

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: P832073

Luminaire Tested: S123RDIP-S340D1195U850-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832073
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-17)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDIP-S340D1195U850-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

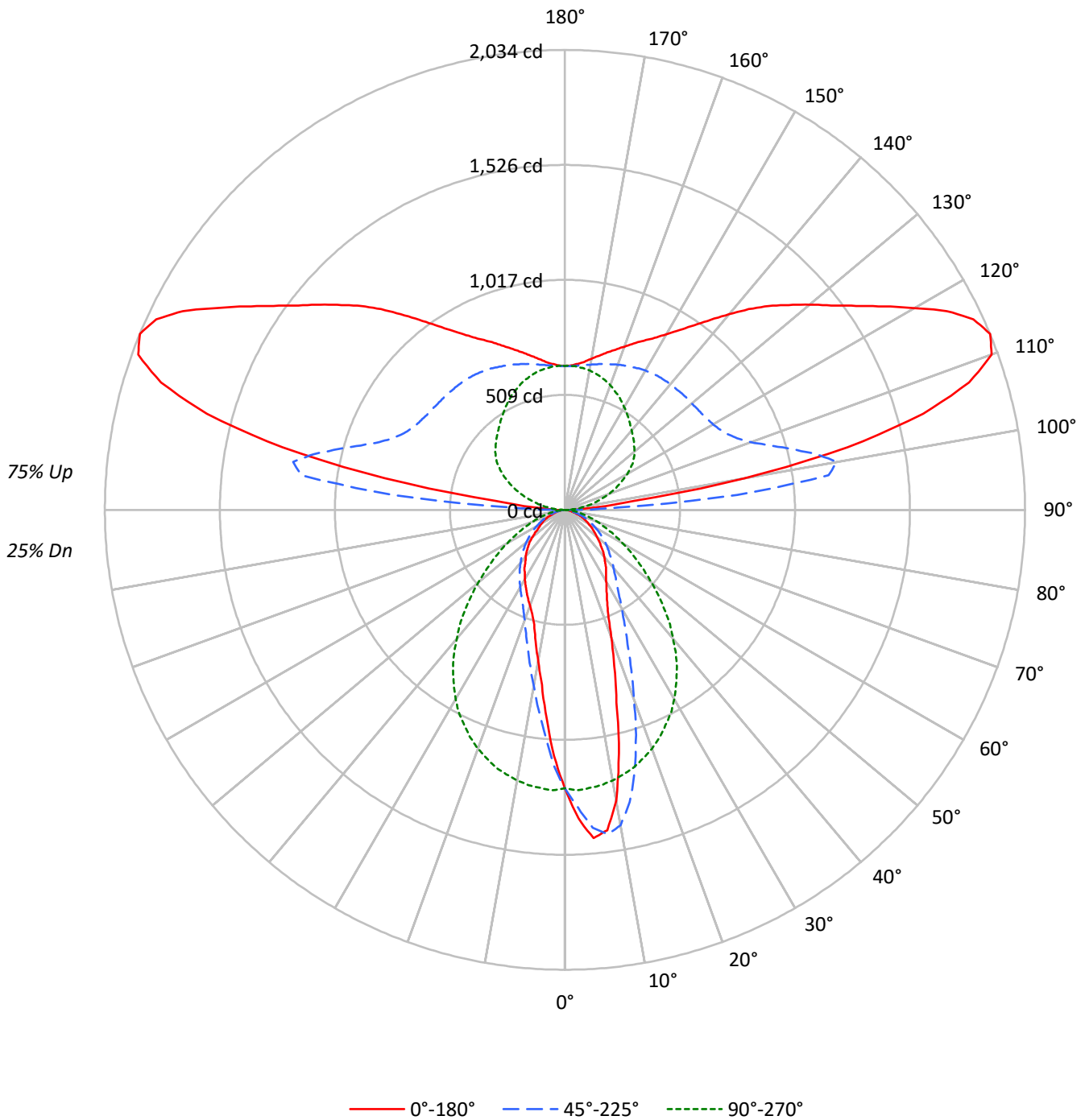
Lumens per Lamp: N/A
Luminaire Lumens: 6424.9 lumens
Efficiency: N/A
Efficacy: 148.0 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

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

TEST NUMBER: P832073

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G4

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	70	70	70	51	51	51	34	34	34	25				
1	93	89	85	82	83	79	76	74	62	60	58	45	44	43	30	30	29	22				
2	85	78	72	67	75	70	65	61	54	51	48	40	38	37	27	26	25	19				
3	78	69	62	57	69	62	56	51	48	44	41	36	33	31	24	23	22	17				
4	71	61	54	48	63	55	49	44	43	39	35	32	29	27	22	21	19	15				
5	65	55	47	41	58	49	43	38	39	34	31	29	26	24	20	18	17	13				
6	60	49	41	36	54	44	38	33	35	30	27	27	23	21	19	17	15	12				
7	56	44	37	32	50	40	34	29	32	27	24	24	21	19	17	15	14	11				
8	52	40	33	28	46	36	30	26	29	25	21	22	19	17	16	14	13	10				
9	48	37	30	25	43	33	27	23	27	22	19	21	17	15	15	13	11	9				
10	45	34	27	22	40	31	25	21	25	20	17	19	16	14	14	12	11	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



TEST NUMBER: P832073

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.3	1.7
10°-20°	259.9	4.0
20°-30°	298.1	4.6
30°-40°	293.9	4.6
40°-50°	259.2	4.0
50°-60°	199.4	3.1
60°-70°	131.1	2.0
70°-80°	63.7	1.0
80°-90°	19.6	0.3
90°-100°	345.4	5.4
100°-110°	1011.2	15.7
110°-120°	987.5	15.4
120°-130°	786.4	12.2
130°-140°	620.5	9.7
140°-150°	462.9	7.2
150°-160°	322.7	5.0
160°-170°	189.6	3.0
170°-180°	61.7	1.0
0°-30°	670.3	10.4
0°-40°	964.2	15.0
0°-60°	1422.7	22.1
0°-90°	1637.0	25.5
90°-120°	2344.1	36.5
90°-150°	4213.9	65.6
90°-180°	4788.0	74.5
0°-180°	6424.9	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°	37	32	3	32	37	20
95°	150	764	44	764	150	243
105°	1639	1036	150	1036	1639	1635
115°	1993	792	264	792	1993	1944
125°	1572	740	367	740	1572	1423
135°	1274	729	430	729	1274	988
145°	996	720	491	720	996	632
155°	826	697	558	697	826	385
165°	720	667	610	667	720	206
175°	648	640	635	640	648	63
180°	636	636	636	636	636	



TEST NUMBER: P832073

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G4

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°	37.4	38.7	37.4	36.1	37.4	34.8	33.5	32.2	30.9	32.2	28.3
92.5°	68.3	70.9	69.6	74.7	77.3	86.3	99.2	127.6	179.1	239.7	265.4
95°	149.5	154.6	163.6	175.2	199.7	246.1	314.4	463.9	619.8	764.1	680.3
97.5°	306.7	320.8	351.8	400.7	487.0	633.9	804.0	1065.6	1215.0	1175.1	877.5
100°	807.9	806.6	856.8	950.9	1081.0	1264.0	1414.8	1519.1	1474.0	1220.2	824.6
102.5°	1279.5	1316.8	1356.8	1426.4	1520.4	1619.6	1691.8	1669.9	1486.9	1136.4	747.3
105°	1639.0	1645.4	1686.6	1735.6	1794.9	1828.4	1803.9	1675.0	1405.7	1035.9	686.8
107.5°	1873.5	1887.6	1904.4	1927.6	1935.3	1900.5	1800.0	1597.7	1289.8	947.0	643.0
110°	2007.5	2010.0	2012.6	2002.3	1966.2	1876.0	1713.7	1476.6	1181.5	873.6	619.8



TEST NUMBER: P832073

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	2034.5	2033.2	2020.4	1983.0	1909.5	1787.1	1600.3	1356.8	1087.5	824.6	606.9
115°	1993.3	1986.9	1961.1	1904.4	1807.8	1667.3	1477.9	1253.7	1015.3	792.4	605.6
117.5°	1903.1	1894.1	1855.4	1792.3	1691.8	1546.2	1372.2	1173.8	967.7	770.5	606.9
120°	1784.6	1776.8	1745.9	1673.7	1572.0	1441.8	1287.2	1113.3	931.6	756.3	612.0
122.5°	1673.7	1663.4	1628.7	1565.5	1477.9	1359.4	1218.9	1065.6	901.9	747.3	621.1
125°	1572.0	1562.9	1530.7	1474.0	1391.6	1288.5	1164.8	1024.3	877.5	739.6	630.1
127.5°	1484.3	1476.6	1447.0	1398.0	1323.3	1227.9	1114.5	987.0	854.3	735.7	640.4
130°	1412.2	1401.9	1374.8	1328.4	1260.1	1172.5	1068.2	952.2	836.2	731.9	650.7
132.5°	1341.3	1334.9	1311.7	1265.3	1202.2	1119.7	1024.3	920.0	819.5	730.6	658.4
135°	1274.3	1265.3	1242.1	1203.4	1140.3	1066.9	983.1	891.6	805.3	729.3	666.1
137.5°	1203.4	1195.7	1176.4	1136.4	1082.3	1016.6	941.9	864.6	792.4	726.7	671.3
140°	1128.7	1130.0	1109.4	1073.3	1024.3	968.9	907.1	841.4	780.8	725.4	676.5
142.5°	1059.1	1060.4	1042.4	1011.5	971.5	925.1	873.6	819.5	770.5	722.8	680.3
145°	996.0	993.4	983.1	956.1	923.8	886.5	845.2	802.7	761.5	720.3	681.6
147.5°	941.9	940.6	930.3	911.0	885.2	858.1	823.3	788.6	752.5	716.4	681.6
150°	895.5	895.5	887.8	873.6	854.3	829.8	802.7	773.1	743.5	711.2	681.6
152.5°	856.8	856.8	853.0	840.1	825.9	806.6	783.4	758.9	733.2	704.8	677.7
155°	825.9	824.6	822.1	811.7	800.2	784.7	765.4	744.7	722.8	697.1	675.2
157.5°	796.3	796.3	793.7	786.0	775.7	762.8	747.3	729.3	711.2	690.6	671.3
160°	767.9	769.2	769.2	761.5	752.5	743.5	730.6	716.4	699.6	682.9	668.7
162.5°	742.2	743.5	743.5	737.0	731.9	724.1	712.5	700.9	688.1	675.2	663.6
165°	720.3	720.3	721.6	716.4	711.2	704.8	695.8	688.1	677.7	667.4	658.4
167.5°	698.4	698.4	699.6	695.8	693.2	688.1	682.9	676.5	667.4	659.7	653.3
170°	679.0	679.0	680.3	677.7	676.5	673.9	668.7	664.9	658.4	652.0	648.1
172.5°	661.0	662.3	664.9	662.3	662.3	661.0	657.1	654.6	649.4	645.5	644.2
175°	648.1	649.4	650.7	649.4	649.4	649.4	646.8	645.5	643.0	640.4	640.4
177.5°	639.1	639.1	641.7	640.4	641.7	641.7	640.4	639.1	637.8	636.5	637.8
180°	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5



TEST NUMBER: P832073

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G4

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°	24.5	20.6	16.8	14.2	11.6	7.7	5.2	2.6	5.2	7.7	11.6
92.5°	198.4	130.1	88.9	65.7	52.8	41.2	28.3	19.3	28.3	41.2	52.8
95°	469.0	277.0	167.5	117.3	83.8	61.8	47.7	43.8	47.7	61.8	83.8
97.5°	521.8	298.9	190.7	135.3	101.8	82.5	70.9	69.6	70.9	82.5	101.8
100°	485.8	295.1	204.9	154.6	123.7	105.7	96.6	95.3	96.6	105.7	123.7
102.5°	454.8	300.2	221.6	176.5	149.5	132.7	125.0	122.4	125.0	132.7	149.5
105°	443.2	310.5	240.9	201.0	176.5	161.1	153.3	149.5	153.3	161.1	176.5
107.5°	440.7	327.3	265.4	228.1	204.9	189.4	181.7	177.8	181.7	189.4	204.9
110°	447.1	349.2	291.2	255.1	233.2	219.0	212.6	208.7	212.6	219.0	233.2



TEST NUMBER: P832073

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	460.0	371.1	318.3	283.5	261.6	247.4	240.9	237.1	240.9	247.4	261.6
115°	474.2	395.6	346.6	311.8	289.9	277.0	269.3	264.1	269.3	277.0	289.9
117.5°	492.2	421.3	372.4	340.2	315.7	304.1	297.6	291.2	297.6	304.1	315.7
120°	512.8	445.8	399.4	367.2	342.7	329.9	323.4	319.5	323.4	329.9	342.7
122.5°	532.1	471.6	426.5	391.7	368.5	354.3	347.9	344.0	347.9	354.3	368.5
125°	552.8	496.1	451.0	416.2	391.7	377.5	369.8	367.2	369.8	377.5	391.7
127.5°	569.5	518.0	474.2	439.4	412.3	398.1	389.1	385.3	389.1	398.1	412.3
130°	586.3	537.3	494.8	460.0	432.9	417.5	405.9	402.0	405.9	417.5	432.9
132.5°	601.7	554.1	512.8	479.3	452.3	432.9	420.0	414.9	420.0	432.9	452.3
135°	614.6	570.8	530.9	496.1	469.0	449.7	435.5	430.4	435.5	449.7	469.0
137.5°	624.9	582.4	543.7	511.5	484.5	463.9	449.7	444.5	449.7	463.9	484.5
140°	632.6	594.0	556.6	524.4	498.6	478.0	465.1	458.7	465.1	478.0	498.6
142.5°	640.4	603.0	566.9	537.3	511.5	493.5	479.3	474.2	479.3	493.5	511.5
145°	645.5	610.7	577.2	547.6	525.7	506.4	494.8	490.9	494.8	506.4	525.7
147.5°	649.4	617.2	586.3	560.5	538.6	521.8	510.2	507.7	510.2	521.8	538.6
150°	650.7	623.6	594.0	570.8	552.8	536.0	525.7	524.4	525.7	536.0	552.8
152.5°	653.3	627.5	603.0	581.1	565.6	551.5	541.2	541.2	541.2	551.5	565.6
155°	653.3	632.6	610.7	592.7	578.5	565.6	557.9	557.9	557.9	565.6	578.5
157.5°	654.6	635.2	617.2	603.0	590.1	578.5	572.1	570.8	572.1	578.5	590.1
160°	654.6	639.1	623.6	610.7	601.7	591.4	586.3	586.3	586.3	591.4	601.7
162.5°	653.3	640.4	627.5	617.2	609.5	601.7	597.9	597.9	597.9	601.7	609.5
165°	650.7	641.7	631.4	622.3	617.2	610.7	608.2	609.5	608.2	610.7	617.2
167.5°	649.4	641.7	633.9	627.5	623.6	618.5	617.2	618.5	617.2	618.5	623.6
170°	645.5	640.4	633.9	631.4	628.8	624.9	623.6	626.2	623.6	624.9	628.8
172.5°	644.2	640.4	635.2	633.9	632.6	630.1	630.1	631.4	630.1	630.1	632.6
175°	641.7	639.1	636.5	635.2	635.2	632.6	633.9	635.2	633.9	632.6	635.2
177.5°	640.4	637.8	636.5	636.5	636.5	635.2	636.5	637.8	636.5	635.2	636.5
180°	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5



TEST NUMBER: P832073

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G4

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°	14.2	16.8	20.6	24.5	28.3	32.2	30.9	32.2	33.5	34.8	37.4
92.5°	65.7	88.9	130.1	198.4	265.4	239.7	179.1	127.6	99.2	86.3	77.3
95°	117.3	167.5	277.0	469.0	680.3	764.1	619.8	463.9	314.4	246.1	199.7
97.5°	135.3	190.7	298.9	521.8	877.5	1175.1	1215.0	1065.6	804.0	633.9	487.0
100°	154.6	204.9	295.1	485.8	824.6	1220.2	1474.0	1519.1	1414.8	1264.0	1081.0
102.5°	176.5	221.6	300.2	454.8	747.3	1136.4	1486.9	1669.9	1691.8	1619.6	1520.4
105°	201.0	240.9	310.5	443.2	686.8	1035.9	1405.7	1675.0	1803.9	1828.4	1794.9
107.5°	228.1	265.4	327.3	440.7	643.0	947.0	1289.8	1597.7	1800.0	1900.5	1935.3
110°	255.1	291.2	349.2	447.1	619.8	873.6	1181.5	1476.6	1713.7	1876.0	1966.2



TEST NUMBER: P832073

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	283.5	318.3	371.1	460.0	606.9	824.6	1087.5	1356.8	1600.3	1787.1	1909.5
115°	311.8	346.6	395.6	474.2	605.6	792.4	1015.3	1253.7	1477.9	1667.3	1807.8
117.5°	340.2	372.4	421.3	492.2	606.9	770.5	967.7	1173.8	1372.2	1546.2	1691.8
120°	367.2	399.4	445.8	512.8	612.0	756.3	931.6	1113.3	1287.2	1441.8	1572.0
122.5°	391.7	426.5	471.6	532.1	621.1	747.3	901.9	1065.6	1218.9	1359.4	1477.9
125°	416.2	451.0	496.1	552.8	630.1	739.6	877.5	1024.3	1164.8	1288.5	1391.6
127.5°	439.4	474.2	518.0	569.5	640.4	735.7	854.3	987.0	1114.5	1227.9	1323.3
130°	460.0	494.8	537.3	586.3	650.7	731.9	836.2	952.2	1068.2	1172.5	1260.1
132.5°	479.3	512.8	554.1	601.7	658.4	730.6	819.5	920.0	1024.3	1119.7	1202.2
135°	496.1	530.9	570.8	614.6	666.1	729.3	805.3	891.6	983.1	1066.9	1140.3
137.5°	511.5	543.7	582.4	624.9	671.3	726.7	792.4	864.6	941.9	1016.6	1082.3
140°	524.4	556.6	594.0	632.6	676.5	725.4	780.8	841.4	907.1	968.9	1024.3
142.5°	537.3	566.9	603.0	640.4	680.3	722.8	770.5	819.5	873.6	925.1	971.5
145°	547.6	577.2	610.7	645.5	681.6	720.3	761.5	802.7	845.2	886.5	923.8
147.5°	560.5	586.3	617.2	649.4	681.6	716.4	752.5	788.6	823.3	858.1	885.2
150°	570.8	594.0	623.6	650.7	681.6	711.2	743.5	773.1	802.7	829.8	854.3
152.5°	581.1	603.0	627.5	653.3	677.7	704.8	733.2	758.9	783.4	806.6	825.9
155°	592.7	610.7	632.6	653.3	675.2	697.1	722.8	744.7	765.4	784.7	800.2
157.5°	603.0	617.2	635.2	654.6	671.3	690.6	711.2	729.3	747.3	762.8	775.7
160°	610.7	623.6	639.1	654.6	668.7	682.9	699.6	716.4	730.6	743.5	752.5
162.5°	617.2	627.5	640.4	653.3	663.6	675.2	688.1	700.9	712.5	724.1	731.9
165°	622.3	631.4	641.7	650.7	658.4	667.4	677.7	688.1	695.8	704.8	711.2
167.5°	627.5	633.9	641.7	649.4	653.3	659.7	667.4	676.5	682.9	688.1	693.2
170°	631.4	633.9	640.4	645.5	648.1	652.0	658.4	664.9	668.7	673.9	676.5
172.5°	633.9	635.2	640.4	644.2	644.2	645.5	649.4	654.6	657.1	661.0	662.3
175°	635.2	636.5	639.1	641.7	640.4	640.4	643.0	645.5	646.8	649.4	649.4
177.5°	636.5	636.5	637.8	640.4	637.8	636.5	637.8	639.1	640.4	641.7	641.7
180°	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5



TEST NUMBER: P832073

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G4

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°	36.1	37.4	38.7	37.4
92.5°	74.7	69.6	70.9	68.3
95°	175.2	163.6	154.6	149.5
97.5°	400.7	351.8	320.8	306.7
100°	950.9	856.8	806.6	807.9
102.5°	1426.4	1356.8	1316.8	1279.5
105°	1735.6	1686.6	1645.4	1639.0
107.5°	1927.6	1904.4	1887.6	1873.5
110°	2002.3	2012.6	2010.0	2007.5



TEST NUMBER: P832073

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	1983.0	2020.4	2033.2	2034.5
115°	1904.4	1961.1	1986.9	1993.3
117.5°	1792.3	1855.4	1894.1	1903.1
120°	1673.7	1745.9	1776.8	1784.6
122.5°	1565.5	1628.7	1663.4	1673.7
125°	1474.0	1530.7	1562.9	1572.0
127.5°	1398.0	1447.0	1476.6	1484.3
130°	1328.4	1374.8	1401.9	1412.2
132.5°	1265.3	1311.7	1334.9	1341.3
135°	1203.4	1242.1	1265.3	1274.3
137.5°	1136.4	1176.4	1195.7	1203.4
140°	1073.3	1109.4	1130.0	1128.7
142.5°	1011.5	1042.4	1060.4	1059.1
145°	956.1	983.1	993.4	996.0
147.5°	911.0	930.3	940.6	941.9
150°	873.6	887.8	895.5	895.5
152.5°	840.1	853.0	856.8	856.8
155°	811.7	822.1	824.6	825.9
157.5°	786.0	793.7	796.3	796.3
160°	761.5	769.2	769.2	767.9
162.5°	737.0	743.5	743.5	742.2
165°	716.4	721.6	720.3	720.3
167.5°	695.8	699.6	698.4	698.4
170°	677.7	680.3	679.0	679.0
172.5°	662.3	664.9	662.3	661.0
175°	649.4	650.7	649.4	648.1
177.5°	640.4	641.7	639.1	639.1
180°	636.5	636.5	636.5	636.5



TEST NUMBER: P832073

CATALOG NUMBER: S123RDIP-S340D1195U850-4F0-1E-UDD-G4

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	6.81	7.47	7.97	8.60	10.19	11.48	12.13	12.63	13.26	14.85
	3H	8.02	8.61	9.18	9.75	11.35	12.96	13.55	14.12	14.69	16.29
	4H	8.40	8.95	9.56	10.09	11.70	13.45	14.00	14.61	15.14	16.75
	6H	8.67	9.18	9.84	10.32	11.94	13.75	14.26	14.92	15.40	17.02
	8H	8.75	9.24	9.93	10.39	12.00	13.82	14.31	15.00	15.47	17.08
	12H	8.80	9.26	9.98	10.41	12.04	13.85	14.31	15.03	15.46	17.09
4H	2H	7.52	8.07	8.69	9.21	10.82	11.45	12.01	12.63	13.15	14.75
	3H	8.87	9.33	10.05	10.50	12.12	13.10	13.56	14.27	14.72	16.34
	4H	9.32	9.74	10.50	10.90	12.54	13.70	14.12	14.87	15.28	16.91
	6H	9.68	10.04	10.86	11.22	12.84	14.12	14.49	15.31	15.66	17.29
	8H	9.80	10.14	10.98	11.31	12.95	14.25	14.59	15.43	15.76	17.40
	12H	9.87	10.18	11.07	11.36	13.00	14.31	14.61	15.50	15.79	17.44
8H	4H	9.62	9.96	10.80	11.13	12.77	13.65	13.99	14.83	15.16	16.80
	6H	10.08	10.36	11.28	11.57	13.21	14.14	14.42	15.34	15.63	17.27
	8H	10.27	10.51	11.48	11.70	13.36	14.33	14.57	15.53	15.76	17.42
	12H	10.41	10.62	11.62	11.81	13.50	14.43	14.65	15.64	15.83	17.53
12H	4H	9.62	9.93	10.82	11.11	12.76	13.59	13.90	14.79	15.08	16.73
	6H	10.14	10.38	11.34	11.57	13.23	14.11	14.36	15.32	15.55	17.21
	8H	10.35	10.56	11.56	11.75	13.44	14.30	14.51	15.51	15.70	17.39