

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P832071

Luminaire Tested: S123RDIP-S340D1195U850-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P832071  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S340D1195U850-4F0-1E-UDD-G  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 1195 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: -

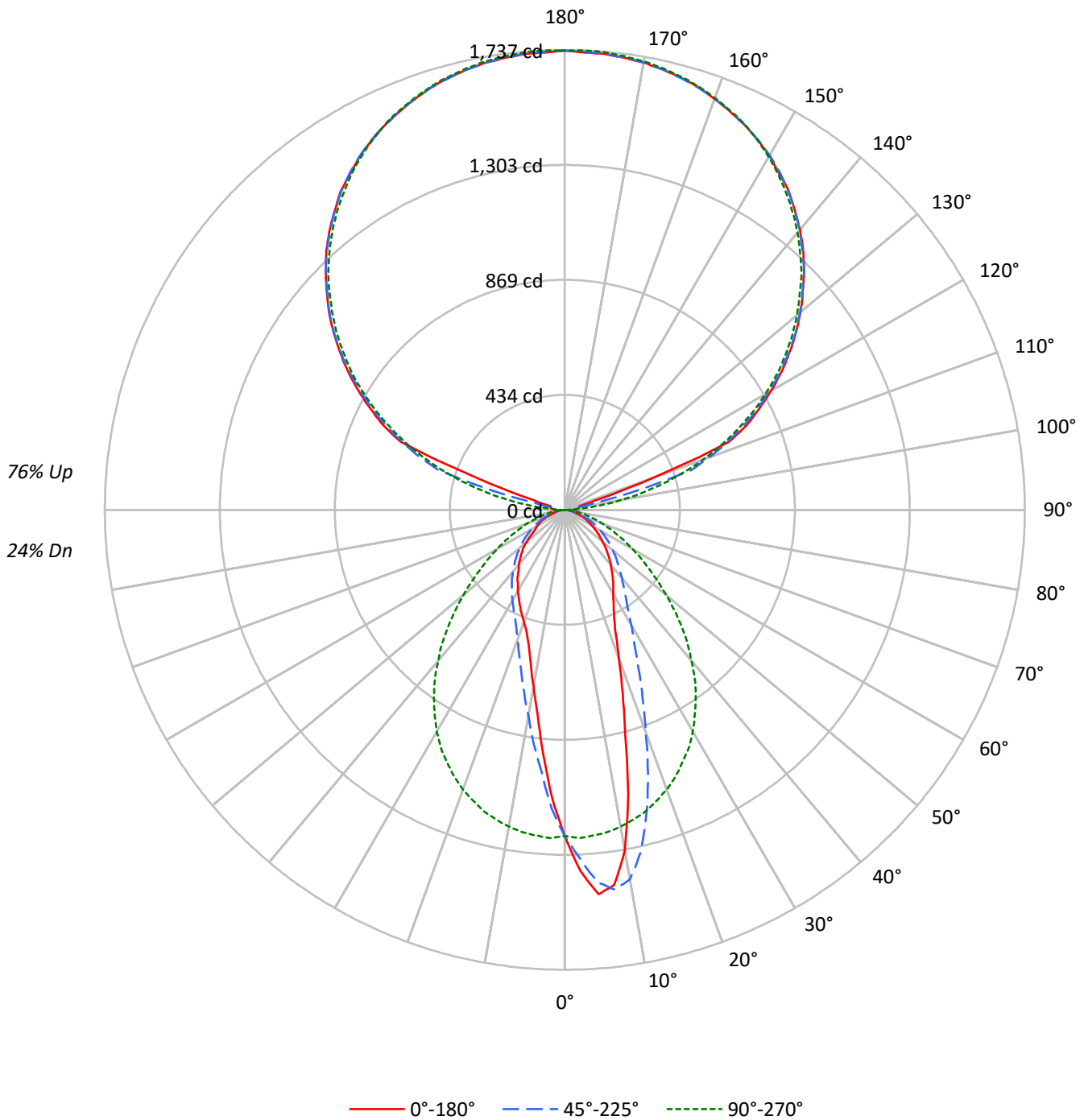
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6923.7 lumens  
Efficiency: N/A  
Efficacy: 159.5 lumens/watt  
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: Semi-Indirect  
  
Input Watts (W): 43.4  
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: 24 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	0	
RCR																						
0	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24				24
1	92	88	85	81	82	79	76	73	61	59	57	44	43	42	29	28	28	21				21
2	84	77	72	67	75	69	64	60	53	50	48	39	37	35	26	25	24	18				18
3	77	68	62	56	68	61	55	51	48	44	40	35	32	30	23	22	21	16				16
4	71	61	53	48	63	54	48	43	42	38	35	31	29	26	21	19	18	14				14
5	65	54	47	41	58	49	42	37	38	34	30	28	25	23	19	17	16	12				12
6	60	49	41	36	53	44	37	33	34	30	26	26	23	20	18	16	14	11				11
7	55	44	37	31	49	40	33	29	31	27	23	23	20	18	16	14	13	10				10
8	51	40	33	28	46	36	30	25	29	24	21	22	19	16	15	13	12	9				9
9	48	36	29	25	43	33	27	23	26	22	19	20	17	15	14	12	11	9				9
10	45	33	27	22	40	30	24	20	24	20	17	18	15	13	13	11	10	8				8

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	13261	13261	13261	13261	13261
5°	15746	15244	13344	10788	10015
10°	14267	15483	13278	8643	7415
15°	9823	13277	13138	7064	5865
20°	6834	10221	12874	5956	5156
25°	5208	7790	12491	5295	4752
30°	4533	6228	12010	4916	4401
35°	4162	5253	11331	4596	4083
40°	3797	4692	10442	4283	3790
45°	3430	4291	9481	3987	3498
50°	3113	3959	8349	3696	3138
55°	2815	3635	7261	3412	2693
60°	2523	3307	6308	3100	2545
65°	2328	2934	5430	2786	2407
70°	1891	2537	4736	2521	1954
75°	1659	2017	4013	2092	1722
80°	1500	1705	3285	1754	1630
85°	1371	1494	2495	1593	1494

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 10004 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.3	1.6
10°-20°	259.9	3.8
20°-30°	298.1	4.3
30°-40°	293.9	4.2
40°-50°	259.2	3.7
50°-60°	199.4	2.9
60°-70°	131.1	1.9
70°-80°	63.7	0.9
80°-90°	19.5	0.3
90°-100°	61.1	0.9
100°-110°	295.6	4.3
110°-120°	724.5	10.5
120°-130°	919.8	13.3
130°-140°	982.6	14.2
140°-150°	918.9	13.3
150°-160°	741.1	10.7
160°-170°	478.3	6.9
170°-180°	164.8	2.4
0°-30°	670.3	9.7
0°-40°	964.2	13.9
0°-60°	1422.7	20.5
0°-90°	1637.0	23.6
90°-120°	1081.2	15.6
90°-150°	3902.5	56.4
90°-180°	5287.0	76.4
0°-180°	6923.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1232	1232	1232	1232	1232	
5°	1457	1411	1235	998	927	133
15°	882	1191	1179	634	526	249
25°	438	656	1052	446	400	207
35°	317	400	862	350	311	197
45°	225	282	623	262	230	175
55°	150	194	387	182	144	135
65°	91	115	213	109	94	90
75°	40	48	96	50	41	43
85°	11	12	20	13	12	12
90°	39	31	1	31	39	17
95°	49	40	79	40	49	41
105°	57	282	384	282	57	118
115°	758	740	720	740	758	713
125°	1036	1031	1015	1031	1036	926
135°	1277	1277	1264	1277	1277	985
145°	1473	1470	1458	1470	1473	920
155°	1604	1605	1607	1605	1604	740
165°	1690	1689	1694	1689	1690	478
175°	1728	1729	1734	1729	1728	164
180°	1734	1734	1734	1734	1734	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0
2.5°	1365.4	1361.1	1356.8	1355.5	1354.3	1350.2	1346.2	1337.1	1328.0	1318.6	1309.3
5°	1457.3	1457.8	1458.3	1457.1	1455.8	1450.5	1445.2	1434.1	1423.0	1410.8	1398.7
7.5°	1429.0	1437.1	1445.2	1446.7	1448.2	1452.3	1456.3	1453.8	1451.2	1446.7	1442.2
10°	1305.3	1304.8	1304.3	1313.3	1322.4	1349.5	1376.5	1390.4	1404.3	1416.6	1429.0
12.5°	1103.2	1104.0	1104.7	1134.5	1164.3	1189.8	1215.3	1250.7	1286.1	1324.2	1362.3
15°	881.5	893.8	906.2	932.7	959.2	997.6	1036.0	1083.5	1131.0	1191.4	1251.7
17.5°	723.9	729.2	734.5	760.0	785.5	821.9	858.2	912.0	965.8	1043.6	1121.4
20°	596.6	601.4	606.2	624.6	643.0	677.9	712.7	764.0	815.3	892.3	969.4
22.5°	498.1	507.4	516.8	529.1	541.5	566.8	592.0	644.3	696.6	766.8	837.0
25°	438.5	442.7	447.0	457.7	468.3	492.5	516.8	551.4	586.0	655.9	725.9
27.5°	398.0	399.3	400.6	408.4	416.2	431.9	447.5	479.6	511.7	569.3	626.9
30°	364.7	367.0	369.3	375.3	381.4	392.7	404.1	426.8	449.6	501.1	552.6
32.5°	338.9	340.2	341.5	346.5	351.6	359.9	368.2	386.2	404.1	443.5	482.9
35°	316.7	317.0	317.2	321.0	324.8	332.9	341.0	355.9	370.8	399.8	428.9
37.5°	291.5	293.2	295.0	297.8	300.6	307.6	314.7	326.8	338.9	362.9	386.9
40°	270.2	271.8	273.3	276.6	279.8	285.4	291.0	302.1	313.2	333.9	354.6
42.5°	249.0	250.0	251.1	254.3	257.6	264.4	271.3	280.1	288.9	306.1	323.3
45°	225.3	227.8	230.3	233.9	237.4	243.2	249.0	258.1	267.2	281.9	296.5
47.5°	205.6	206.9	208.1	211.1	214.2	221.2	228.3	236.4	244.5	258.1	271.8
50°	185.9	186.4	186.9	189.7	192.5	198.8	205.1	214.4	223.8	236.4	249.0
52.5°	167.2	168.5	169.7	172.5	175.3	179.6	183.9	193.5	203.1	215.4	227.8
55°	150.0	150.8	151.5	153.6	155.6	160.6	165.7	174.0	182.4	193.7	205.1
57.5°	133.9	134.9	135.9	137.4	138.9	143.5	148.0	155.3	162.7	174.0	185.4
60°	117.2	118.5	119.7	121.5	123.3	126.8	130.3	136.9	143.5	153.6	163.7
62.5°	105.1	105.3	105.6	107.1	108.6	111.1	113.7	119.0	124.3	134.4	144.5
65°	91.4	92.2	92.9	93.7	94.5	96.5	98.5	103.0	107.6	115.2	122.7
67.5°	77.3	78.0	78.8	80.1	81.3	83.1	84.9	87.9	90.9	98.0	105.1
70°	60.1	60.1	60.1	62.1	64.2	67.2	70.2	72.5	74.8	80.6	86.4
72.5°	49.0	49.3	49.5	49.8	50.0	51.8	53.5	57.3	61.1	64.7	68.2
75°	39.9	40.2	40.4	40.7	40.9	41.4	41.9	43.2	44.5	48.5	52.5
77.5°	31.8	32.1	32.3	32.6	32.8	33.3	33.8	34.3	34.9	36.4	37.9
80°	24.2	24.5	24.8	25.0	25.3	25.5	25.8	26.3	26.8	27.5	28.3
82.5°	17.7	17.7	17.7	17.7	17.7	18.2	18.7	18.7	18.7	19.2	19.7
85°	11.1	11.1	11.1	11.4	11.6	11.6	11.6	11.9	12.1	12.1	12.1
87.5°	5.1	4.8	4.5	4.8	5.1	5.1	5.1	5.3	5.6	5.6	5.6
90°	38.7	38.1	37.5	36.9	36.4	35.5	34.4	33.2	32.1	30.9	27.2
92.5°	43.8	43.5	43.2	42.9	42.7	41.5	39.5	37.5	35.5	33.5	30.9
95°	49.0	49.0	49.0	49.0	49.0	48.0	46.0	44.0	41.9	39.9	36.8
97.5°	52.8	52.5	52.3	52.0	51.7	50.4	48.1	45.8	43.5	41.2	55.8
100°	54.1	53.8	53.5	53.3	53.0	51.7	49.4	47.1	44.8	42.5	87.2
102.5°	55.4	54.8	54.3	53.7	53.1	57.6	67.0	76.4	85.9	95.3	145.2
105°	56.7	56.1	55.5	55.0	54.4	79.5	130.1	180.8	231.5	282.2	307.9
107.5°	134.0	171.5	209.0	246.5	284.0	324.8	368.9	413.0	457.1	501.2	496.9
110°	354.3	395.3	436.2	477.2	518.1	543.3	552.7	562.2	571.6	581.1	577.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	671.3	671.9	672.4	673.0	673.6	672.6	670.0	667.4	664.8	662.3	659.1
115°	757.6	756.5	755.3	754.2	753.0	751.0	748.2	745.3	742.4	739.6	737.0
117.5°	827.2	826.9	826.6	826.3	826.0	824.7	822.5	820.2	817.9	815.6	814.2
120°	899.3	899.3	899.3	899.3	899.3	898.2	895.9	893.6	891.3	889.0	888.2
122.5°	970.2	969.9	969.6	969.3	969.1	968.2	966.8	965.3	963.9	962.5	961.3
125°	1035.9	1035.3	1034.8	1034.2	1033.6	1033.0	1032.5	1031.9	1031.3	1030.8	1029.6
127.5°	1100.3	1100.9	1101.5	1102.1	1102.6	1102.5	1101.6	1100.8	1099.9	1099.0	1097.6
130°	1162.2	1162.8	1163.3	1163.9	1164.5	1164.2	1163.0	1161.9	1160.7	1159.6	1158.5
132.5°	1218.9	1219.7	1220.6	1221.4	1222.3	1222.2	1221.0	1219.9	1218.7	1217.6	1216.7
135°	1276.9	1277.7	1278.6	1279.4	1280.3	1280.3	1279.4	1278.6	1277.7	1276.9	1275.7
137.5°	1332.3	1332.8	1333.4	1334.0	1334.5	1334.1	1332.7	1331.3	1329.8	1328.4	1327.8
140°	1381.2	1381.8	1382.4	1382.9	1383.5	1383.2	1382.1	1380.9	1379.8	1378.6	1377.8
142.5°	1426.3	1427.2	1428.0	1428.9	1429.7	1429.7	1428.9	1428.0	1427.2	1426.3	1425.5
145°	1472.7	1472.7	1472.7	1472.7	1472.7	1472.4	1471.8	1471.3	1470.7	1470.1	1469.5
147.5°	1506.2	1507.6	1509.1	1510.5	1511.9	1512.4	1511.8	1511.2	1510.6	1510.1	1509.5
150°	1544.8	1545.7	1546.6	1547.4	1548.3	1548.4	1547.9	1547.3	1546.7	1546.1	1545.6
152.5°	1575.8	1577.2	1578.6	1580.1	1581.5	1581.6	1580.5	1579.3	1578.2	1577.1	1576.8
155°	1604.1	1605.8	1607.6	1609.3	1611.0	1611.1	1609.7	1608.3	1606.8	1605.4	1605.1
157.5°	1628.6	1630.9	1633.2	1635.5	1637.8	1638.0	1636.3	1634.6	1632.9	1631.2	1631.5
160°	1651.8	1653.8	1655.8	1657.8	1659.8	1659.9	1658.2	1656.5	1654.8	1653.1	1653.4
162.5°	1673.7	1675.4	1677.1	1678.8	1680.6	1680.4	1678.4	1676.4	1674.4	1672.4	1672.7
165°	1690.4	1692.4	1694.5	1696.5	1698.5	1698.3	1696.0	1693.7	1691.4	1689.2	1689.4
167.5°	1703.3	1705.6	1707.9	1710.2	1712.5	1712.5	1710.2	1707.9	1705.6	1703.3	1703.3
170°	1714.9	1717.2	1719.5	1721.8	1724.1	1724.1	1721.8	1719.5	1717.2	1714.9	1714.9
172.5°	1721.4	1723.9	1726.5	1729.1	1731.7	1731.8	1729.5	1727.2	1724.9	1722.7	1722.4
175°	1727.8	1730.1	1732.4	1734.7	1737.0	1737.1	1735.1	1733.1	1731.1	1729.1	1728.8
177.5°	1729.1	1732.0	1734.8	1737.7	1740.5	1740.8	1738.5	1736.3	1734.0	1731.7	1731.4
180°	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0
2.5°	1308.0	1306.8	1294.7	1282.5	1270.7	1258.8	1250.0	1241.1	1226.2	1211.3	1202.0
5°	1389.1	1379.5	1360.3	1341.1	1312.3	1283.5	1259.3	1235.0	1204.2	1173.4	1147.7
7.5°	1434.3	1426.5	1403.3	1380.0	1341.9	1303.7	1265.9	1228.0	1182.5	1137.1	1098.2
10°	1435.6	1442.2	1423.0	1403.8	1360.8	1317.9	1266.4	1214.8	1153.7	1092.6	1042.3
12.5°	1390.6	1418.9	1414.9	1410.8	1367.1	1323.4	1260.8	1198.2	1123.2	1048.2	985.3
15°	1306.5	1361.3	1377.5	1393.7	1357.5	1321.4	1250.2	1179.0	1090.8	1002.7	930.5
17.5°	1198.2	1275.0	1317.6	1360.3	1334.1	1307.8	1229.7	1151.7	1052.4	953.2	874.6
20°	1069.9	1170.4	1237.3	1304.3	1294.7	1285.1	1204.5	1123.9	1016.8	909.7	824.6
22.5°	943.1	1049.2	1141.6	1234.0	1243.9	1253.7	1172.4	1091.1	973.9	856.7	770.1
25°	833.7	941.6	1051.7	1161.8	1184.0	1206.3	1129.0	1051.7	930.2	808.7	722.6
27.5°	729.4	832.0	953.2	1074.4	1114.8	1155.2	1084.5	1013.8	887.3	760.7	674.9
30°	644.3	736.0	859.7	983.5	1039.8	1096.1	1031.2	966.3	840.8	715.3	631.2
32.5°	565.0	647.1	771.3	895.6	961.0	1026.4	970.4	914.3	793.6	672.8	589.7
35°	502.4	575.9	691.8	807.7	881.0	954.2	908.2	862.3	744.3	626.4	547.8
37.5°	448.6	510.2	619.0	727.9	805.7	883.5	845.1	806.7	695.8	584.9	510.7
40°	404.1	453.6	554.9	656.2	732.4	808.7	775.9	743.1	643.8	544.5	475.1
42.5°	366.0	408.7	499.6	590.5	660.5	730.4	708.7	687.0	597.1	507.2	442.7
45°	332.4	368.2	448.3	528.4	592.8	657.2	640.0	622.8	545.3	467.8	408.7
47.5°	302.6	333.4	404.9	476.3	534.2	592.0	576.1	560.2	496.0	431.9	378.1
50°	275.3	301.6	361.2	420.8	472.8	524.8	511.7	498.6	445.5	392.5	346.0
52.5°	249.5	271.3	324.8	378.3	420.3	462.2	452.1	442.0	401.1	360.2	318.0
55°	225.0	245.0	290.2	335.4	371.3	407.1	397.0	386.9	355.1	323.3	286.2
57.5°	202.8	220.2	256.9	293.5	322.0	350.6	345.8	341.0	314.4	287.9	257.4
60°	179.3	195.0	226.6	258.1	281.1	304.1	298.5	293.0	274.0	255.1	228.8
62.5°	158.4	172.3	197.5	222.8	241.5	260.1	256.1	252.1	237.7	223.3	201.5
65°	136.4	150.0	170.5	190.9	205.6	220.2	216.7	213.2	202.3	191.4	174.0
67.5°	116.4	127.8	145.5	163.2	173.0	182.9	180.8	178.8	170.5	162.1	148.5
70°	96.2	106.1	120.7	135.4	142.2	149.0	149.8	150.5	143.0	135.4	125.3
72.5°	76.0	83.9	97.5	111.1	116.4	121.7	121.5	121.2	116.7	112.1	103.0
75°	58.3	64.2	74.8	85.4	89.9	94.5	95.5	96.5	92.2	87.9	82.8
77.5°	41.9	46.0	54.0	62.1	67.2	72.2	72.7	73.2	71.2	69.2	64.4
80°	29.6	30.8	35.9	40.9	46.2	51.5	52.3	53.0	51.0	49.0	46.0
82.5°	20.5	21.2	23.0	24.8	29.0	33.3	34.3	35.4	34.3	33.3	30.1
85°	12.4	12.6	13.4	14.1	16.2	18.2	19.2	20.2	19.7	19.2	17.4
87.5°	5.6	5.6	5.8	6.1	6.6	7.1	8.3	9.6	8.8	8.1	7.3
90°	23.5	19.8	16.0	12.7	9.9	7.0	4.2	1.3	4.2	7.0	9.9
92.5°	28.3	25.8	23.2	22.8	24.5	26.2	27.9	29.6	27.9	26.2	24.5
95°	33.6	30.5	27.3	31.6	43.4	55.1	66.9	78.6	66.9	55.1	43.4
97.5°	70.4	85.0	99.6	110.9	119.0	127.0	135.0	143.0	135.0	127.0	119.0
100°	131.9	176.5	221.2	240.7	234.9	229.2	223.5	217.7	223.5	229.2	234.9
102.5°	195.0	244.8	294.6	317.7	314.0	310.2	306.5	302.8	306.5	310.2	314.0
105°	333.7	359.5	385.2	396.6	393.4	390.3	387.1	384.0	387.1	390.3	393.4
107.5°	492.6	488.3	484.0	480.6	478.0	475.4	472.9	470.3	472.9	475.4	478.0
110°	574.8	571.6	568.5	565.8	563.5	561.2	558.9	556.6	558.9	561.2	563.5





TEST NUMBER: P832071

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	656.0	652.8	649.7	647.1	645.1	643.1	641.1	639.1	641.1	643.1	645.1
115°	734.4	731.8	729.3	727.1	725.4	723.7	722.0	720.2	722.0	723.7	725.4
117.5°	812.7	811.3	809.9	808.1	806.1	804.1	802.1	800.1	802.1	804.1	806.1
120°	887.3	886.5	885.6	883.9	881.3	878.7	876.1	873.6	876.1	878.7	881.3
122.5°	960.2	959.0	957.9	956.3	954.3	952.3	950.3	948.3	950.3	952.3	954.3
125°	1028.5	1027.3	1026.2	1024.5	1022.2	1019.9	1017.6	1015.3	1017.6	1019.9	1022.2
127.5°	1096.2	1094.8	1093.3	1091.5	1089.2	1086.9	1084.6	1082.3	1084.6	1086.9	1089.2
130°	1157.3	1156.2	1155.0	1153.3	1151.0	1148.7	1146.4	1144.1	1146.4	1148.7	1151.0
132.5°	1215.9	1215.0	1214.1	1212.6	1210.3	1208.0	1205.7	1203.4	1205.7	1208.0	1210.3
135°	1274.6	1273.4	1272.3	1270.8	1269.1	1267.4	1265.7	1264.0	1265.7	1267.4	1269.1
137.5°	1327.2	1326.7	1326.1	1324.7	1322.4	1320.1	1317.8	1315.5	1317.8	1320.1	1322.4
140°	1376.9	1376.1	1375.2	1373.9	1372.2	1370.5	1368.8	1367.0	1368.8	1370.5	1372.2
142.5°	1424.6	1423.7	1422.9	1421.6	1419.9	1418.2	1416.4	1414.7	1416.4	1418.2	1419.9
145°	1469.0	1468.4	1467.8	1466.5	1464.5	1462.5	1460.5	1458.5	1460.5	1462.5	1464.5
147.5°	1508.9	1508.3	1507.8	1506.8	1505.3	1503.9	1502.5	1501.0	1502.5	1503.9	1505.3
150°	1545.0	1544.4	1543.8	1543.1	1542.3	1541.4	1540.6	1539.7	1540.6	1541.4	1542.3
152.5°	1576.5	1576.2	1575.9	1575.6	1575.3	1575.1	1574.8	1574.5	1574.8	1575.1	1575.3
155°	1604.8	1604.5	1604.3	1604.4	1605.0	1605.5	1606.1	1606.7	1606.1	1605.5	1605.0
157.5°	1631.7	1632.0	1632.3	1632.5	1632.5	1632.5	1632.5	1632.5	1632.5	1632.5	1632.5
160°	1653.7	1653.9	1654.2	1654.5	1654.8	1655.1	1655.4	1655.7	1655.4	1655.1	1654.8
162.5°	1673.0	1673.3	1673.5	1674.1	1675.0	1675.8	1676.7	1677.6	1676.7	1675.8	1675.0
165°	1689.7	1690.0	1690.3	1690.9	1691.7	1692.6	1693.4	1694.3	1693.4	1692.6	1691.7
167.5°	1703.3	1703.3	1703.3	1703.9	1705.0	1706.2	1707.3	1708.5	1707.3	1706.2	1705.0
170°	1714.9	1714.9	1714.9	1715.5	1716.6	1717.8	1718.9	1720.1	1718.9	1717.8	1716.6
172.5°	1722.1	1721.8	1721.5	1722.1	1723.5	1724.9	1726.4	1727.8	1726.4	1724.9	1723.5
175°	1728.5	1728.2	1728.0	1728.5	1730.0	1731.4	1732.8	1734.2	1732.8	1731.4	1730.0
177.5°	1731.1	1730.8	1730.5	1731.1	1732.5	1734.0	1735.4	1736.8	1735.4	1734.0	1732.5
180°	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2



TEST NUMBER: P832071

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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0	1232.0
2.5°	1192.6	1178.2	1163.8	1153.5	1143.1	1130.2	1117.4	1116.8	1116.3	1106.7	1097.1
5°	1121.9	1096.9	1071.9	1047.4	1022.9	998.4	973.9	968.3	962.8	954.4	946.1
7.5°	1059.3	1019.4	979.5	948.1	916.8	892.3	867.8	851.1	834.5	821.6	808.7
10°	992.1	942.6	893.1	855.2	817.3	790.8	764.3	745.1	725.9	716.8	707.7
12.5°	922.4	868.6	814.8	777.7	740.5	708.7	676.9	659.5	642.0	629.4	616.8
15°	858.2	800.4	742.5	703.1	663.7	633.9	604.1	586.7	569.3	556.7	544.0
17.5°	796.1	737.7	679.4	639.5	599.6	572.6	545.5	528.6	511.7	503.9	496.0
20°	739.5	680.7	621.8	584.2	546.6	520.0	493.5	484.4	475.3	468.0	460.7
22.5°	683.4	626.9	570.3	534.2	498.1	478.9	459.7	452.3	445.0	439.5	433.9
25°	636.5	580.1	523.8	492.3	460.7	445.8	430.9	426.1	421.3	415.7	410.2
27.5°	589.0	535.4	481.9	456.6	431.4	419.3	407.1	401.1	395.0	390.5	385.9
30°	547.1	497.6	448.1	427.1	406.1	395.5	384.9	378.3	371.8	367.5	363.2
32.5°	506.6	462.7	418.8	400.8	382.9	372.5	362.2	355.9	349.6	344.5	339.4
35°	469.3	431.1	393.0	376.6	360.2	349.8	339.4	333.1	326.8	321.8	316.7
37.5°	436.4	401.8	367.2	351.8	336.4	327.3	318.2	311.7	305.1	299.8	294.5
40°	405.6	375.1	344.5	329.6	314.7	304.8	295.0	289.2	283.4	278.6	273.8
42.5°	378.3	350.3	322.3	307.6	293.0	283.6	274.3	267.5	260.6	257.9	255.1
45°	349.6	324.8	300.0	285.9	271.8	261.9	252.1	246.3	240.4	237.9	235.4
47.5°	324.3	301.3	278.3	264.4	250.5	241.7	232.9	228.3	223.8	220.2	216.7
50°	299.5	277.3	255.1	241.7	228.3	220.7	213.2	207.6	202.1	199.5	197.0
52.5°	275.8	255.6	235.4	221.8	208.1	200.8	193.5	188.7	183.9	178.6	173.3
55°	249.0	231.4	213.7	201.5	189.4	181.8	174.3	168.7	163.2	157.6	152.0
57.5°	226.8	209.4	192.0	181.1	170.2	162.9	155.6	149.5	143.5	138.9	134.4
60°	202.6	187.4	172.3	161.6	151.0	144.0	136.9	131.1	125.3	123.0	120.7
62.5°	179.8	165.7	151.5	142.2	132.8	126.0	119.2	115.4	111.6	110.1	108.6
65°	156.6	144.5	132.3	123.8	115.2	109.4	103.6	101.8	100.0	98.8	97.5
67.5°	134.9	124.5	114.2	106.6	99.0	95.0	90.9	88.9	86.9	85.4	83.9
70°	115.2	106.1	97.0	90.4	83.9	80.1	76.3	74.5	72.7	70.0	67.2
72.5°	94.0	86.9	79.8	74.8	69.7	66.4	63.1	59.6	56.1	53.5	51.0
75°	77.8	70.7	63.6	58.8	54.0	50.3	46.5	45.2	43.9	43.2	42.4
77.5°	59.6	53.5	47.5	43.7	39.9	38.1	36.4	35.6	34.9	34.6	34.3
80°	42.9	37.9	32.8	30.8	28.8	28.3	27.8	27.3	26.8	26.5	26.3
82.5°	26.8	24.2	21.7	21.2	20.7	20.5	20.2	20.0	19.7	19.4	19.2
85°	15.7	14.6	13.6	13.4	13.1	12.9	12.6	12.6	12.6	12.6	12.6
87.5°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.3	6.1
90°	12.7	16.0	19.8	23.5	27.2	30.9	32.1	33.2	34.4	35.5	36.4
92.5°	22.8	23.2	25.8	28.3	30.9	33.5	35.5	37.5	39.5	41.5	42.7
95°	31.6	27.3	30.5	33.6	36.8	39.9	41.9	44.0	46.0	48.0	49.0
97.5°	110.9	99.6	85.0	70.4	55.8	41.2	43.5	45.8	48.1	50.4	51.7
100°	240.7	221.2	176.5	131.9	87.2	42.5	44.8	47.1	49.4	51.7	53.0
102.5°	317.7	294.6	244.8	195.0	145.2	95.3	85.9	76.4	67.0	57.6	53.1
105°	396.6	385.2	359.5	333.7	307.9	282.2	231.5	180.8	130.1	79.5	54.4
107.5°	480.6	484.0	488.3	492.6	496.9	501.2	457.1	413.0	368.9	324.8	284.0
110°	565.8	568.5	571.6	574.8	577.9	581.1	571.6	562.2	552.7	543.3	518.1



TEST NUMBER: P832071

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	647.1	649.7	652.8	656.0	659.1	662.3	664.8	667.4	670.0	672.6	673.6
115°	727.1	729.3	731.8	734.4	737.0	739.6	742.4	745.3	748.2	751.0	753.0
117.5°	808.1	809.9	811.3	812.7	814.2	815.6	817.9	820.2	822.5	824.7	826.0
120°	883.9	885.6	886.5	887.3	888.2	889.0	891.3	893.6	895.9	898.2	899.3
122.5°	956.3	957.9	959.0	960.2	961.3	962.5	963.9	965.3	966.8	968.2	969.1
125°	1024.5	1026.2	1027.3	1028.5	1029.6	1030.8	1031.3	1031.9	1032.5	1033.0	1033.6
127.5°	1091.5	1093.3	1094.8	1096.2	1097.6	1099.0	1099.9	1100.8	1101.6	1102.5	1102.6
130°	1153.3	1155.0	1156.2	1157.3	1158.5	1159.6	1160.7	1161.9	1163.0	1164.2	1164.5
132.5°	1212.6	1214.1	1215.0	1215.9	1216.7	1217.6	1218.7	1219.9	1221.0	1222.2	1222.3
135°	1270.8	1272.3	1273.4	1274.6	1275.7	1276.9	1277.7	1278.6	1279.4	1280.3	1280.3
137.5°	1324.7	1326.1	1326.7	1327.2	1327.8	1328.4	1329.8	1331.3	1332.7	1334.1	1334.5
140°	1373.9	1375.2	1376.1	1376.9	1377.8	1378.6	1379.8	1380.9	1382.1	1383.2	1383.5
142.5°	1421.6	1422.9	1423.7	1424.6	1425.5	1426.3	1427.2	1428.0	1428.9	1429.7	1429.7
145°	1466.5	1467.8	1468.4	1469.0	1469.5	1470.1	1470.7	1471.3	1471.8	1472.4	1472.7
147.5°	1506.8	1507.8	1508.3	1508.9	1509.5	1510.1	1510.6	1511.2	1511.8	1512.4	1511.9
150°	1543.1	1543.8	1544.4	1545.0	1545.6	1546.1	1546.7	1547.3	1547.9	1548.4	1548.3
152.5°	1575.6	1575.9	1576.2	1576.5	1576.8	1577.1	1578.2	1579.3	1580.5	1581.6	1581.5
155°	1604.4	1604.3	1604.5	1604.8	1605.1	1605.4	1606.8	1608.3	1609.7	1611.1	1611.0
157.5°	1632.5	1632.3	1632.0	1631.7	1631.5	1631.2	1632.9	1634.6	1636.3	1638.0	1637.8
160°	1654.5	1654.2	1653.9	1653.7	1653.4	1653.1	1654.8	1656.5	1658.2	1659.9	1659.8
162.5°	1674.1	1673.5	1673.3	1673.0	1672.7	1672.4	1674.4	1676.4	1678.4	1680.4	1680.6
165°	1690.9	1690.3	1690.0	1689.7	1689.4	1689.2	1691.4	1693.7	1696.0	1698.3	1698.5
167.5°	1703.9	1703.3	1703.3	1703.3	1703.3	1703.3	1705.6	1707.9	1710.2	1712.5	1712.5
170°	1715.5	1714.9	1714.9	1714.9	1714.9	1714.9	1717.2	1719.5	1721.8	1724.1	1724.1
172.5°	1722.1	1721.5	1721.8	1722.1	1722.4	1722.7	1724.9	1727.2	1729.5	1731.8	1731.7
175°	1728.5	1728.0	1728.2	1728.5	1728.8	1729.1	1731.1	1733.1	1735.1	1737.1	1737.0
177.5°	1731.1	1730.5	1730.8	1731.1	1731.4	1731.7	1734.0	1736.3	1738.5	1740.8	1740.5
180°	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2



TEST NUMBER: P832071

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1232.0	1232.0	1232.0	1232.0
2.5°	1094.6	1092.1	1091.1	1090.1
5°	938.3	930.5	928.7	926.9
7.5°	805.4	802.2	791.3	780.4
10°	697.6	687.5	682.9	678.4
12.5°	607.4	598.1	596.6	595.0
15°	537.5	530.9	528.6	526.3
17.5°	491.5	486.9	484.2	481.4
20°	457.4	454.1	452.1	450.1
22.5°	431.4	428.9	427.3	425.8
25°	406.4	402.6	401.3	400.1
27.5°	382.6	379.4	378.1	376.8
30°	360.4	357.6	355.9	354.1
32.5°	336.2	332.9	331.9	330.9
35°	314.7	312.7	311.7	310.7
37.5°	292.0	289.4	287.9	286.4
40°	272.5	271.3	270.5	269.7
42.5°	252.8	250.5	250.3	250.0
45°	233.1	230.8	230.3	229.8
47.5°	214.7	212.7	212.4	212.2
50°	194.2	191.4	189.4	187.4
52.5°	170.7	168.2	166.4	164.7
55°	149.3	146.5	145.0	143.5
57.5°	133.1	131.8	131.1	130.3
60°	120.0	119.2	118.7	118.2
62.5°	107.8	107.1	107.1	107.1
65°	96.7	96.0	95.2	94.5
67.5°	82.3	80.8	80.6	80.3
70°	64.9	62.6	62.4	62.1
72.5°	50.8	50.5	50.0	49.5
75°	41.9	41.4	41.4	41.4
77.5°	33.8	33.3	33.3	33.3
80°	26.0	25.8	26.0	26.3
82.5°	19.2	19.2	18.9	18.7
85°	12.4	12.1	12.1	12.1
87.5°	6.1	6.1	6.1	6.1
90°	36.9	37.5	38.1	38.7
92.5°	42.9	43.2	43.5	43.8
95°	49.0	49.0	49.0	49.0
97.5°	52.0	52.3	52.5	52.8
100°	53.3	53.5	53.8	54.1
102.5°	53.7	54.3	54.8	55.4
105°	55.0	55.5	56.1	56.7
107.5°	246.5	209.0	171.5	134.0
110°	477.2	436.2	395.3	354.3



TEST NUMBER: P832071

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	673.0	672.4	671.9	671.3
115°	754.2	755.3	756.5	757.6
117.5°	826.3	826.6	826.9	827.2
120°	899.3	899.3	899.3	899.3
122.5°	969.3	969.6	969.9	970.2
125°	1034.2	1034.8	1035.3	1035.9
127.5°	1102.1	1101.5	1100.9	1100.3
130°	1163.9	1163.3	1162.8	1162.2
132.5°	1221.4	1220.6	1219.7	1218.9
135°	1279.4	1278.6	1277.7	1276.9
137.5°	1334.0	1333.4	1332.8	1332.3
140°	1382.9	1382.4	1381.8	1381.2
142.5°	1428.9	1428.0	1427.2	1426.3
145°	1472.7	1472.7	1472.7	1472.7
147.5°	1510.5	1509.1	1507.6	1506.2
150°	1547.4	1546.6	1545.7	1544.8
152.5°	1580.1	1578.6	1577.2	1575.8
155°	1609.3	1607.6	1605.8	1604.1
157.5°	1635.5	1633.2	1630.9	1628.6
160°	1657.8	1655.8	1653.8	1651.8
162.5°	1678.8	1677.1	1675.4	1673.7
165°	1696.5	1694.5	1692.4	1690.4
167.5°	1710.2	1707.9	1705.6	1703.3
170°	1721.8	1719.5	1717.2	1714.9
172.5°	1729.1	1726.5	1723.9	1721.4
175°	1734.7	1732.4	1730.1	1727.8
177.5°	1737.7	1734.8	1732.0	1729.1
180°	1734.2	1734.2	1734.2	1734.2



TEST NUMBER: P832071

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G

**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	6.52	7.16	7.68	8.30	9.91	11.18	11.82	12.34	12.97	14.57
	3H	7.72	8.30	8.89	9.45	11.07	12.67	13.24	13.83	14.39	16.01
	4H	8.10	8.64	9.27	9.79	11.42	13.15	13.69	14.32	14.84	16.47
	6H	8.37	8.87	9.55	10.02	11.66	13.45	13.95	14.63	15.10	16.74
	8H	8.45	8.93	9.64	10.10	11.72	13.52	14.00	14.71	15.17	16.80
	12H	8.50	8.95	9.69	10.11	11.76	13.55	14.00	14.74	15.16	16.81
4H	2H	7.22	7.76	8.40	8.92	10.54	11.15	11.70	12.34	12.85	14.48
	3H	8.57	9.02	9.76	10.20	11.84	12.79	13.25	13.98	14.43	16.06
	4H	9.02	9.44	10.21	10.60	12.26	13.39	13.81	14.58	14.98	16.63
	6H	9.38	9.73	10.57	10.92	12.57	13.82	14.18	15.02	15.37	17.01
	8H	9.50	9.83	10.69	11.01	12.67	13.95	14.28	15.14	15.46	17.12
	12H	9.57	9.87	10.77	11.06	12.72	14.00	14.31	15.21	15.50	17.16
8H	4H	9.32	9.65	10.51	10.83	12.49	13.35	13.68	14.54	14.86	16.52
	6H	9.78	10.05	10.99	11.27	12.93	13.84	14.11	15.05	15.33	16.99
	8H	9.97	10.21	11.19	11.41	13.09	14.02	14.26	15.24	15.46	17.14
	12H	10.11	10.32	11.32	11.51	13.22	14.13	14.34	15.35	15.54	17.25
12H	4H	9.32	9.63	10.53	10.81	12.48	13.29	13.59	14.50	14.78	16.45
	6H	9.84	10.07	11.05	11.27	12.95	13.81	14.05	15.03	15.25	16.93
	8H	10.05	10.26	11.26	11.45	13.16	14.00	14.21	15.22	15.40	17.11