

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: P831349

Luminaire Tested: S123DIP-S340D1195U840-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831349
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-9)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D1195U840-4F0-1E-UDD-G1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: -

Summary

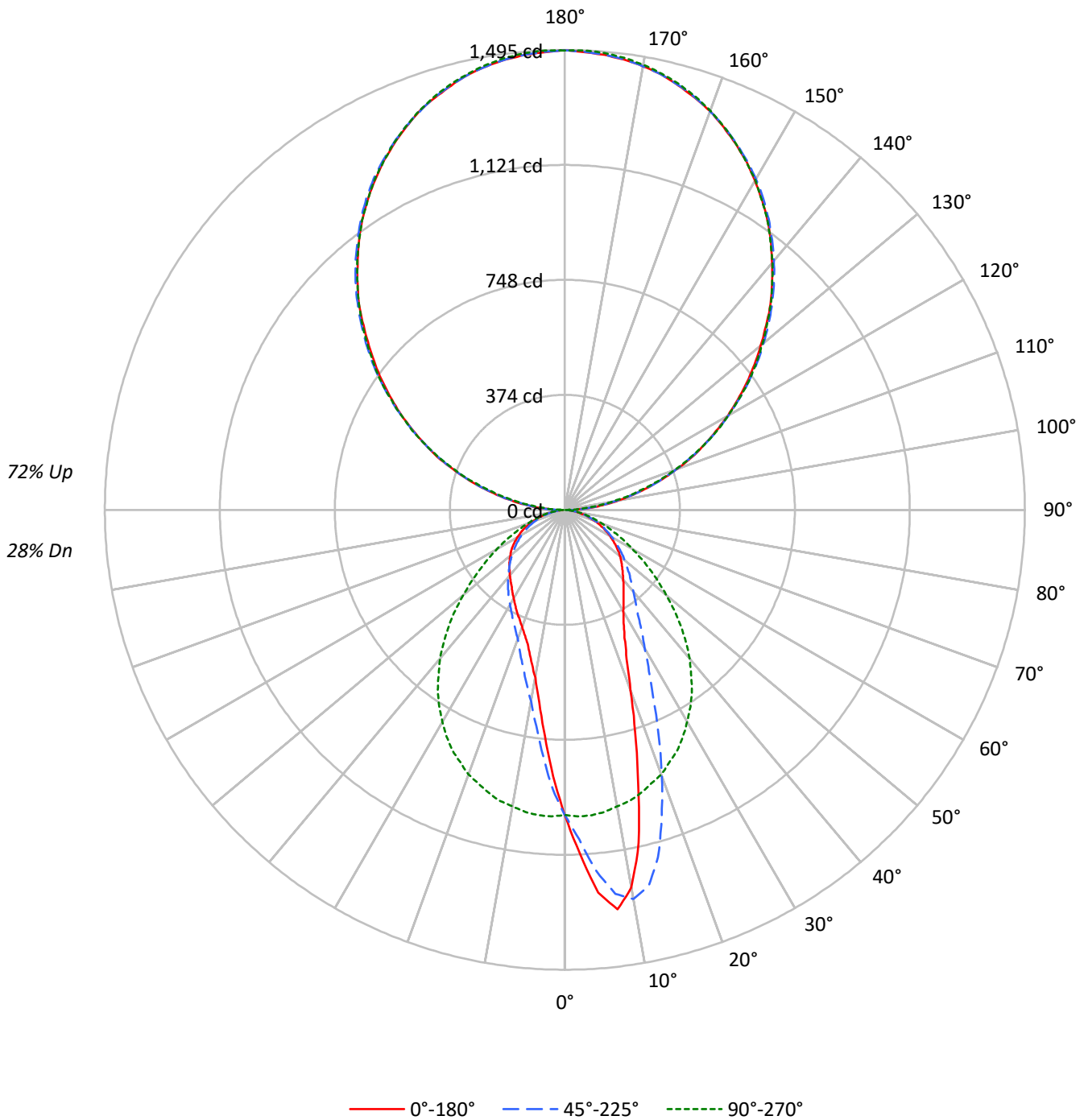
Lumens per Lamp: N/A
Luminaire Lumens: 5735.6 lumens
Efficiency: N/A
Efficacy: 132.2 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

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: P831349

CATALOG NUMBER: S123DIP-S340D1195U840-4F0-1E-UDD-G1

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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28				
1	93	89	85	82	83	80	77	74	62	60	59	47	45	44	32	31	31	24				
2	85	78	72	67	76	70	65	61	55	52	49	41	39	37	29	27	26	21				
3	78	69	62	57	69	62	56	51	49	45	42	37	34	32	26	24	23	18				
4	71	61	54	48	63	55	49	44	44	39	36	33	30	28	23	21	20	16				
5	65	54	47	41	58	49	43	38	39	34	31	30	27	24	21	19	18	14				
6	60	49	41	36	54	44	38	33	35	31	27	27	24	21	19	17	16	12				
7	56	44	37	31	50	40	33	29	32	27	24	25	21	19	18	16	14	11				
8	52	40	33	28	46	36	30	26	29	25	21	23	19	17	16	14	13	10				
9	48	37	30	25	43	33	27	23	27	22	19	21	18	15	15	13	12	9				
10	45	34	27	22	40	31	25	21	25	20	17	19	16	14	14	12	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	10672	10672	10672	10672	10672
5°	13498	12739	10768	8678	7974
10°	13629	14041	10696	6918	6044
15°	10264	13036	10623	5858	5112
20°	7152	10549	10488	5123	4643
25°	5454	8112	10257	4713	4355
30°	4718	6444	9887	4424	4123
35°	4377	5441	9462	4214	3960
40°	4144	4881	8864	4014	3905
45°	4007	4518	8103	3859	3880
50°	3937	4230	7204	3718	3860
55°	3791	4020	6320	3582	3877
60°	3655	3793	5449	3457	3813
65°	3433	3581	4699	3321	3739
70°	3172	3308	3997	3100	3519
75°	2870	2965	3427	2878	3215
80°	2368	2597	2709	2510	2709
85°	1877	2100	1988	2137	2161

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 9252 cd/sqm



TEST NUMBER: P831349

CATALOG NUMBER: S123DIP-S340D1195U840-4F0-1E-UDD-G1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.7	1.6
10°-20°	233.2	4.1
20°-30°	276.1	4.8
30°-40°	277.6	4.8
40°-50°	254.7	4.4
50°-60°	210.2	3.7
60°-70°	148.7	2.6
70°-80°	79.4	1.4
80°-90°	23.3	0.4
90°-100°	96.1	1.7
100°-110°	291.0	5.1
110°-120°	495.4	8.6
120°-130°	651.8	11.4
130°-140°	732.6	12.8
140°-150°	720.2	12.6
150°-160°	606.4	10.6
160°-170°	403.7	7.0
170°-180°	141.4	2.5
0°-30°	603.1	10.5
0°-40°	880.7	15.4
0°-60°	1345.6	23.5
0°-90°	1597.0	27.8
90°-120°	882.6	15.4
90°-150°	2987.2	52.1
90°-180°	4139.0	72.2
0°-180°	5735.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	992	992	992	992	992	
5°	1249	1179	997	803	738	119
15°	921	1170	953	526	459	254
25°	459	683	864	397	367	217
35°	333	414	720	321	301	209
45°	263	297	532	254	255	204
55°	202	214	337	191	207	181
65°	135	141	184	130	147	134
75°	69	71	82	69	77	73
85°	15	17	16	17	18	17
90°	35	28	1	28	35	18
95°	92	87	69	87	92	92
105°	279	277	264	277	279	296
115°	500	500	499	500	500	495
125°	722	731	730	731	722	645
135°	946	953	947	953	946	727
145°	1149	1155	1149	1155	1149	717
155°	1313	1316	1315	1316	1313	605
165°	1428	1429	1433	1429	1428	403
175°	1484	1486	1490	1486	1484	141
180°	1494	1494	1494	1494	1494	



TEST NUMBER: P831349

CATALOG NUMBER: S123DIP-S340D1195U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	991.5	991.5	991.5	991.5	991.5	991.5	991.5	991.5	991.5	991.5	991.5
2.5°	1117.6	1116.4	1115.3	1109.5	1103.8	1101.0	1098.3	1090.0	1081.7	1072.5	1063.3
5°	1249.2	1252.4	1255.6	1251.9	1248.2	1237.0	1225.7	1210.7	1195.8	1179.0	1162.2
7.5°	1309.9	1311.7	1313.6	1311.3	1309.0	1306.0	1303.0	1289.7	1276.3	1259.1	1241.8
10°	1246.9	1251.0	1255.1	1264.1	1273.1	1283.2	1293.3	1291.5	1289.7	1284.6	1279.5
12.5°	1108.4	1113.4	1118.5	1136.4	1154.4	1177.4	1200.4	1220.2	1240.0	1253.8	1267.6
15°	921.1	935.1	949.2	965.5	981.8	1015.7	1049.5	1091.1	1132.8	1169.8	1206.8
17.5°	758.7	764.0	769.3	786.8	804.3	846.8	889.4	937.4	985.5	1047.0	1108.4
20°	624.4	629.2	634.0	657.0	680.0	713.4	746.7	800.8	854.9	920.9	986.9
22.5°	524.5	532.1	539.7	552.6	565.5	597.4	629.4	677.5	725.6	798.5	871.4
25°	459.2	464.7	470.2	478.0	485.9	511.4	536.9	576.5	616.1	683.0	750.0
27.5°	414.5	416.8	419.1	427.0	434.8	451.4	467.9	502.0	536.0	592.8	649.7
30°	379.6	381.2	382.8	389.7	396.6	407.9	419.1	443.8	468.4	518.5	568.7
32.5°	355.2	356.3	357.5	362.8	368.1	376.1	384.2	402.1	420.1	461.5	502.9
35°	333.1	333.8	334.5	338.4	342.3	348.3	354.3	367.8	381.4	414.1	446.8
37.5°	313.8	314.7	315.6	317.9	320.2	325.5	330.8	341.6	352.4	377.5	402.6
40°	294.9	296.5	298.1	299.8	301.4	305.7	310.1	318.4	326.7	347.4	368.1
42.5°	278.8	280.4	282.0	282.7	283.4	286.0	288.5	296.1	303.7	319.1	334.5
45°	263.2	263.9	264.6	265.2	265.9	268.0	270.1	276.7	283.4	296.8	310.1
47.5°	248.9	248.9	248.9	249.4	249.8	251.7	253.5	258.3	263.2	273.5	283.9
50°	235.1	235.1	235.1	234.4	233.7	234.9	236.0	239.7	243.4	252.6	261.8
52.5°	218.5	218.5	218.5	218.8	219.0	219.0	219.0	222.2	225.4	233.7	242.0
55°	202.0	202.9	203.8	203.1	202.4	202.9	203.4	205.4	207.5	214.2	220.8
57.5°	185.4	185.9	186.3	186.1	185.9	186.1	186.3	188.2	190.0	195.1	200.1
60°	169.8	169.8	169.8	169.3	168.9	169.3	169.8	170.7	171.6	176.2	180.8
62.5°	152.3	152.5	152.8	153.0	153.2	152.8	152.3	153.4	154.6	158.0	161.5
65°	134.8	135.0	135.3	136.0	136.6	136.2	135.7	136.9	138.0	140.6	143.1
67.5°	119.2	118.7	118.2	118.5	118.7	119.4	120.1	120.3	120.5	123.3	126.1
70°	100.8	101.2	101.7	101.5	101.2	101.5	101.7	102.4	103.1	105.1	107.2
72.5°	84.2	84.4	84.7	84.7	84.7	85.1	85.6	86.3	87.0	88.1	89.3
75°	69.0	69.0	69.0	69.5	69.9	70.2	70.4	70.4	70.4	71.3	72.2
77.5°	52.5	53.6	54.8	54.5	54.3	54.8	55.2	55.9	56.6	57.1	57.5
80°	38.2	38.2	38.2	38.4	38.6	39.3	40.0	40.5	40.9	41.9	42.8
82.5°	24.4	24.6	24.8	25.5	26.2	26.7	27.1	27.8	28.5	28.5	28.5
85°	15.2	14.7	14.3	14.7	15.2	15.6	16.1	16.3	16.6	17.0	17.5
87.5°	7.4	7.4	7.4	7.4	7.4	7.6	7.8	7.8	7.8	7.8	7.8
90°	35.2	34.7	34.2	33.6	33.1	32.3	31.3	30.2	29.2	28.2	24.8
92.5°	50.5	51.0	51.5	52.0	52.5	52.4	51.6	50.8	50.1	49.3	47.7
95°	91.5	91.5	91.5	91.5	91.5	91.0	90.0	88.9	87.9	86.8	84.7
97.5°	131.4	131.7	131.9	132.2	132.5	131.9	130.6	129.3	128.0	126.7	125.2
100°	178.3	177.8	177.3	176.8	176.3	175.6	174.8	174.0	173.3	172.5	171.2
102.5°	226.5	226.7	227.0	227.2	227.5	227.2	226.5	225.7	224.9	224.1	222.3
105°	279.3	278.7	278.2	277.7	277.2	276.9	276.9	276.9	276.9	276.9	274.6
107.5°	333.2	333.5	333.8	334.0	334.3	334.0	333.2	332.4	331.7	330.9	329.8
110°	388.4	388.9	389.4	389.9	390.5	390.2	389.2	388.1	387.1	386.0	385.5

TEST NUMBER: P831349

CATALOG NUMBER: S123DIP-S340D1195U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	447.0	447.0	447.0	447.0	447.0	446.4	445.1	443.8	442.5	441.2	441.2
115°	499.8	500.1	500.4	500.6	500.9	500.9	500.6	500.4	500.1	499.8	500.4
117.5°	553.8	554.6	555.4	556.2	556.9	557.3	557.3	557.3	557.3	557.3	557.9
120°	611.3	611.8	612.4	612.9	613.4	613.8	614.1	614.3	614.6	614.8	616.1
122.5°	666.5	667.2	668.0	668.8	669.6	670.4	671.2	671.9	672.7	673.5	674.0
125°	721.6	722.6	723.7	724.7	725.8	726.8	727.9	728.9	730.0	731.0	731.5
127.5°	776.8	777.8	778.8	779.9	780.9	782.2	783.8	785.4	786.9	788.5	789.0
130°	830.7	832.6	834.4	836.2	838.0	839.5	840.5	841.5	842.6	843.6	844.4
132.5°	887.0	888.4	889.7	891.0	892.3	893.6	894.9	896.2	897.5	898.8	899.3
135°	945.7	946.2	946.8	947.3	947.8	948.6	949.6	950.7	951.7	952.8	953.0
137.5°	997.3	998.1	998.9	999.7	1000.5	1001.5	1002.8	1004.1	1005.4	1006.7	1005.9
140°	1047.8	1049.6	1051.4	1053.3	1055.1	1056.1	1056.4	1056.7	1056.9	1057.2	1056.9
142.5°	1099.4	1100.7	1102.0	1103.3	1104.6	1105.4	1105.7	1105.9	1106.2	1106.5	1105.9
145°	1148.7	1149.7	1150.8	1151.8	1152.9	1153.5	1153.8	1154.0	1154.3	1154.6	1153.8
147.5°	1193.3	1194.9	1196.4	1198.0	1199.5	1200.3	1200.3	1200.3	1200.3	1200.3	1199.5
150°	1235.5	1237.1	1238.7	1240.2	1241.8	1242.6	1242.6	1242.6	1242.6	1242.6	1242.0
152.5°	1276.6	1277.9	1279.2	1280.5	1281.8	1282.2	1281.7	1281.2	1280.6	1280.1	1279.9
155°	1313.0	1314.8	1316.6	1318.4	1320.3	1320.7	1319.6	1318.6	1317.5	1316.5	1316.2
157.5°	1347.0	1348.6	1350.1	1351.7	1353.3	1353.5	1352.5	1351.4	1350.4	1349.3	1349.1
160°	1379.9	1380.9	1381.9	1383.0	1384.0	1383.9	1382.6	1381.3	1380.0	1378.7	1378.7
162.5°	1404.5	1406.3	1408.1	1410.0	1411.8	1412.1	1410.8	1409.4	1408.1	1406.8	1406.6
165°	1428.0	1429.8	1431.6	1433.4	1435.3	1435.4	1433.8	1432.3	1430.7	1429.1	1429.1
167.5°	1449.1	1450.6	1452.2	1453.8	1455.3	1455.3	1453.8	1452.2	1450.6	1449.1	1448.8
170°	1464.3	1466.2	1468.0	1469.8	1471.6	1471.6	1469.8	1468.0	1466.2	1464.3	1464.3
172.5°	1476.1	1477.9	1479.7	1481.5	1483.4	1483.5	1481.9	1480.4	1478.8	1477.2	1477.2
175°	1484.3	1486.1	1487.9	1489.8	1491.6	1491.7	1490.1	1488.6	1487.0	1485.5	1485.5
177.5°	1489.0	1490.8	1492.6	1494.4	1496.3	1496.4	1494.8	1493.3	1491.7	1490.1	1490.1
180°	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7



TEST NUMBER: P831349

CATALOG NUMBER: S123DIP-S340D1195U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	991.5	991.5	991.5	991.5	991.5	991.5	991.5	991.5	991.5	991.5	991.5
2.5°	1060.5	1057.8	1047.6	1037.5	1026.0	1014.5	1006.0	997.5	984.8	972.2	961.8
5°	1149.3	1136.4	1115.0	1093.7	1064.7	1035.7	1016.1	996.6	970.3	944.1	923.2
7.5°	1219.7	1197.6	1167.7	1137.8	1099.9	1061.9	1026.0	990.1	950.1	910.1	877.4
10°	1264.6	1249.6	1215.1	1180.6	1129.8	1078.9	1028.8	978.6	927.1	875.6	832.3
12.5°	1269.0	1270.3	1238.6	1206.8	1149.3	1091.8	1030.8	969.9	905.0	840.1	789.8
15°	1230.5	1254.2	1236.7	1219.3	1161.3	1103.3	1028.3	953.3	878.6	803.8	745.6
17.5°	1159.2	1210.1	1212.6	1215.1	1157.1	1099.2	1016.1	933.1	848.4	763.8	702.6
20°	1061.9	1136.9	1162.7	1188.4	1141.3	1094.1	1004.9	915.6	820.8	726.0	661.9
22.5°	962.5	1053.6	1100.8	1147.9	1113.0	1078.0	983.0	888.0	787.9	687.8	622.7
25°	849.3	948.7	1021.2	1093.7	1072.3	1050.9	957.2	863.6	757.1	650.6	584.1
27.5°	750.7	851.6	939.1	1026.5	1021.9	1017.3	924.3	831.4	722.4	613.3	549.1
30°	662.8	756.9	854.6	952.4	963.7	974.9	885.2	795.5	686.2	577.0	515.1
32.5°	585.0	667.1	772.0	876.9	899.0	921.1	840.1	759.2	651.0	542.9	483.3
35°	521.3	595.8	700.7	805.6	833.2	860.8	790.4	720.1	614.7	509.3	452.5
37.5°	464.9	527.3	629.6	732.0	765.8	799.7	736.6	673.6	574.9	476.2	424.0
40°	418.2	468.4	562.5	656.6	695.7	734.8	682.8	630.8	537.2	443.5	395.5
42.5°	379.1	423.8	509.1	594.4	631.9	669.4	625.5	581.6	498.3	415.0	371.1
45°	345.8	381.4	458.9	536.5	572.1	607.8	570.1	532.3	458.9	385.6	344.6
47.5°	314.5	345.1	411.3	477.6	509.3	541.1	511.6	482.2	420.1	358.0	320.9
50°	286.4	311.0	369.0	427.0	454.6	482.2	456.2	430.2	379.1	328.0	295.8
52.5°	262.0	282.0	330.6	379.1	402.8	426.5	404.2	381.9	341.4	300.9	272.8
55°	237.9	254.9	297.0	339.1	355.2	371.3	354.0	336.8	304.1	271.5	247.8
57.5°	215.3	230.5	265.0	299.5	311.9	324.4	308.7	293.1	268.5	243.9	224.1
60°	193.2	205.7	234.4	263.2	270.8	278.4	265.7	253.1	235.8	218.5	200.8
62.5°	172.8	184.0	205.4	226.8	231.9	237.0	227.3	217.6	204.5	191.4	177.6
65°	151.6	160.1	177.6	195.1	198.3	201.5	193.0	184.5	174.6	164.7	154.6
67.5°	132.0	138.0	152.3	166.6	166.8	167.0	160.1	153.2	147.7	142.2	134.1
70°	113.0	118.7	128.1	137.6	137.8	138.0	132.5	127.0	122.8	118.7	112.7
72.5°	93.4	97.5	104.7	111.8	111.3	110.9	107.4	104.0	100.8	97.5	93.2
75°	75.7	79.1	84.0	88.8	87.4	86.0	84.2	82.4	79.6	76.8	74.1
77.5°	59.6	61.7	64.4	67.2	66.3	65.3	63.7	62.1	60.0	58.0	56.8
80°	43.7	44.6	46.5	48.3	47.9	47.4	45.5	43.7	43.2	42.8	41.2
82.5°	29.7	30.8	31.3	31.7	31.5	31.3	29.9	28.5	28.1	27.6	27.4
85°	17.7	17.9	18.2	18.4	17.7	17.0	16.6	16.1	16.1	16.1	15.9
87.5°	8.1	8.3	8.3	8.3	8.1	7.8	7.4	6.9	7.1	7.4	7.4
90°	21.4	18.0	14.6	11.6	9.0	6.4	3.8	1.2	3.8	6.4	9.0
92.5°	46.2	44.6	43.0	41.5	39.9	38.3	36.8	35.2	36.8	38.3	39.9
95°	82.7	80.6	78.5	76.5	74.7	72.9	71.1	69.2	71.1	72.9	74.7
97.5°	123.6	122.0	120.5	119.0	117.7	116.4	115.1	113.8	115.1	116.4	117.7
100°	169.9	168.6	167.3	165.8	164.3	162.7	161.1	159.6	161.1	162.7	164.3
102.5°	220.5	218.6	216.8	215.5	214.7	213.9	213.2	212.4	213.2	213.9	214.7
105°	272.2	269.9	267.5	266.1	265.6	265.0	264.5	264.0	264.5	265.0	265.6
107.5°	328.8	327.8	326.7	326.1	325.8	325.5	325.3	325.0	325.3	325.5	325.8
110°	385.0	384.5	383.9	383.4	382.9	382.4	381.9	381.3	381.9	382.4	382.9



TEST NUMBER: P831349

CATALOG NUMBER: S123DIP-S340D1195U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	441.2	441.2	441.2	441.0	440.8	440.5	440.3	440.0	440.3	440.5	440.8
115°	500.9	501.4	501.9	501.8	501.0	500.2	499.5	498.7	499.5	500.2	501.0
117.5°	558.4	558.9	559.4	559.6	559.3	559.0	558.8	558.5	558.8	559.0	559.3
120°	617.4	618.7	620.0	619.9	618.4	616.8	615.2	613.7	615.2	616.8	618.4
122.5°	674.5	675.1	675.6	675.3	674.3	673.2	672.2	671.2	672.2	673.2	674.3
125°	732.0	732.6	733.1	732.9	732.2	731.4	730.6	729.8	730.6	731.4	732.2
127.5°	789.5	790.1	790.6	790.1	788.5	786.9	785.4	783.8	785.4	786.9	788.5
130°	845.2	846.0	846.8	846.1	844.0	841.9	839.9	837.8	839.9	841.9	844.0
132.5°	899.8	900.3	900.9	900.1	898.0	895.9	893.8	891.7	893.8	895.9	898.0
135°	953.3	953.5	953.8	953.1	951.6	950.0	948.5	946.9	948.5	950.0	951.6
137.5°	1005.2	1004.4	1003.6	1002.6	1001.3	999.9	998.6	997.3	998.6	999.9	1001.3
140°	1056.7	1056.4	1056.1	1055.4	1054.1	1052.8	1051.4	1050.1	1051.4	1052.8	1054.1
142.5°	1105.4	1104.9	1104.4	1103.5	1102.2	1100.9	1099.6	1098.3	1099.6	1100.9	1102.2
145°	1153.0	1152.2	1151.4	1150.8	1150.3	1149.7	1149.2	1148.7	1149.2	1149.7	1150.3
147.5°	1198.8	1198.0	1197.2	1196.3	1195.2	1194.2	1193.2	1192.1	1193.2	1194.2	1195.2
150°	1241.5	1241.0	1240.5	1240.0	1239.4	1238.9	1238.4	1237.9	1238.4	1238.9	1239.4
152.5°	1279.6	1279.3	1279.1	1278.6	1277.8	1277.0	1276.2	1275.4	1276.2	1277.0	1277.8
155°	1316.0	1315.7	1315.4	1315.3	1315.3	1315.3	1315.3	1315.3	1315.3	1315.3	1315.3
157.5°	1348.8	1348.6	1348.3	1348.3	1348.6	1348.8	1349.1	1349.3	1349.1	1348.8	1348.6
160°	1378.7	1378.7	1378.7	1378.9	1379.5	1380.0	1380.5	1381.0	1380.5	1380.0	1379.5
162.5°	1406.3	1406.1	1405.8	1406.1	1406.8	1407.6	1408.4	1409.2	1408.4	1407.6	1406.8
165°	1429.1	1429.1	1429.1	1429.5	1430.3	1431.1	1431.9	1432.7	1431.9	1431.1	1430.3
167.5°	1448.6	1448.3	1448.0	1448.4	1449.5	1450.5	1451.6	1452.6	1451.6	1450.5	1449.5
170°	1464.3	1464.3	1464.3	1464.9	1465.9	1466.9	1468.0	1469.0	1468.0	1466.9	1465.9
172.5°	1477.2	1477.2	1477.2	1477.8	1478.8	1479.8	1480.9	1481.9	1480.9	1479.8	1478.8
175°	1485.5	1485.5	1485.5	1486.0	1487.0	1488.1	1489.1	1490.1	1489.1	1488.1	1487.0
177.5°	1490.1	1490.1	1490.1	1490.7	1491.7	1492.8	1493.8	1494.8	1493.8	1492.8	1491.7
180°	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7



TEST NUMBER: P831349

CATALOG NUMBER: S123DIP-S340D1195U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	991.5	991.5	991.5	991.5	991.5	991.5	991.5	991.5	991.5	991.5	991.5
2.5°	951.5	942.5	933.5	926.6	919.7	908.0	896.3	893.5	890.7	886.8	882.9
5°	902.3	880.2	858.1	838.3	818.5	803.1	787.7	777.6	767.4	760.1	752.7
7.5°	844.7	811.6	778.5	755.0	731.6	709.2	686.9	679.8	672.7	663.0	653.3
10°	789.1	752.5	715.9	685.3	654.7	632.9	611.0	602.3	593.5	581.3	569.1
12.5°	739.4	699.3	659.3	628.5	597.7	576.5	555.3	542.7	530.0	523.1	516.2
15°	687.4	644.6	601.8	573.3	544.8	525.7	506.6	495.5	484.5	477.8	471.1
17.5°	641.4	599.0	556.7	529.3	502.0	484.5	467.0	457.3	447.7	442.6	437.6
20°	597.7	556.3	514.8	488.2	461.5	447.2	433.0	426.7	420.5	416.4	412.2
22.5°	557.6	516.9	476.2	453.4	430.7	419.1	407.6	403.3	398.9	395.5	392.0
25°	517.6	481.3	444.9	425.6	406.3	396.8	387.4	383.0	378.7	375.2	371.8
27.5°	484.9	450.2	415.5	398.9	382.3	375.0	367.6	364.2	360.7	357.5	354.3
30°	453.2	422.1	391.1	376.8	362.6	355.9	349.2	345.8	342.3	339.3	336.3
32.5°	423.8	397.1	370.4	357.3	344.2	338.6	333.1	329.0	324.8	322.5	320.2
35°	395.7	371.8	347.8	337.0	326.2	320.7	315.2	311.7	308.3	306.4	304.6
37.5°	371.8	350.4	329.0	318.6	308.3	303.0	297.7	294.7	291.7	291.0	290.3
40°	347.4	329.0	310.6	300.4	290.3	285.7	281.1	279.3	277.4	277.0	276.5
42.5°	327.1	309.2	291.2	282.0	272.8	268.9	265.0	264.1	263.2	263.9	264.6
45°	303.7	288.7	273.8	265.2	256.7	253.5	250.3	249.6	248.9	250.3	251.7
47.5°	283.9	270.1	256.3	248.2	240.2	237.9	235.6	235.3	235.1	237.0	238.8
50°	263.6	250.3	237.0	230.5	224.1	222.0	219.9	220.6	221.3	224.3	227.3
52.5°	244.8	232.3	219.9	213.9	208.0	206.6	205.2	206.8	208.4	211.6	214.9
55°	224.1	212.8	201.5	196.9	192.3	190.9	189.6	192.8	196.0	199.0	202.0
57.5°	204.3	194.4	184.5	180.4	176.2	176.0	175.8	178.7	181.7	185.0	188.2
60°	183.1	174.8	166.6	163.3	160.1	160.6	161.0	164.5	167.9	170.5	173.0
62.5°	163.8	156.9	150.0	147.0	144.0	145.2	146.3	149.8	153.2	156.2	159.2
65°	144.5	138.7	133.0	130.9	128.8	130.4	132.0	135.0	138.0	140.1	142.2
67.5°	126.1	121.2	116.4	114.8	113.2	114.8	116.4	119.4	122.4	124.5	126.5
70°	106.7	102.8	98.9	97.8	96.6	98.5	100.3	102.8	105.4	107.4	109.5
72.5°	88.8	85.8	82.8	82.6	82.4	84.0	85.6	88.1	90.6	92.0	93.4
75°	71.3	69.7	68.1	67.9	67.6	69.2	70.9	72.2	73.6	74.8	75.9
77.5°	55.7	54.3	52.9	53.1	53.4	54.5	55.7	57.1	58.4	59.1	59.8
80°	39.6	39.1	38.6	39.1	39.6	40.5	41.4	42.3	43.2	43.7	44.2
82.5°	27.1	26.7	26.2	26.9	27.6	28.3	29.0	29.7	30.4	30.6	30.8
85°	15.6	16.3	17.0	17.0	17.0	17.3	17.5	17.7	17.9	17.7	17.5
87.5°	7.4	7.6	7.8	7.8	7.8	8.1	8.3	8.3	8.3	8.1	7.8
90°	11.6	14.6	18.0	21.4	24.8	28.2	29.2	30.2	31.3	32.3	33.1
92.5°	41.5	43.0	44.6	46.2	47.7	49.3	50.1	50.8	51.6	52.4	52.5
95°	76.5	78.5	80.6	82.7	84.7	86.8	87.9	88.9	90.0	91.0	91.5
97.5°	119.0	120.5	122.0	123.6	125.2	126.7	128.0	129.3	130.6	131.9	132.5
100°	165.8	167.3	168.6	169.9	171.2	172.5	173.3	174.0	174.8	175.6	176.3
102.5°	215.5	216.8	218.6	220.5	222.3	224.1	224.9	225.7	226.5	227.2	227.5
105°	266.1	267.5	269.9	272.2	274.6	276.9	276.9	276.9	276.9	276.9	277.2
107.5°	326.1	326.7	327.8	328.8	329.8	330.9	331.7	332.4	333.2	334.0	334.3
110°	383.4	383.9	384.5	385.0	385.5	386.0	387.1	388.1	389.2	390.2	390.5



TEST NUMBER: P831349

CATALOG NUMBER: S123DIP-S340D1195U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	441.0	441.2	441.2	441.2	441.2	441.2	442.5	443.8	445.1	446.4	447.0
115°	501.8	501.9	501.4	500.9	500.4	499.8	500.1	500.4	500.6	500.9	500.9
117.5°	559.6	559.4	558.9	558.4	557.9	557.3	557.3	557.3	557.3	557.3	556.9
120°	619.9	620.0	618.7	617.4	616.1	614.8	614.6	614.3	614.1	613.8	613.4
122.5°	675.3	675.6	675.1	674.5	674.0	673.5	672.7	671.9	671.2	670.4	669.6
125°	732.9	733.1	732.6	732.0	731.5	731.0	730.0	728.9	727.9	726.8	725.8
127.5°	790.1	790.6	790.1	789.5	789.0	788.5	786.9	785.4	783.8	782.2	780.9
130°	846.1	846.8	846.0	845.2	844.4	843.6	842.6	841.5	840.5	839.5	838.0
132.5°	900.1	900.9	900.3	899.8	899.3	898.8	897.5	896.2	894.9	893.6	892.3
135°	953.1	953.8	953.5	953.3	953.0	952.8	951.7	950.7	949.6	948.6	947.8
137.5°	1002.6	1003.6	1004.4	1005.2	1005.9	1006.7	1005.4	1004.1	1002.8	1001.5	1000.5
140°	1055.4	1056.1	1056.4	1056.7	1056.9	1057.2	1056.9	1056.7	1056.4	1056.1	1055.1
142.5°	1103.5	1104.4	1104.9	1105.4	1105.9	1106.5	1106.2	1105.9	1105.7	1105.4	1104.6
145°	1150.8	1151.4	1152.2	1153.0	1153.8	1154.6	1154.3	1154.0	1153.8	1153.5	1152.9
147.5°	1196.3	1197.2	1198.0	1198.8	1199.5	1200.3	1200.3	1200.3	1200.3	1200.3	1199.5
150°	1240.0	1240.5	1241.0	1241.5	1242.0	1242.6	1242.6	1242.6	1242.6	1242.6	1241.8
152.5°	1278.6	1279.1	1279.3	1279.6	1279.9	1280.1	1280.6	1281.2	1281.7	1282.2	1281.8
155°	1315.3	1315.4	1315.7	1316.0	1316.2	1316.5	1317.5	1318.6	1319.6	1320.7	1320.3
157.5°	1348.3	1348.3	1348.6	1348.8	1349.1	1349.3	1350.4	1351.4	1352.5	1353.5	1353.3
160°	1378.9	1378.7	1378.7	1378.7	1378.7	1378.7	1380.0	1381.3	1382.6	1383.9	1384.0
162.5°	1406.1	1405.8	1406.1	1406.3	1406.6	1406.8	1408.1	1409.4	1410.8	1412.1	1411.8
165°	1429.5	1429.1	1429.1	1429.1	1429.1	1429.1	1430.7	1432.3	1433.8	1435.4	1435.3
167.5°	1448.4	1448.0	1448.3	1448.6	1448.8	1449.1	1450.6	1452.2	1453.8	1455.3	1455.3
170°	1464.9	1464.3	1464.3	1464.3	1464.3	1464.3	1466.2	1468.0	1469.8	1471.6	1471.6
172.5°	1477.8	1477.2	1477.2	1477.2	1477.2	1477.2	1478.8	1480.4	1481.9	1483.5	1483.4
175°	1486.0	1485.5	1485.5	1485.5	1485.5	1485.5	1487.0	1488.6	1490.1	1491.7	1491.6
177.5°	1490.7	1490.1	1490.1	1490.1	1490.1	1490.1	1491.7	1493.3	1494.8	1496.4	1496.3
180°	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7



TEST NUMBER: P831349

CATALOG NUMBER: S123DIP-S340D1195U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	991.5	991.5	991.5	991.5
2.5°	881.3	879.7	873.3	866.8
5°	747.2	741.7	739.8	738.0
7.5°	652.9	652.4	642.8	633.1
10°	569.8	570.5	561.8	553.0
12.5°	510.5	504.7	504.0	503.3
15°	465.8	460.6	459.6	458.7
17.5°	434.3	431.1	430.2	429.3
20°	410.4	408.6	407.0	405.3
22.5°	389.7	387.4	386.0	384.6
25°	369.7	367.6	367.2	366.7
27.5°	351.7	349.2	349.2	349.2
30°	334.7	333.1	332.4	331.7
32.5°	318.8	317.5	317.5	317.5
35°	303.9	303.2	302.3	301.4
37.5°	290.3	290.3	289.9	289.4
40°	277.2	277.9	277.9	277.9
42.5°	265.2	265.9	265.9	265.9
45°	252.8	254.0	254.4	254.9
47.5°	240.6	242.5	242.9	243.4
50°	228.7	230.0	230.3	230.5
52.5°	216.5	218.1	219.2	220.4
55°	203.6	205.2	205.9	206.6
57.5°	189.8	191.4	191.6	191.9
60°	174.6	176.2	176.7	177.1
62.5°	160.1	161.0	161.5	162.0
65°	143.6	144.9	145.9	146.8
67.5°	127.7	128.8	128.8	128.8
70°	110.0	110.4	111.1	111.8
72.5°	93.6	93.9	93.9	93.9
75°	76.4	76.8	77.1	77.3
77.5°	60.0	60.3	60.3	60.3
80°	43.9	43.7	43.7	43.7
82.5°	30.1	29.4	29.4	29.4
85°	17.3	17.0	17.3	17.5
87.5°	7.8	7.8	7.8	7.8
90°	33.6	34.2	34.7	35.2
92.5°	52.0	51.5	51.0	50.5
95°	91.5	91.5	91.5	91.5
97.5°	132.2	131.9	131.7	131.4
100°	176.8	177.3	177.8	178.3
102.5°	227.2	227.0	226.7	226.5
105°	277.7	278.2	278.7	279.3
107.5°	334.0	333.8	333.5	333.2
110°	389.9	389.4	388.9	388.4



TEST NUMBER: P831349

CATALOG NUMBER: S123DIP-S340D1195U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	447.0	447.0	447.0	447.0
115°	500.6	500.4	500.1	499.8
117.5°	556.2	555.4	554.6	553.8
120°	612.9	612.4	611.8	611.3
122.5°	668.8	668.0	667.2	666.5
125°	724.7	723.7	722.6	721.6
127.5°	779.9	778.8	777.8	776.8
130°	836.2	834.4	832.6	830.7
132.5°	891.0	889.7	888.4	887.0
135°	947.3	946.8	946.2	945.7
137.5°	999.7	998.9	998.1	997.3
140°	1053.3	1051.4	1049.6	1047.8
142.5°	1103.3	1102.0	1100.7	1099.4
145°	1151.8	1150.8	1149.7	1148.7
147.5°	1198.0	1196.4	1194.9	1193.3
150°	1240.2	1238.7	1237.1	1235.5
152.5°	1280.5	1279.2	1277.9	1276.6
155°	1318.4	1316.6	1314.8	1313.0
157.5°	1351.7	1350.1	1348.6	1347.0
160°	1383.0	1381.9	1380.9	1379.9
162.5°	1410.0	1408.1	1406.3	1404.5
165°	1433.4	1431.6	1429.8	1428.0
167.5°	1453.8	1452.2	1450.6	1449.1
170°	1469.8	1468.0	1466.2	1464.3
172.5°	1481.5	1479.7	1477.9	1476.1
175°	1489.8	1487.9	1486.1	1484.3
177.5°	1494.4	1492.6	1490.8	1489.0
180°	1493.7	1493.7	1493.7	1493.7

TEST NUMBER: P831349

CATALOG NUMBER: S123DIP-S340D1195U840-4F0-1E-UDD-G1

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	9.25	9.93	10.38	11.05	12.60	11.49	12.16	12.62	13.28	14.84
	3H	10.89	11.49	12.03	12.62	14.19	12.90	13.50	14.04	14.63	16.21
	4H	11.46	12.03	12.60	13.16	14.74	13.34	13.92	14.49	15.04	16.62
	6H	11.82	12.34	12.97	13.48	15.07	13.61	14.14	14.77	15.27	16.86
	8H	11.91	12.41	13.07	13.56	15.14	13.67	14.17	14.83	15.31	16.90
	12H	11.95	12.42	13.11	13.56	15.17	13.68	14.15	14.84	15.29	16.90
4H	2H	9.81	10.38	10.96	11.51	13.09	11.63	12.20	12.79	13.33	14.91
	3H	11.62	12.10	12.78	13.25	14.84	13.23	13.71	14.39	14.87	16.46
	4H	12.31	12.75	13.47	13.89	15.50	13.81	14.25	14.97	15.39	17.00
	6H	12.77	13.15	13.94	14.32	15.92	14.20	14.58	15.37	15.75	17.35
	8H	12.91	13.26	14.07	14.42	16.03	14.31	14.66	15.48	15.82	17.44
	12H	12.97	13.28	14.15	14.45	16.07	14.35	14.67	15.53	15.84	17.46
8H	4H	12.56	12.91	13.73	14.07	15.69	13.90	14.25	15.07	15.41	17.03
	6H	13.14	13.43	14.33	14.63	16.25	14.40	14.69	15.58	15.89	17.50
	8H	13.35	13.60	14.54	14.78	16.41	14.58	14.83	15.77	16.01	17.64
	12H	13.47	13.69	14.66	14.86	16.53	14.67	14.89	15.87	16.07	17.73
12H	4H	12.55	12.87	13.74	14.04	15.66	13.87	14.19	15.05	15.35	16.98
	6H	13.19	13.44	14.39	14.62	16.26	14.41	14.66	15.60	15.84	17.47
	8H	13.42	13.64	14.61	14.81	16.48	14.60	14.82	15.80	16.00	17.66