

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: P333591-830

Luminaire Tested: **S125RDIP-S1090D590U830-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333591-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-19,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125RDIP-S1090D590U830-4F0-1E-UDD-F4
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1090 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5981.3 lumens
Efficiency: N/A
Efficacy: 122.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.11 / 1.25
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')
CIE Type: Semi-Direct

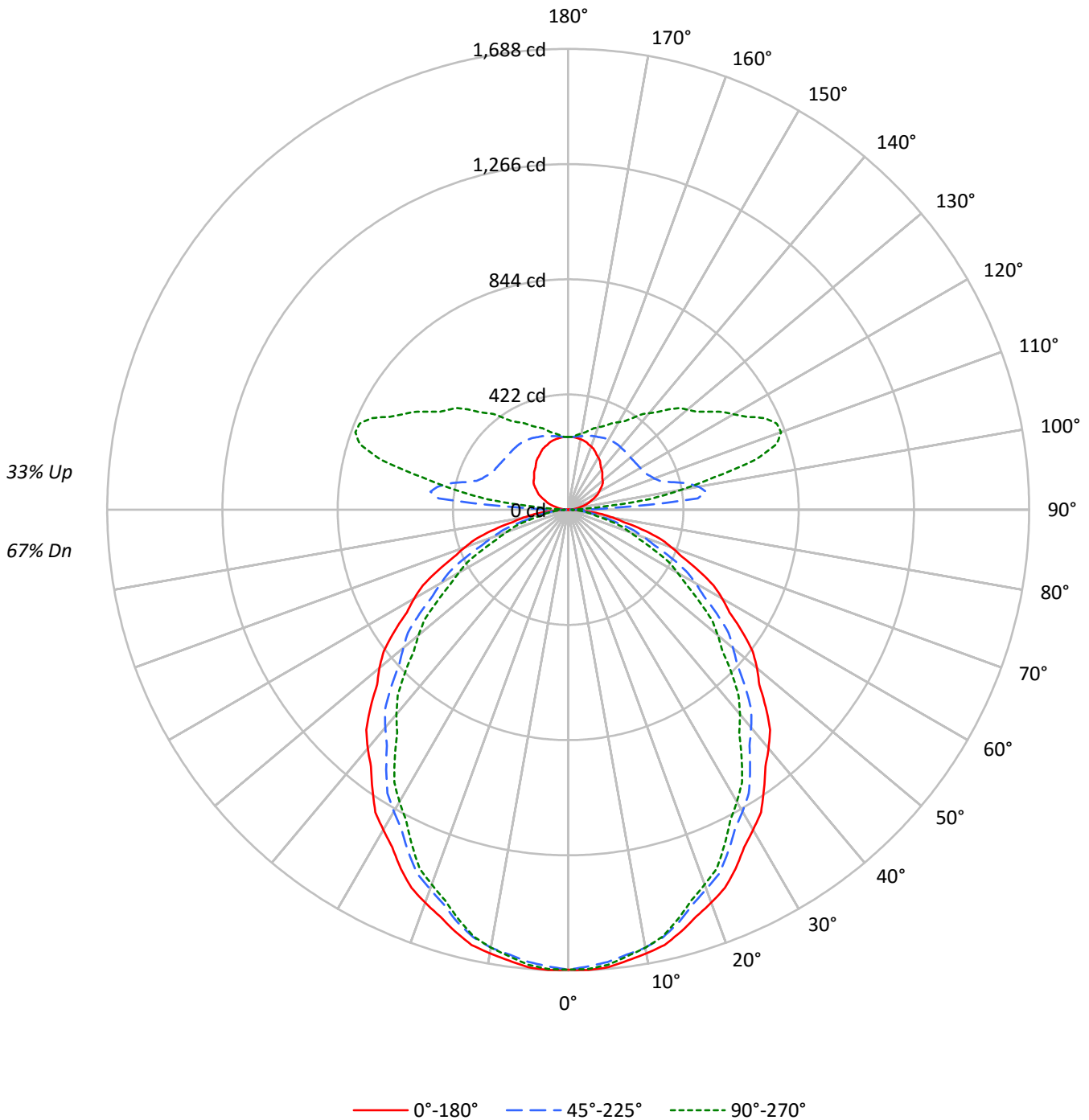
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	105	105	105	105	93	93	93	81	81	81	71	71	71	67
1	102	97	94	90	96	92	89	86	82	79	77	72	70	69	64	62	61	57
2	93	85	79	74	87	81	75	71	72	68	64	64	61	58	56	54	52	48
3	85	75	68	62	80	71	65	59	64	58	54	57	53	49	50	47	44	41
4	78	67	59	53	73	63	56	51	57	51	46	51	46	42	45	41	38	35
5	72	60	52	46	67	57	49	44	51	45	40	46	41	37	41	37	34	31
6	66	54	46	40	62	51	44	38	46	40	35	41	36	33	37	33	30	27
7	61	49	41	35	58	46	39	34	42	36	31	38	33	29	34	30	27	24
8	57	45	37	31	54	42	35	30	38	32	28	35	30	26	31	27	24	22
9	53	41	33	28	50	39	32	27	35	29	25	32	27	23	29	25	22	20
10	50	38	30	25	47	36	29	24	33	27	23	30	25	21	27	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10880	10880	10880
5°	10906	10781	10847
10°	10823	10681	10681
15°	10694	10465	10380
20°	10529	10162	10040
25°	10337	9865	9648
30°	10097	9517	9214
35°	9851	9159	8728
40°	9622	8786	8250
45°	9344	8368	7728
50°	9064	7913	7185
55°	8740	7479	6604
60°	8415	6952	5983
65°	8031	6339	5269
70°	7593	5574	4539
75°	6984	4699	3778
80°	6152	3689	3169
85°	5180	3016	2831



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.4	2.6
10°-20°	442.7	7.4
20°-30°	642.0	10.7
30°-40°	731.6	12.2
40°-50°	713.2	11.9
50°-60°	600.3	10.0
60°-70°	420.8	7.0
70°-80°	216.3	3.6
80°-90°	56.1	0.9
90°-100°	193.3	3.2
100°-110°	415.5	6.9
110°-120°	390.0	6.5
120°-130°	316.0	5.3
130°-140°	253.6	4.2
140°-150°	191.4	3.2
150°-160°	134.7	2.3
160°-170°	79.4	1.3
170°-180°	25.8	0.4
0°-30°	1243.1	20.8
0°-40°	1974.7	33.0
0°-60°	3288.2	55.0
0°-90°	3981.4	66.6
90°-120°	998.8	16.7
90°-150°	1759.9	29.4
90°-180°	2000.0	33.4
0°-180°	5981.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1685	1685	1685	1685	1685	
5°	1682	1677	1663	1675	1673	159
15°	1599	1591	1565	1563	1552	451
25°	1451	1430	1384	1368	1354	667
35°	1250	1218	1162	1126	1107	782
45°	1023	984	916	867	846	789
55°	776	734	664	609	586	694
65°	526	481	415	366	345	520
75°	280	241	188	161	151	296
85°	70	48	41	39	38	79
90°	1	5	9	11	12	4
95°	18	52	476	216	126	19
105°	61	85	390	767	712	64
115°	109	131	313	674	794	107
125°	150	176	300	537	625	134
135°	176	212	298	450	519	137
145°	205	235	299	372	410	129
155°	234	252	291	329	344	108
165°	256	263	280	296	301	72
175°	266	266	268	272	270	25
180°	267	267	267	267	267	



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CATALOG NUMBER: S125RDIP-S1090D590U830-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1684.7	1684.7	1684.7	1684.7	1684.7	1684.7	1684.7	1684.7	1684.7	1684.7	1684.7
2.5°	1687.7	1687.1	1686.4	1685.6	1685.0	1683.6	1681.3	1679.0	1676.8	1674.5	1676.8
5°	1682.2	1681.0	1679.9	1678.8	1677.6	1675.5	1672.4	1669.2	1666.1	1663.0	1665.8
7.5°	1665.6	1664.5	1663.4	1662.4	1661.2	1658.9	1655.1	1651.4	1647.7	1644.0	1646.0
10°	1650.3	1649.4	1648.6	1647.8	1646.9	1644.5	1640.6	1636.6	1632.7	1628.7	1629.6
12.5°	1633.0	1631.9	1630.9	1629.8	1628.7	1625.5	1620.2	1614.9	1609.6	1604.2	1604.9
15°	1599.4	1597.7	1596.0	1594.3	1592.6	1588.8	1582.9	1577.0	1571.0	1565.1	1564.8
17.5°	1561.5	1558.9	1556.3	1553.7	1551.0	1546.1	1538.6	1531.2	1523.6	1516.2	1514.8
20°	1532.0	1529.2	1526.4	1523.5	1520.7	1514.8	1505.7	1496.7	1487.6	1478.6	1477.2
22.5°	1499.4	1496.6	1493.7	1490.9	1488.1	1482.0	1472.4	1462.9	1453.4	1443.9	1441.1
25°	1450.6	1446.3	1442.1	1437.8	1433.6	1426.3	1415.8	1405.3	1394.9	1384.4	1380.7
27.5°	1394.6	1389.4	1384.2	1379.1	1373.9	1365.8	1354.6	1343.4	1332.2	1321.0	1315.9
30°	1353.9	1348.5	1343.1	1337.8	1332.4	1323.7	1311.8	1300.0	1288.1	1276.2	1269.7
32.5°	1314.1	1307.9	1301.6	1295.3	1289.0	1279.9	1267.7	1255.7	1243.5	1231.4	1224.3
35°	1249.5	1242.7	1236.0	1229.2	1222.4	1212.6	1199.9	1187.1	1174.4	1161.7	1153.5
37.5°	1186.1	1177.9	1169.6	1161.4	1153.1	1142.5	1129.3	1116.2	1103.1	1090.0	1080.1
40°	1141.3	1132.8	1124.4	1115.9	1107.4	1096.4	1082.8	1069.2	1055.6	1042.1	1031.3
42.5°	1094.5	1085.8	1077.1	1068.4	1059.7	1048.3	1034.3	1020.3	1006.3	992.2	981.9
45°	1023.0	1014.8	1006.6	998.4	990.2	978.4	962.8	947.3	931.7	916.2	904.8
47.5°	949.0	940.3	931.6	923.0	914.4	902.2	886.6	870.8	855.2	839.5	827.8
50°	902.1	892.8	883.4	874.1	864.8	852.1	835.9	819.8	803.7	787.6	775.7
52.5°	851.2	841.7	832.1	822.6	813.0	800.6	785.4	770.2	755.0	739.8	727.0
55°	776.2	767.1	758.1	749.0	740.0	727.5	711.7	695.9	680.0	664.2	651.5
57.5°	700.3	690.7	681.0	671.3	661.7	649.2	634.0	618.7	603.4	588.1	575.7
60°	651.5	641.6	631.7	621.8	611.9	599.3	584.0	568.7	553.5	538.2	525.8
62.5°	599.6	590.1	580.7	571.2	561.8	549.3	533.9	518.3	502.8	487.3	475.8
65°	525.5	515.9	506.2	496.6	487.0	474.8	459.8	444.8	429.8	414.8	403.5
67.5°	451.9	442.3	432.7	423.1	413.5	401.5	387.1	372.8	358.4	344.0	333.8
70°	402.1	392.5	382.9	373.2	363.6	351.8	337.6	323.5	309.3	295.2	286.4
72.5°	353.3	343.8	334.4	325.1	315.7	304.3	291.2	277.9	264.7	251.5	243.4
75°	279.9	271.5	263.0	254.5	246.0	235.8	223.9	212.1	200.2	188.3	182.1
77.5°	207.2	200.4	193.6	186.8	180.0	171.8	162.4	152.9	143.4	133.8	129.5
80°	165.4	158.6	151.8	145.1	138.3	130.9	123.0	115.1	107.2	99.2	96.7
82.5°	124.7	118.6	112.4	106.4	100.3	94.5	89.1	83.6	78.2	72.8	71.6
85°	69.9	64.8	59.8	54.7	49.6	46.4	45.0	43.5	42.1	40.7	40.4
87.5°	23.6	22.1	20.6	19.3	17.9	17.2	17.2	17.2	17.0	17.0	17.1
90°	0.6	1.0	2.2	3.2	4.3	5.4	5.9	7.0	7.5	8.6	9.1
92.5°	6.6	7.9	12.4	19.1	28.4	44.1	73.4	122.7	176.2	173.3	140.3
95°	17.7	18.3	22.6	28.5	40.3	64.6	122.1	240.3	388.7	476.4	466.2
97.5°	29.5	30.1	33.1	39.0	49.7	67.1	105.2	191.8	347.1	508.7	589.8
100°	37.6	38.7	40.9	46.8	57.0	73.1	104.3	174.2	309.7	485.5	619.9
102.5°	46.7	47.3	49.0	55.4	64.8	80.4	108.2	166.9	281.3	444.6	601.8
105°	60.8	60.8	63.4	68.8	77.4	92.5	116.1	164.0	253.7	389.8	544.1
107.5°	74.6	75.6	78.1	82.6	91.5	105.1	128.0	168.9	242.1	352.0	485.2
110°	84.5	85.5	87.7	92.5	100.6	114.5	136.6	173.6	238.7	334.4	451.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	94.3	95.4	97.1	102.0	110.0	123.6	144.8	179.6	238.7	324.1	426.7
115°	108.6	109.7	111.3	116.1	124.2	137.6	157.5	188.7	240.3	312.9	399.4
117.5°	121.5	123.1	124.9	129.7	138.8	151.8	170.7	199.1	243.8	307.5	383.2
120°	130.1	131.8	133.8	138.7	147.9	161.3	180.1	205.9	247.3	304.8	374.2
122.5°	139.1	140.3	142.0	146.8	156.9	170.3	189.2	213.7	250.3	302.7	366.5
125°	150.5	151.7	154.3	159.1	169.4	183.3	201.0	224.2	255.4	300.0	355.9
127.5°	159.5	161.1	164.6	170.7	181.5	195.5	212.5	233.8	261.1	298.7	346.3
130°	165.0	166.6	171.0	178.0	189.3	203.2	219.9	240.3	264.6	297.8	339.8
132.5°	169.4	171.4	176.5	184.5	196.1	210.1	226.8	245.9	268.4	297.8	334.6
135°	176.3	178.5	184.9	193.6	204.8	219.3	236.0	253.7	273.6	297.8	328.5
137.5°	185.2	186.8	192.8	201.4	212.4	227.4	242.6	259.6	278.5	298.5	323.0
140°	190.3	191.9	198.4	207.0	217.3	231.8	247.3	263.4	280.7	299.0	320.5
142.5°	196.3	197.6	203.6	212.2	222.0	235.6	250.3	265.6	281.9	299.4	318.3
145°	205.4	206.4	211.8	219.3	229.0	241.4	255.4	268.8	283.3	299.0	315.1
147.5°	214.8	215.5	220.1	227.1	235.4	246.4	258.6	270.8	283.9	297.6	311.7
150°	220.5	221.5	225.3	232.2	239.8	248.9	260.8	272.0	283.9	296.2	309.2
152.5°	226.5	227.1	230.5	236.6	243.6	251.9	262.9	272.9	283.4	294.5	306.1
155°	234.4	234.4	237.6	243.0	248.4	255.9	265.0	273.6	282.3	291.4	301.0
157.5°	241.5	241.4	244.0	248.6	253.4	259.0	266.9	274.2	280.9	288.1	296.3
160°	246.3	245.7	247.9	251.7	255.9	260.8	267.8	274.2	279.6	286.1	292.5
162.5°	250.2	249.6	251.8	255.1	258.5	262.5	268.6	273.8	278.3	283.4	289.1
165°	255.9	254.9	256.5	259.1	261.3	264.6	268.8	273.1	276.4	279.6	283.9
167.5°	259.8	259.3	260.2	261.7	263.3	265.2	268.8	271.8	273.3	275.8	278.8
170°	262.4	261.8	262.4	263.4	264.6	266.2	268.8	271.0	272.0	273.6	275.8
172.5°	264.1	263.2	263.6	264.8	265.4	266.2	268.4	270.1	270.3	271.1	272.8
175°	266.2	265.0	265.6	266.2	266.2	266.2	267.8	268.8	268.2	268.2	268.8
177.5°	267.1	266.3	266.3	266.6	266.3	266.3	267.1	267.5	266.6	266.6	267.1
180°	266.6	266.6	266.6	266.6	266.6	266.6	266.6	266.6	266.6	266.6	266.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1684.7	1684.7	1684.7	1684.7	1684.7	1684.7	1684.7	1684.7
2.5°	1679.0	1681.3	1683.6	1684.5	1684.3	1684.1	1683.9	1683.7
5°	1668.7	1671.5	1674.3	1675.5	1674.9	1674.3	1673.8	1673.2
7.5°	1647.9	1649.9	1651.9	1652.6	1651.9	1651.3	1650.7	1650.0
10°	1630.4	1631.3	1632.1	1632.1	1631.3	1630.4	1629.6	1628.7
12.5°	1605.5	1606.1	1606.8	1606.4	1605.1	1603.8	1602.5	1601.2
15°	1564.5	1564.2	1564.0	1562.5	1560.0	1557.5	1554.9	1552.4
17.5°	1513.3	1511.9	1510.5	1508.8	1506.7	1504.6	1502.5	1500.4
20°	1475.7	1474.3	1472.9	1470.9	1468.4	1465.8	1463.3	1460.8
22.5°	1438.4	1435.6	1432.9	1430.4	1428.3	1426.3	1424.1	1422.0
25°	1377.1	1373.4	1369.7	1366.3	1363.2	1360.1	1357.0	1353.9
27.5°	1310.7	1305.6	1300.4	1296.4	1293.4	1290.3	1287.3	1284.4
30°	1263.2	1256.7	1250.2	1245.7	1243.1	1240.6	1238.0	1235.5
32.5°	1217.1	1209.8	1202.7	1197.5	1194.3	1191.1	1187.8	1184.6
35°	1145.3	1137.1	1128.9	1122.9	1118.9	1114.9	1111.0	1107.0
37.5°	1070.3	1060.5	1050.6	1043.8	1039.9	1036.0	1032.2	1028.3
40°	1020.6	1009.8	999.1	992.0	988.6	985.2	981.8	978.5
42.5°	971.7	961.3	951.0	943.4	938.4	933.5	928.5	923.5
45°	893.5	882.2	870.9	863.1	858.8	854.6	850.4	846.1
47.5°	816.2	804.6	793.0	784.8	780.0	775.3	770.7	766.0
50°	763.8	752.0	740.1	732.1	727.8	723.6	719.3	715.1
52.5°	714.3	701.4	688.6	680.1	675.9	671.7	667.4	663.2
55°	638.8	626.0	613.3	604.6	600.1	595.6	591.1	586.5
57.5°	563.3	550.8	538.4	530.1	526.1	522.1	518.0	514.1
60°	513.3	500.9	488.4	480.1	475.9	471.6	467.4	463.2
62.5°	464.3	452.7	441.2	433.3	429.0	424.8	420.6	416.3
65°	392.2	380.9	369.6	361.7	357.5	353.3	349.0	344.8
67.5°	323.4	313.0	302.7	295.8	292.4	289.0	285.6	282.2
70°	277.7	268.9	260.1	254.0	250.6	247.2	243.8	240.4
72.5°	235.3	227.2	219.0	213.9	211.6	209.3	207.1	204.8
75°	175.9	169.7	163.4	159.3	157.3	155.3	153.4	151.4
77.5°	125.2	120.8	116.4	113.5	112.1	110.6	109.1	107.6
80°	94.2	91.6	89.1	87.5	86.9	86.3	85.8	85.2
82.5°	70.4	69.2	68.1	67.3	66.9	66.5	66.3	65.9
85°	40.2	39.9	39.6	39.3	39.0	38.7	38.5	38.2
87.5°	17.2	17.3	17.4	17.5	17.2	17.1	17.0	16.7
90°	9.7	10.2	10.7	11.8	11.8	11.8	12.3	12.3
92.5°	95.3	69.2	52.0	44.1	37.2	35.9	35.2	34.3
95°	386.5	304.8	238.7	193.6	155.4	139.2	135.0	126.4
97.5°	575.7	518.4	454.0	391.2	358.0	327.8	312.3	305.4
100°	661.3	635.0	579.6	523.7	486.5	447.9	428.0	419.3
102.5°	690.1	706.3	679.8	642.0	602.3	574.8	553.2	546.7
105°	673.2	746.8	770.4	764.5	747.3	729.6	718.9	712.4
107.5°	612.5	710.8	771.6	799.6	808.3	808.2	804.6	800.3
110°	567.8	670.0	745.7	791.5	815.6	825.9	829.6	829.6



TEST NUMBER: P333591-830

CATALOG NUMBER: S125RDIP-S1090D590U830-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	532.5	629.5	706.2	760.1	795.4	812.9	822.3	826.1
115°	488.1	571.6	645.2	703.8	745.7	771.6	786.6	793.6
117.5°	459.6	531.4	594.8	648.7	690.6	717.3	732.2	736.5
120°	444.1	508.6	567.8	615.1	654.9	680.7	695.2	699.5
122.5°	432.5	492.3	545.0	589.3	624.7	648.4	662.9	666.8
125°	415.6	470.4	517.3	555.9	586.1	608.1	619.9	625.3
127.5°	398.4	449.6	493.2	529.5	556.8	576.3	587.4	589.8
130°	387.7	435.0	476.9	511.8	538.8	556.5	567.2	570.4
132.5°	376.9	421.2	459.3	492.9	519.8	537.5	547.4	551.1
135°	362.9	400.0	434.4	465.1	488.7	506.4	516.1	519.3
137.5°	351.1	381.1	409.7	435.7	456.9	473.1	481.9	485.5
140°	344.6	369.9	394.6	417.3	437.2	451.1	459.1	461.8
142.5°	339.0	360.4	381.7	401.3	418.2	430.0	437.6	439.9
145°	331.8	348.4	365.0	379.6	392.5	401.6	407.6	409.7
147.5°	324.9	338.4	351.2	362.1	372.4	379.7	383.1	384.1
150°	320.9	332.8	343.0	352.7	360.8	367.2	369.4	369.9
152.5°	316.7	327.3	336.6	344.1	350.9	356.0	358.2	358.7
155°	310.2	318.9	326.3	332.2	337.6	341.4	343.0	343.6
157.5°	303.8	310.9	316.7	321.3	325.5	328.6	330.1	330.0
160°	299.4	304.8	310.2	314.0	317.7	320.5	321.5	320.9
162.5°	294.7	299.7	304.2	307.6	310.5	312.7	312.9	312.8
165°	288.1	291.9	295.2	297.8	300.0	301.0	301.0	301.0
167.5°	281.9	284.5	286.9	288.8	289.9	290.9	290.4	290.3
170°	278.5	280.1	281.7	282.8	283.9	284.5	284.5	283.9
172.5°	274.7	276.3	277.4	278.1	278.3	279.3	278.4	277.9
175°	270.4	270.4	271.5	271.5	271.5	272.0	271.0	270.4
177.5°	267.5	268.0	268.0	268.0	267.5	268.0	266.6	266.6
180°	266.6	266.6	266.6	266.6	266.6	266.6	266.6	266.6

(END OF REPORT)