°	486.0	483.5	483.8	483.8
25°	461.8	462.2	459.3	458.7
27.5°	440.5	439.8	439.2	438.0
30°	420.4	417.9	417.2	416.0
32.5°	399.6	399.3	396.8	397.7
35°	378.6	377.6	377.0	376.4
37.5°	359.1	357.2	356.9	356.3
40°	339.3	338.7	335.9	337.4
42.5°	317.9	316.7	316.7	316.7
45°	300.0	296.6	296.6	295.3
47.5°	279.9	278.7	278.0	275.8
50°	260.1	258.3	257.6	257.6
52.5°	239.7	239.4	240.0	238.8
55°	221.8	222.1	221.8	221.2
57.5°	202.3	200.8	200.8	201.1
60°	179.1	179.1	179.7	178.5
62.5°	156.8	156.1	153.9	153.3
65°	133.8	131.3	131.0	131.3
67.5°	113.4	112.5	110.9	111.2
70°	95.8	95.5	93.9	93.0
72.5°	80.1	80.1	79.2	79.2
75°	66.9	66.3	66.0	66.6
77.5°	51.5	50.0	50.6	49.6
80°	37.4	38.0	37.4	37.1
82.5°	27.6	27.0	27.3	27.0
85°	17.6	17.0	17.3	17.0
87.5°	7.2	7.5	7.5	6.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)