

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: P243671

Luminaire Tested: **S125DR-H610D835-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243671
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-H610D835-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2342.7 lumens
Efficiency: N/A
Efficacy: 136.2 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

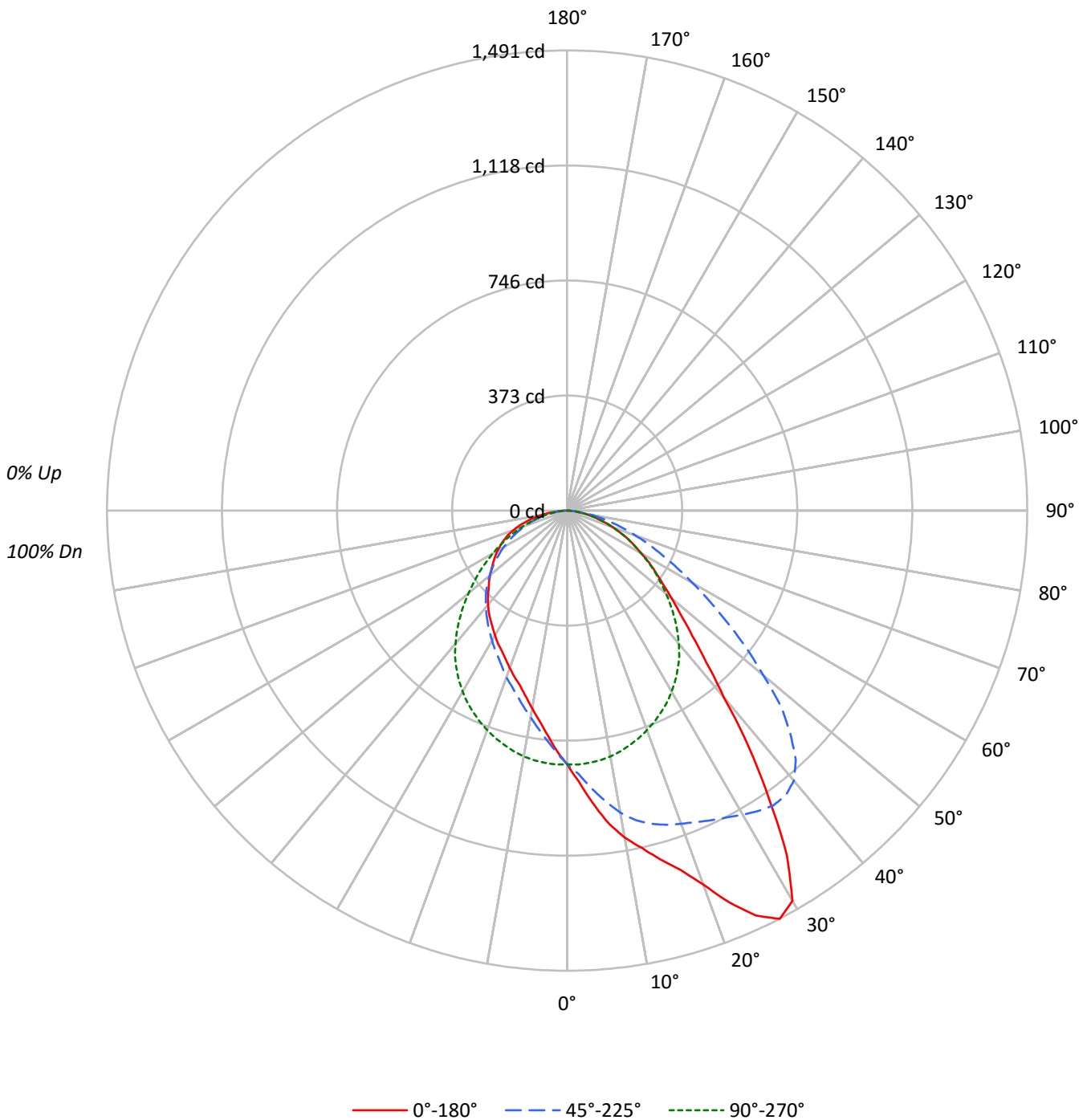
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5842	5842	5842
5°	6787	5855	5203
10°	7765	5836	4696
15°	8609	5783	4327
20°	9746	5726	4105
25°	11350	5652	3931
30°	11982	5559	3835
35°	9909	5423	3754
40°	7330	5226	3699
45°	5762	4942	3618
50°	4879	4622	3605
55°	4346	4303	3618
60°	3942	3952	3696
65°	3654	3621	3801
70°	3283	3242	3824
75°	2801	2848	3770
80°	2292	2333	3520
85°	1574	1655	2993



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.4	3.4
10°-20°	237.3	10.1
20°-30°	385.8	16.5
30°-40°	469.3	20.0
40°-50°	429.5	18.3
50°-60°	343.7	14.7
60°-70°	239.4	10.2
70°-80°	127.2	5.4
80°-90°	31.2	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°	702.4	30.0
0°-40°	1171.7	50.0
0°-60°	1944.9	83.0
0°-90°	2342.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2342.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	822	822	822	822	822	
5°	951	903	821	747	729	95
15°	1170	1051	786	622	588	336
25°	1447	1107	721	526	501	661
35°	1142	1166	625	448	433	708
45°	573	1022	492	371	360	452
55°	351	634	347	283	292	316
65°	217	339	215	190	226	214
75°	102	150	104	99	137	110
85°	19	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°	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0
2.5°	880.0	876.3	875.3	875.7	873.7	872.0	868.0	862.7	859.0	854.3	853.0
5°	951.3	942.3	944.0	941.3	937.0	931.3	926.3	918.3	910.6	903.3	893.7
7.5°	1021.3	1019.6	1015.0	1014.3	1007.3	997.6	987.6	976.6	960.3	949.0	936.0
10°	1076.0	1079.3	1072.6	1073.0	1060.6	1051.0	1042.3	1028.0	1009.6	994.3	975.3
12.5°	1120.0	1121.3	1120.3	1116.0	1108.0	1091.6	1083.3	1068.3	1048.3	1027.3	1012.6
15°	1170.0	1166.3	1160.6	1155.3	1143.6	1132.0	1114.6	1097.0	1071.6	1050.6	1029.3
17.5°	1220.0	1219.3	1212.3	1201.0	1186.3	1171.0	1145.0	1122.3	1095.3	1067.6	1041.0
20°	1288.6	1285.0	1274.6	1261.6	1234.6	1213.0	1180.6	1149.6	1114.3	1079.6	1048.6
22.5°	1374.6	1362.6	1352.3	1332.3	1301.3	1263.6	1227.3	1182.3	1133.0	1092.3	1053.6
25°	1447.3	1442.0	1431.0	1408.6	1373.3	1328.0	1274.0	1223.0	1161.0	1107.0	1056.6
27.5°	1491.3	1489.0	1482.3	1461.3	1432.0	1387.0	1329.3	1264.3	1194.0	1121.0	1060.6
30°	1460.0	1460.3	1464.0	1461.6	1448.6	1419.6	1368.3	1303.0	1221.6	1137.6	1061.6
32.5°	1325.3	1334.3	1363.0	1376.6	1395.0	1401.0	1378.0	1323.6	1245.0	1154.3	1065.0
35°	1142.0	1164.0	1183.3	1223.3	1271.0	1310.0	1332.6	1315.0	1254.6	1165.6	1066.6
37.5°	969.3	967.6	997.6	1041.0	1091.6	1158.0	1222.3	1257.6	1238.0	1163.3	1063.6
40°	790.0	805.3	824.0	862.3	921.6	1003.3	1080.0	1155.6	1183.0	1142.6	1052.0
42.5°	667.3	674.3	693.0	723.0	765.7	849.0	924.6	1022.0	1092.0	1096.6	1026.3
45°	573.3	581.0	586.3	616.0	655.7	711.7	789.3	887.3	981.3	1022.0	984.6
47.5°	498.0	502.3	514.0	532.0	558.0	607.7	669.7	758.7	861.0	940.0	927.3
50°	441.3	444.7	454.0	464.0	485.3	522.0	572.0	645.0	743.3	829.7	858.0
52.5°	391.3	395.7	400.3	410.0	429.7	454.3	495.0	552.0	643.3	731.7	776.7
55°	350.7	352.3	357.3	364.7	379.7	398.3	430.7	482.3	546.3	634.3	696.3
57.5°	315.3	313.7	319.0	324.0	334.0	349.7	373.0	411.3	472.3	547.3	612.0
60°	277.3	279.0	283.0	287.0	294.0	307.7	326.0	356.7	401.3	468.7	534.7
62.5°	244.7	246.0	247.0	252.7	259.0	268.7	283.7	308.7	345.7	401.3	460.3
65°	217.3	215.0	216.3	220.3	225.3	233.3	247.3	265.7	293.3	338.7	387.7
67.5°	185.3	186.0	186.3	188.7	193.0	200.7	210.7	225.7	248.3	284.0	327.0
70°	158.0	158.3	158.7	160.7	164.3	168.7	175.7	187.3	206.7	234.3	268.0
72.5°	130.0	131.3	131.3	133.0	135.7	138.0	144.7	154.3	169.0	191.0	219.3
75°	102.0	104.3	105.0	107.0	109.3	110.0	115.0	122.7	132.0	150.0	172.3
77.5°	79.3	79.3	80.7	83.0	83.0	85.0	90.3	93.7	101.0	113.3	130.3
80°	56.0	57.0	57.0	57.7	59.0	60.7	63.0	66.0	72.3	81.3	90.3
82.5°	36.7	37.0	37.3	39.0	38.3	40.0	41.0	44.7	47.7	52.0	57.7
85°	19.3	19.3	19.7	20.7	21.7	22.0	22.7	24.3	26.7	28.7	32.0
87.5°	8.0	7.7	7.7	8.3	8.3	8.7	9.0	9.7	11.0	11.0	12.3
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°	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0
2.5°	852.0	849.3	844.7	840.7	835.7	832.0	828.3	823.7	819.0	814.0	808.7
5°	886.0	878.0	869.0	860.0	849.3	840.7	831.3	820.7	811.7	801.7	791.0
7.5°	925.0	911.0	895.3	877.7	861.0	846.0	830.7	816.0	802.7	787.7	773.0
10°	962.6	938.3	918.6	894.7	871.0	849.0	828.0	808.7	789.3	770.7	752.7
12.5°	988.3	960.6	936.0	908.3	880.7	853.0	825.3	798.7	775.7	753.0	734.0
15°	1006.0	986.6	954.0	920.6	884.3	848.3	817.0	786.0	758.7	732.3	709.7
17.5°	1017.0	992.0	960.0	925.0	885.0	847.3	809.7	772.7	741.3	713.0	687.3
20°	1020.0	990.6	957.3	921.0	881.0	839.7	797.3	757.0	723.0	690.7	664.7
22.5°	1017.0	983.0	947.3	912.0	870.0	828.0	783.7	739.7	700.7	667.3	640.0
25°	1012.0	971.0	933.6	892.0	853.0	813.0	767.3	720.7	680.0	645.3	614.7
27.5°	1005.6	958.6	912.6	871.7	829.3	790.0	748.0	700.3	658.0	620.0	591.3
30°	998.3	942.3	891.3	842.7	802.7	763.3	722.3	677.3	634.7	598.3	567.3
32.5°	990.0	925.0	865.0	812.7	770.0	733.7	695.3	652.3	610.3	571.3	544.3
35°	978.3	901.3	836.7	780.0	735.7	696.3	662.7	625.0	583.3	547.0	519.0
37.5°	964.6	880.3	808.0	746.7	698.3	658.0	627.0	596.3	557.3	522.3	495.3
40°	946.3	855.0	777.7	711.3	659.7	620.0	589.7	563.3	531.0	495.7	471.3
42.5°	922.3	827.0	743.3	672.7	622.7	580.3	552.0	528.0	500.3	469.7	445.7
45°	895.0	795.0	705.0	635.7	581.3	541.0	513.3	491.7	470.7	443.3	421.0
47.5°	852.3	757.3	670.3	593.7	540.3	501.3	475.3	454.7	439.0	417.3	395.3
50°	801.7	714.7	629.3	552.3	498.3	460.7	436.0	418.0	404.7	388.0	371.3
52.5°	746.0	666.7	584.3	512.3	458.3	422.7	396.7	380.7	372.0	358.7	345.7
55°	681.0	612.7	536.0	470.3	417.3	381.0	358.7	347.3	337.7	331.0	319.3
57.5°	615.7	558.0	489.7	424.7	376.0	343.7	323.7	311.0	304.0	299.3	291.0
60°	544.3	499.0	436.3	380.0	336.7	306.0	288.3	278.0	271.7	269.0	263.3
62.5°	476.3	441.7	384.7	337.7	299.0	272.0	254.3	246.0	242.0	239.0	235.7
65°	409.3	382.0	337.0	293.0	260.3	236.0	222.0	215.3	212.3	209.0	208.7
67.5°	349.0	324.0	288.0	252.0	224.7	204.0	191.7	185.0	181.7	182.0	180.3
70°	289.7	270.3	241.0	211.7	188.3	172.0	160.3	156.0	154.7	154.3	153.0
72.5°	234.3	223.3	197.7	173.0	154.7	142.0	132.7	129.0	127.3	126.7	126.7
75°	185.7	177.7	155.7	137.0	123.0	112.7	106.3	103.7	101.3	102.7	101.7
77.5°	139.3	132.7	117.7	104.3	93.7	85.0	82.0	79.7	78.3	78.0	79.3
80°	98.0	94.0	84.7	74.0	66.0	61.0	59.0	57.0	56.0	55.3	56.0
82.5°	63.0	60.7	54.0	47.7	43.0	40.3	38.3	37.3	35.7	36.0	36.7
85°	34.3	33.7	29.3	27.3	23.0	22.7	21.3	20.3	20.7	20.0	21.0
87.5°	14.0	13.3	12.3	11.3	10.0	9.0	8.3	9.0	8.0	9.0	8.7
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°	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0
2.5°	806.0	802.3	798.0	794.0	788.0	784.0	782.0	782.7	780.3	779.7	779.3
5°	784.7	776.3	768.3	761.7	754.7	746.7	741.0	739.3	738.7	737.0	733.3
7.5°	762.7	752.0	741.7	732.0	722.0	712.7	707.0	702.3	699.7	695.0	694.0
10°	739.3	726.3	715.3	701.3	689.3	679.7	672.3	668.3	666.0	661.7	658.0
12.5°	717.0	703.3	686.3	673.7	661.0	651.0	642.7	636.0	634.3	628.7	625.7
15°	693.0	676.3	661.0	646.3	634.3	621.7	616.7	610.7	604.7	599.7	598.7
17.5°	670.0	650.0	635.0	620.7	606.0	596.7	590.0	586.0	581.3	578.7	574.0
20°	642.3	626.0	609.3	596.0	583.3	575.3	566.3	562.7	559.3	553.0	551.0
22.5°	619.0	599.3	585.3	572.0	560.7	549.3	543.0	539.3	534.3	531.0	528.3
25°	594.7	578.3	560.7	547.3	537.7	526.3	522.0	517.3	513.0	510.0	507.3
27.5°	571.0	553.0	538.7	525.3	515.3	507.3	501.3	496.3	493.3	491.0	489.3
30°	546.3	529.7	516.3	504.0	492.7	486.0	480.3	478.3	475.0	473.3	470.7
32.5°	524.0	507.0	494.3	483.7	473.7	467.0	463.7	460.7	457.3	454.3	454.0
35°	498.7	484.0	472.3	460.7	453.3	448.0	444.3	441.3	438.7	436.3	435.0
37.5°	476.3	462.3	449.3	441.0	433.0	428.3	424.3	423.3	420.7	421.0	419.0
40°	452.3	439.7	428.7	420.3	415.0	410.0	407.3	404.0	402.3	402.7	401.0
42.5°	429.0	417.3	407.3	399.7	394.0	390.3	388.0	385.3	383.3	382.0	381.7
45°	405.3	395.0	386.7	379.0	374.3	371.0	368.0	364.7	363.0	362.3	362.0
47.5°	382.0	372.7	363.7	358.3	354.0	351.0	348.0	345.3	344.0	343.0	341.3
50°	358.0	348.7	342.3	335.7	332.0	328.0	324.7	323.3	321.7	321.3	323.0
52.5°	333.0	325.7	320.0	314.7	310.3	306.0	302.7	301.0	302.0	302.0	304.0
55°	309.3	301.7	296.3	292.0	287.3	283.3	280.0	280.0	280.0	282.0	284.7
57.5°	283.0	276.3	272.3	267.3	263.0	260.3	258.0	257.7	259.0	262.3	265.3
60°	256.3	251.7	247.3	243.3	239.0	237.0	236.7	236.0	238.0	241.3	247.7
62.5°	230.0	227.0	221.7	219.7	216.0	213.7	213.7	214.3	217.3	222.7	228.3
65°	204.7	200.3	196.3	194.3	192.0	190.0	190.0	192.7	197.0	202.0	209.0
67.5°	178.7	175.0	172.3	170.3	167.7	166.7	167.7	170.7	176.0	181.0	188.3
70°	150.7	150.0	147.7	145.0	143.7	143.7	144.7	148.0	152.0	159.7	166.0
72.5°	125.0	125.0	123.7	122.0	121.0	122.0	122.7	126.0	131.0	137.7	144.7
75°	101.7	100.7	99.7	99.0	98.7	99.3	100.3	103.0	109.0	115.3	121.0
77.5°	78.7	78.0	77.0	77.7	77.7	78.0	81.0	84.0	87.3	92.3	98.3
80°	56.7	57.0	56.0	55.7	57.3	58.0	60.3	62.7	65.0	70.7	75.0
82.5°	37.3	38.0	37.7	38.3	39.0	39.0	41.7	44.0	46.0	50.0	53.3
85°	21.3	21.7	21.7	22.7	23.3	23.0	25.3	26.7	27.7	30.7	32.7
87.5°	9.3	9.7	10.0	10.0	10.0	11.3	11.7	12.3	12.7	13.3	14.3
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: S125DR-H610D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	822.0	822.0	822.0	822.0
2.5°	776.3	776.0	777.7	778.7
5°	731.0	730.0	728.7	729.3
7.5°	690.7	688.0	687.3	687.3
10°	655.0	652.3	651.7	650.7
12.5°	624.7	620.7	619.0	617.3
15°	596.0	595.3	591.7	588.0
17.5°	569.7	570.7	567.0	565.3
20°	547.7	544.7	543.3	542.7
22.5°	525.3	523.0	523.0	520.7
25°	505.3	503.3	503.7	501.3
27.5°	486.7	486.3	486.0	485.3
30°	469.3	468.0	466.7	467.3
32.5°	452.7	450.7	449.7	449.3
35°	435.3	434.7	433.3	432.7
37.5°	418.3	418.7	417.0	416.7
40°	400.0	399.7	399.3	398.7
42.5°	380.7	379.7	380.3	380.0
45°	361.3	360.3	361.0	360.0
47.5°	342.3	343.0	343.0	343.3
50°	323.7	325.0	325.0	326.0
52.5°	306.3	309.0	309.0	308.7
55°	287.7	290.7	291.7	292.0
57.5°	270.0	273.0	276.0	276.7
60°	251.0	256.3	259.3	260.0
62.5°	234.0	239.0	243.0	243.3
65°	215.0	221.0	224.7	226.0
67.5°	195.7	200.3	205.3	207.3
70°	173.7	179.3	182.7	184.0
72.5°	150.7	157.0	161.3	162.0
75°	128.7	133.3	136.7	137.3
77.5°	103.7	108.3	111.3	112.0
80°	78.7	82.7	84.7	86.0
82.5°	55.7	58.3	59.3	60.7
85°	34.3	36.3	36.7	36.7
87.5°	15.0	15.3	15.3	16.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)