

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: P831360

Luminaire Tested: S123DIP-S340D1195U935-4F0-1E-UDD-G

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831360
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-5)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D1195U935-4F0-1E-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

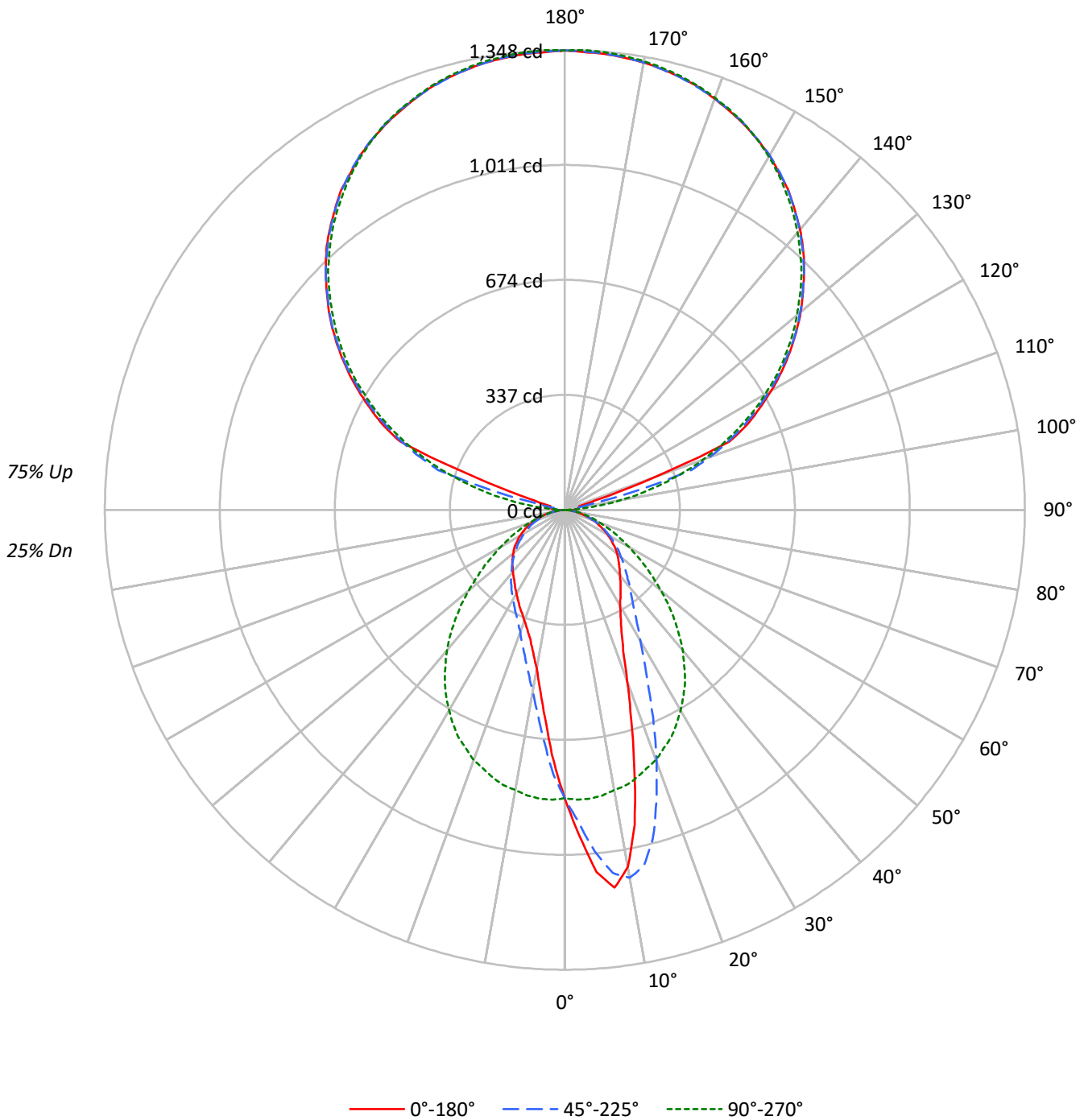
Lumens per Lamp: N/A
Luminaire Lumens: 5466.1 lumens
Efficiency: N/A
Efficacy: 125.9 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

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: P831360

CATALOG NUMBER: S123DIP-S340D1195U935-4F0-1E-UDD-G

Luminous Intensity Polar Plot





TEST NUMBER: P831360

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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	33	33	33	25				
1	92	88	85	81	82	79	76	73	61	59	57	45	43	42	30	29	28	21				
2	84	77	72	67	75	69	64	60	54	51	48	40	37	36	26	25	24	18				
3	77	68	61	56	68	61	55	51	48	44	40	35	33	31	24	22	21	16				
4	71	60	53	47	63	54	48	43	42	38	35	31	29	26	21	20	18	14				
5	65	54	46	41	58	48	42	37	38	33	30	28	25	23	19	18	16	12				
6	60	48	41	35	53	44	37	32	34	30	26	26	23	20	18	16	14	11				
7	55	44	36	31	49	39	33	28	31	26	23	23	20	18	16	14	13	10				
8	51	40	32	27	46	36	29	25	28	24	21	21	18	16	15	13	12	9				
9	48	36	29	24	42	33	27	22	26	22	18	20	17	15	14	12	11	8				
10	44	33	26	22	40	30	24	20	24	20	17	18	15	13	13	11	10	8				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	9099	9099	9099	9099	9099
5°	11507	10861	9181	7398	6799
10°	11620	11970	9120	5898	5153
15°	8751	11115	9058	4995	4358
20°	6097	8993	8942	4368	3959
25°	4650	6916	8745	4018	3713
30°	4022	5495	8429	3771	3515
35°	3732	4639	8067	3593	3376
40°	3532	4162	7557	3423	3329
45°	3416	3851	6909	3290	3308
50°	3358	3607	6142	3170	3291
55°	3232	3427	5388	3055	3305
60°	3115	3233	4646	2947	3251
65°	2926	3051	4006	2832	3186
70°	2703	2820	3408	2640	2999
75°	2445	2529	2920	2454	2741
80°	2021	2213	2312	2139	2312
85°	1593	1791	1692	1815	1840

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 7888 cd/sqm



TEST NUMBER: P831360

CATALOG NUMBER: S123DIP-S340D1195U935-4F0-1E-UDD-G

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.9	1.5
10°-20°	198.8	3.6
20°-30°	235.4	4.3
30°-40°	236.7	4.3
40°-50°	217.2	4.0
50°-60°	179.2	3.3
60°-70°	126.8	2.3
70°-80°	67.7	1.2
80°-90°	19.9	0.4
90°-100°	47.5	0.9
100°-110°	229.5	4.2
110°-120°	562.5	10.3
120°-130°	714.1	13.1
130°-140°	762.9	14.0
140°-150°	713.4	13.1
150°-160°	575.4	10.5
160°-170°	371.3	6.8
170°-180°	128.0	2.3
0°-30°	514.2	9.4
0°-40°	750.9	13.7
0°-60°	1147.3	21.0
0°-90°	1361.6	24.9
90°-120°	839.4	15.4
90°-150°	3029.8	55.4
90°-180°	4105.0	75.1
0°-180°	5466.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	845	845	845	845	845	
5°	1065	1005	850	685	629	101
15°	785	997	813	448	391	217
25°	392	582	736	338	313	185
35°	284	353	614	273	257	178
45°	224	253	454	216	217	174
55°	172	183	287	163	176	154
65°	115	120	157	111	125	114
75°	59	61	70	59	66	62
85°	13	14	14	15	15	14
90°	30	24	1	24	30	14
95°	38	31	61	31	38	32
105°	44	219	298	219	44	92
115°	588	574	559	574	588	553
125°	804	800	788	800	804	719
135°	991	991	981	991	991	765
145°	1143	1141	1132	1141	1143	714
155°	1245	1246	1247	1246	1245	574
165°	1312	1311	1315	1311	1312	371
175°	1341	1342	1346	1342	1341	128
180°	1346	1346	1346	1346	1346	



TEST NUMBER: P831360

CATALOG NUMBER: S123DIP-S340D1195U935-4F0-1E-UDD-G

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	952.8	951.9	950.9	946.0	941.1	938.7	936.4	929.3	922.2	914.4	906.5
5°	1065.0	1067.8	1070.5	1067.4	1064.2	1054.6	1045.0	1032.3	1019.5	1005.2	990.9
7.5°	1116.8	1118.4	1119.9	1118.0	1116.0	1113.5	1110.9	1099.5	1088.2	1073.5	1058.7
10°	1063.1	1066.6	1070.1	1077.8	1085.4	1094.1	1102.7	1101.1	1099.5	1095.2	1090.9
12.5°	945.0	949.3	953.6	968.9	984.2	1003.8	1023.4	1040.3	1057.2	1068.9	1080.7
15°	785.3	797.3	809.3	823.2	837.1	865.9	894.8	930.3	965.8	997.4	1028.9
17.5°	646.9	651.4	655.9	670.8	685.7	722.0	758.3	799.3	840.2	892.6	945.0
20°	532.3	536.4	540.6	560.2	579.8	608.2	636.7	682.8	728.8	785.1	841.4
22.5°	447.2	453.7	460.1	471.1	482.1	509.4	536.6	577.6	618.6	680.8	743.0
25°	391.5	396.2	400.9	407.6	414.2	436.0	457.8	491.5	525.3	582.3	639.4
27.5°	353.4	355.4	357.4	364.0	370.7	384.8	398.9	428.0	457.0	505.4	553.9
30°	323.6	325.0	326.4	332.3	338.1	347.8	357.4	378.3	399.3	442.1	484.9
32.5°	302.8	303.8	304.8	309.3	313.8	320.7	327.5	342.8	358.1	393.5	428.8
35°	284.0	284.6	285.2	288.5	291.9	297.0	302.1	313.6	325.2	353.0	380.9
37.5°	267.5	268.3	269.1	271.1	273.0	277.5	282.0	291.3	300.5	321.9	343.2
40°	251.4	252.8	254.2	255.6	256.9	260.7	264.4	271.5	278.5	296.2	313.8
42.5°	237.7	239.1	240.5	241.1	241.6	243.8	246.0	252.4	258.9	272.0	285.2
45°	224.4	225.0	225.6	226.1	226.7	228.5	230.3	236.0	241.6	253.0	264.4
47.5°	212.2	212.2	212.2	212.6	213.0	214.6	216.1	220.3	224.4	233.2	242.0
50°	200.5	200.5	200.5	199.9	199.3	200.3	201.2	204.4	207.5	215.4	223.2
52.5°	186.3	186.3	186.3	186.5	186.7	186.7	186.7	189.5	192.2	199.3	206.3
55°	172.2	173.0	173.8	173.2	172.6	173.0	173.4	175.2	176.9	182.6	188.3
57.5°	158.1	158.5	158.9	158.7	158.5	158.7	158.9	160.4	162.0	166.3	170.6
60°	144.7	144.7	144.7	144.4	144.0	144.4	144.7	145.5	146.3	150.2	154.2
62.5°	129.8	130.0	130.2	130.4	130.6	130.2	129.8	130.8	131.8	134.7	137.7
65°	114.9	115.1	115.3	115.9	116.5	116.1	115.7	116.7	117.7	119.8	122.0
67.5°	101.6	101.2	100.8	101.0	101.2	101.8	102.4	102.6	102.8	105.1	107.5
70°	85.9	86.3	86.7	86.5	86.3	86.5	86.7	87.3	87.9	89.6	91.4
72.5°	71.8	72.0	72.2	72.2	72.2	72.6	73.0	73.6	74.1	75.1	76.1
75°	58.8	58.8	58.8	59.2	59.6	59.8	60.0	60.0	60.0	60.8	61.6
77.5°	44.7	45.7	46.7	46.5	46.3	46.7	47.1	47.7	48.2	48.6	49.0
80°	32.6	32.6	32.6	32.8	33.0	33.5	34.1	34.5	34.9	35.7	36.5
82.5°	20.8	21.0	21.2	21.8	22.4	22.8	23.1	23.7	24.3	24.3	24.3
85°	12.9	12.6	12.2	12.6	12.9	13.3	13.7	13.9	14.1	14.5	14.9
87.5°	6.3	6.3	6.3	6.3	6.3	6.5	6.7	6.7	6.7	6.7	6.7
90°	30.0	29.6	29.1	28.7	28.2	27.6	26.7	25.8	24.9	24.0	21.1
92.5°	34.0	33.8	33.6	33.3	33.1	32.2	30.7	29.1	27.6	26.0	24.0
95°	38.0	38.0	38.0	38.0	38.0	37.2	35.7	34.1	32.6	31.0	28.6
97.5°	41.0	40.8	40.6	40.3	40.1	39.1	37.3	35.6	33.8	32.0	43.3
100°	42.0	41.8	41.6	41.3	41.1	40.1	38.3	36.6	34.8	33.0	67.7
102.5°	43.0	42.6	42.1	41.7	41.2	44.7	52.0	59.4	66.7	74.0	112.7
105°	44.0	43.6	43.1	42.7	42.2	61.7	101.0	140.4	179.7	219.1	239.1
107.5°	104.0	133.2	162.3	191.4	220.5	252.2	286.4	320.7	354.9	389.1	385.8
110°	275.1	306.9	338.7	370.5	402.2	421.8	429.1	436.5	443.8	451.1	448.7



TEST NUMBER: P831360

CATALOG NUMBER: S123DIP-S340D1195U935-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	521.2	521.6	522.1	522.5	522.9	522.2	520.2	518.2	516.2	514.2	511.7
115°	588.2	587.3	586.4	585.5	584.6	583.1	580.9	578.6	576.4	574.2	572.2
117.5°	642.2	642.0	641.8	641.5	641.3	640.3	638.5	636.8	635.0	633.2	632.1
120°	698.2	698.2	698.2	698.2	698.2	697.3	695.6	693.8	692.0	690.2	689.6
122.5°	753.2	753.0	752.8	752.6	752.3	751.7	750.6	749.5	748.3	747.2	746.3
125°	804.3	803.8	803.4	802.9	802.5	802.0	801.6	801.1	800.7	800.3	799.4
127.5°	854.3	854.7	855.2	855.6	856.0	855.9	855.3	854.6	853.9	853.3	852.2
130°	902.3	902.7	903.2	903.6	904.1	903.8	903.0	902.1	901.2	900.3	899.4
132.5°	946.3	947.0	947.6	948.3	949.0	948.9	948.0	947.1	946.2	945.3	944.6
135°	991.3	992.0	992.6	993.3	994.0	994.0	993.3	992.6	992.0	991.3	990.4
137.5°	1034.3	1034.8	1035.2	1035.7	1036.1	1035.8	1034.7	1033.5	1032.4	1031.3	1030.9
140°	1072.3	1072.8	1073.2	1073.7	1074.1	1073.9	1073.0	1072.1	1071.2	1070.3	1069.7
142.5°	1107.3	1108.0	1108.7	1109.4	1110.0	1110.0	1109.4	1108.7	1108.0	1107.3	1106.7
145°	1143.4	1143.4	1143.4	1143.4	1143.4	1143.1	1142.7	1142.2	1141.8	1141.4	1140.9
147.5°	1169.4	1170.5	1171.6	1172.7	1173.8	1174.1	1173.7	1173.3	1172.8	1172.4	1171.9
150°	1199.4	1200.0	1200.7	1201.4	1202.0	1202.2	1201.7	1201.3	1200.8	1200.4	1199.9
152.5°	1223.4	1224.5	1225.6	1226.7	1227.8	1227.9	1227.1	1226.2	1225.3	1224.4	1224.2
155°	1245.4	1246.7	1248.1	1249.4	1250.7	1250.8	1249.7	1248.6	1247.5	1246.4	1246.2
157.5°	1264.4	1266.2	1268.0	1269.7	1271.5	1271.7	1270.4	1269.1	1267.7	1266.4	1266.6
160°	1282.4	1284.0	1285.5	1287.1	1288.6	1288.7	1287.4	1286.1	1284.7	1283.4	1283.6
162.5°	1299.4	1300.7	1302.1	1303.4	1304.7	1304.6	1303.1	1301.5	1300.0	1298.4	1298.6
165°	1312.4	1314.0	1315.5	1317.1	1318.6	1318.5	1316.7	1315.0	1313.2	1311.4	1311.6
167.5°	1322.4	1324.2	1326.0	1327.8	1329.5	1329.5	1327.8	1326.0	1324.2	1322.4	1322.4
170°	1331.4	1333.2	1335.0	1336.8	1338.5	1338.5	1336.8	1335.0	1333.2	1331.4	1331.4
172.5°	1336.4	1338.4	1340.4	1342.4	1344.4	1344.5	1342.8	1341.0	1339.2	1337.4	1337.2
175°	1341.4	1343.2	1345.0	1346.8	1348.5	1348.6	1347.1	1345.5	1344.0	1342.4	1342.2
177.5°	1342.4	1344.6	1346.9	1349.1	1351.3	1351.5	1349.8	1348.0	1346.2	1344.4	1344.2
180°	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4



TEST NUMBER: P831360

CATALOG NUMBER: S123DIP-S340D1195U935-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	904.2	901.8	893.2	884.6	874.8	865.0	857.7	850.4	839.7	828.9	820.0
5°	979.9	968.9	950.7	932.4	907.7	883.0	866.3	849.7	827.3	804.9	787.1
7.5°	1039.9	1021.1	995.6	970.1	937.7	905.4	874.8	844.2	810.0	775.9	748.1
10°	1078.2	1065.4	1036.0	1006.6	963.2	919.9	877.1	834.4	790.4	746.5	709.6
12.5°	1081.9	1083.1	1056.0	1028.9	979.9	930.9	878.9	826.9	771.6	716.3	673.3
15°	1049.1	1069.3	1054.4	1039.5	990.1	940.7	876.7	812.8	749.0	685.3	635.7
17.5°	988.3	1031.7	1033.8	1036.0	986.6	937.1	866.3	795.5	723.4	651.2	599.0
20°	905.4	969.3	991.3	1013.2	973.0	932.8	856.7	780.6	699.8	619.0	564.3
22.5°	820.6	898.3	938.5	978.7	948.9	919.1	838.1	757.1	671.8	586.4	530.9
25°	724.1	808.9	870.7	932.4	914.2	896.0	816.1	736.3	645.5	554.7	498.0
27.5°	640.0	726.1	800.6	875.2	871.2	867.3	788.1	708.8	615.9	522.9	468.2
30°	565.1	645.3	728.6	812.0	821.6	831.2	754.7	678.2	585.1	491.9	439.2
32.5°	498.8	568.8	658.2	747.7	766.5	785.3	716.3	647.3	555.1	462.9	412.1
35°	444.4	508.0	597.4	686.9	710.4	733.9	673.9	613.9	524.1	434.2	385.8
37.5°	396.4	449.5	536.8	624.1	652.9	681.8	628.0	574.3	490.1	406.0	361.5
40°	356.6	399.3	479.6	559.8	593.1	626.5	582.1	537.8	458.0	378.2	337.2
42.5°	323.2	361.3	434.1	506.8	538.8	570.8	533.3	495.8	424.8	353.8	316.4
45°	294.8	325.2	391.3	457.4	487.8	518.2	486.0	453.9	391.3	328.7	293.8
47.5°	268.1	294.2	350.7	407.2	434.2	461.3	436.2	411.1	358.1	305.2	273.6
50°	244.2	265.2	314.6	364.0	387.6	411.1	388.9	366.8	323.2	279.7	252.2
52.5°	223.4	240.5	281.8	323.2	343.4	363.6	344.6	325.6	291.1	256.5	232.6
55°	202.8	217.3	253.2	289.1	302.8	316.6	301.9	287.1	259.3	231.4	211.2
57.5°	183.6	196.5	225.9	255.4	266.0	276.6	263.2	249.9	228.9	207.9	191.0
60°	164.8	175.3	199.9	224.4	230.9	237.3	226.5	215.8	201.0	186.3	171.2
62.5°	147.3	156.9	175.2	193.4	197.7	202.0	193.8	185.5	174.4	163.2	151.4
65°	129.3	136.5	151.4	166.3	169.1	171.8	164.6	157.3	148.9	140.4	131.8
67.5°	112.6	117.7	129.8	142.0	142.2	142.4	136.5	130.6	125.9	121.2	114.3
70°	96.3	101.2	109.2	117.3	117.5	117.7	113.0	108.3	104.7	101.2	96.1
72.5°	79.6	83.2	89.2	95.3	94.9	94.5	91.6	88.7	85.9	83.2	79.4
75°	64.5	67.5	71.6	75.7	74.5	73.4	71.8	70.2	67.9	65.5	63.2
77.5°	50.8	52.6	54.9	57.3	56.5	55.7	54.3	53.0	51.2	49.4	48.4
80°	37.3	38.1	39.6	41.2	40.8	40.4	38.8	37.3	36.9	36.5	35.1
82.5°	25.3	26.3	26.7	27.1	26.9	26.7	25.5	24.3	23.9	23.5	23.3
85°	15.1	15.3	15.5	15.7	15.1	14.5	14.1	13.7	13.7	13.7	13.5
87.5°	6.9	7.1	7.1	7.1	6.9	6.7	6.3	5.9	6.1	6.3	6.3
90°	18.2	15.3	12.4	9.9	7.7	5.4	3.2	1.0	3.2	5.4	7.7
92.5°	22.0	20.0	18.0	17.7	19.0	20.3	21.7	23.0	21.7	20.3	19.0
95°	26.1	23.7	21.2	24.6	33.7	42.8	51.9	61.0	51.9	42.8	33.7
97.5°	54.7	66.0	77.4	86.1	92.4	98.6	104.8	111.0	104.8	98.6	92.4
100°	102.4	137.0	171.7	186.8	182.4	177.9	173.5	169.1	173.5	177.9	182.4
102.5°	151.4	190.1	228.7	246.6	243.7	240.9	238.0	235.1	238.0	240.9	243.7
105°	259.1	279.1	299.1	307.9	305.4	303.0	300.5	298.1	300.5	303.0	305.4
107.5°	382.5	379.1	375.8	373.1	371.1	369.1	367.1	365.1	367.1	369.1	371.1
110°	446.3	443.8	441.4	439.2	437.5	435.7	433.9	432.1	433.9	435.7	437.5



TEST NUMBER: P831360

CATALOG NUMBER: S123DIP-S340D1195U935-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	509.3	506.8	504.4	502.4	500.8	499.3	497.7	496.2	497.7	499.3	500.8
115°	570.2	568.2	566.2	564.5	563.2	561.8	560.5	559.2	560.5	561.8	563.2
117.5°	631.0	629.9	628.8	627.4	625.9	624.3	622.8	621.2	622.8	624.3	625.9
120°	688.9	688.2	687.6	686.2	684.2	682.2	680.2	678.2	680.2	682.2	684.2
122.5°	745.5	744.6	743.7	742.5	740.9	739.3	737.8	736.2	737.8	739.3	740.9
125°	798.5	797.6	796.7	795.4	793.6	791.8	790.0	788.2	790.0	791.8	793.6
127.5°	851.0	849.9	848.8	847.4	845.6	843.8	842.0	840.3	842.0	843.8	845.6
130°	898.5	897.6	896.7	895.4	893.6	891.8	890.1	888.3	890.1	891.8	893.6
132.5°	944.0	943.3	942.6	941.4	939.6	937.9	936.1	934.3	936.1	937.9	939.6
135°	989.5	988.6	987.8	986.6	985.3	984.0	982.6	981.3	982.6	984.0	985.3
137.5°	1030.4	1030.0	1029.5	1028.4	1026.7	1024.9	1023.1	1021.3	1023.1	1024.9	1026.7
140°	1069.0	1068.3	1067.7	1066.7	1065.3	1064.0	1062.7	1061.3	1062.7	1064.0	1065.3
142.5°	1106.0	1105.3	1104.7	1103.7	1102.3	1101.0	1099.7	1098.3	1099.7	1101.0	1102.3
145°	1140.5	1140.0	1139.6	1138.6	1137.0	1135.5	1133.9	1132.4	1133.9	1135.5	1137.0
147.5°	1171.5	1171.0	1170.6	1169.8	1168.7	1167.6	1166.5	1165.4	1166.5	1167.6	1168.7
150°	1199.5	1199.0	1198.6	1198.0	1197.4	1196.7	1196.0	1195.4	1196.0	1196.7	1197.4
152.5°	1223.9	1223.7	1223.5	1223.3	1223.1	1222.8	1222.6	1222.4	1222.6	1222.8	1223.1
155°	1245.9	1245.7	1245.5	1245.6	1246.1	1246.5	1246.9	1247.4	1246.9	1246.5	1246.1
157.5°	1266.8	1267.1	1267.3	1267.4	1267.4	1267.4	1267.4	1267.4	1267.4	1267.4	1267.4
160°	1283.8	1284.1	1284.3	1284.5	1284.7	1285.0	1285.2	1285.4	1285.2	1285.0	1284.7
162.5°	1298.9	1299.1	1299.3	1299.7	1300.4	1301.1	1301.7	1302.4	1301.7	1301.1	1300.4
165°	1311.9	1312.1	1312.3	1312.7	1313.4	1314.1	1314.7	1315.4	1314.7	1314.1	1313.4
167.5°	1322.4	1322.4	1322.4	1322.9	1323.8	1324.6	1325.5	1326.4	1325.5	1324.6	1323.8
170°	1331.4	1331.4	1331.4	1331.9	1332.8	1333.6	1334.5	1335.4	1334.5	1333.6	1332.8
172.5°	1337.0	1336.8	1336.5	1337.0	1338.1	1339.2	1340.3	1341.4	1340.3	1339.2	1338.1
175°	1342.0	1341.8	1341.5	1342.0	1343.1	1344.2	1345.3	1346.4	1345.3	1344.2	1343.1
177.5°	1344.0	1343.8	1343.5	1344.0	1345.1	1346.2	1347.3	1348.4	1347.3	1346.2	1345.1
180°	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4



TEST NUMBER: P831360

CATALOG NUMBER: S123DIP-S340D1195U935-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	811.2	803.6	795.9	790.0	784.2	774.2	764.1	761.8	759.4	756.1	752.8
5°	769.2	750.4	731.6	714.7	697.9	684.7	671.6	662.9	654.3	648.0	641.8
7.5°	720.2	692.0	663.7	643.7	623.7	604.7	585.7	579.6	573.5	565.3	557.0
10°	672.7	641.6	610.4	584.3	558.2	539.6	520.9	513.5	506.0	495.6	485.2
12.5°	630.4	596.3	562.1	535.8	509.6	491.5	473.5	462.7	451.9	446.0	440.1
15°	586.1	549.6	513.1	488.8	464.5	448.2	431.9	422.5	413.1	407.4	401.7
17.5°	546.8	510.7	474.7	451.3	428.0	413.1	398.2	389.9	381.7	377.4	373.1
20°	509.6	474.3	439.0	416.2	393.5	381.3	369.1	363.8	358.5	355.0	351.5
22.5°	475.4	440.7	406.0	386.6	367.2	357.4	347.6	343.8	340.1	337.2	334.2
25°	441.3	410.3	379.3	362.9	346.4	338.3	330.3	326.6	322.8	319.9	317.0
27.5°	413.5	383.8	354.2	340.1	326.0	319.7	313.4	310.5	307.5	304.8	302.1
30°	386.4	359.9	333.4	321.3	309.1	303.4	297.7	294.8	291.9	289.3	286.8
32.5°	361.3	338.5	315.8	304.6	293.4	288.7	284.0	280.5	276.9	275.0	273.0
35°	337.4	317.0	296.6	287.3	278.1	273.4	268.7	265.8	262.8	261.3	259.7
37.5°	317.0	298.7	280.5	271.6	262.8	258.3	253.8	251.3	248.7	248.1	247.5
40°	296.2	280.5	264.8	256.2	247.5	243.6	239.7	238.1	236.5	236.1	235.8
42.5°	278.9	263.6	248.3	240.5	232.6	229.3	225.9	225.2	224.4	225.0	225.6
45°	258.9	246.2	233.4	226.1	218.9	216.1	213.4	212.8	212.2	213.4	214.6
47.5°	242.0	230.3	218.5	211.6	204.8	202.8	200.8	200.6	200.5	202.0	203.6
50°	224.8	213.4	202.0	196.5	191.0	189.3	187.5	188.1	188.7	191.2	193.8
52.5°	208.7	198.1	187.5	182.4	177.3	176.1	175.0	176.3	177.7	180.4	183.2
55°	191.0	181.4	171.8	167.9	164.0	162.8	161.6	164.4	167.1	169.7	172.2
57.5°	174.2	165.7	157.3	153.8	150.2	150.0	149.8	152.4	154.9	157.7	160.4
60°	156.1	149.1	142.0	139.3	136.5	136.9	137.3	140.2	143.2	145.3	147.5
62.5°	139.6	133.8	127.9	125.3	122.8	123.8	124.7	127.7	130.6	133.2	135.7
65°	123.2	118.3	113.4	111.6	109.8	111.2	112.6	115.1	117.7	119.4	121.2
67.5°	107.5	103.4	99.2	97.9	96.5	97.9	99.2	101.8	104.3	106.1	107.9
70°	91.0	87.7	84.3	83.4	82.4	83.9	85.5	87.7	89.8	91.6	93.4
72.5°	75.7	73.2	70.6	70.4	70.2	71.6	73.0	75.1	77.3	78.5	79.6
75°	60.8	59.4	58.1	57.9	57.7	59.0	60.4	61.6	62.8	63.7	64.7
77.5°	47.5	46.3	45.1	45.3	45.5	46.5	47.5	48.6	49.8	50.4	51.0
80°	33.7	33.3	33.0	33.3	33.7	34.5	35.3	36.1	36.9	37.3	37.7
82.5°	23.1	22.8	22.4	22.9	23.5	24.1	24.7	25.3	25.9	26.1	26.3
85°	13.3	13.9	14.5	14.5	14.5	14.7	14.9	15.1	15.3	15.1	14.9
87.5°	6.3	6.5	6.7	6.7	6.7	6.9	7.1	7.1	7.1	6.9	6.7
90°	9.9	12.4	15.3	18.2	21.1	24.0	24.9	25.8	26.7	27.6	28.2
92.5°	17.7	18.0	20.0	22.0	24.0	26.0	27.6	29.1	30.7	32.2	33.1
95°	24.6	21.2	23.7	26.1	28.6	31.0	32.6	34.1	35.7	37.2	38.0
97.5°	86.1	77.4	66.0	54.7	43.3	32.0	33.8	35.6	37.3	39.1	40.1
100°	186.8	171.7	137.0	102.4	67.7	33.0	34.8	36.6	38.3	40.1	41.1
102.5°	246.6	228.7	190.1	151.4	112.7	74.0	66.7	59.4	52.0	44.7	41.2
105°	307.9	299.1	279.1	259.1	239.1	219.1	179.7	140.4	101.0	61.7	42.2
107.5°	373.1	375.8	379.1	382.5	385.8	389.1	354.9	320.7	286.4	252.2	220.5
110°	439.2	441.4	443.8	446.3	448.7	451.1	443.8	436.5	429.1	421.8	402.2



TEST NUMBER: P831360

CATALOG NUMBER: S123DIP-S340D1195U935-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	502.4	504.4	506.8	509.3	511.7	514.2	516.2	518.2	520.2	522.2	522.9
115°	564.5	566.2	568.2	570.2	572.2	574.2	576.4	578.6	580.9	583.1	584.6
117.5°	627.4	628.8	629.9	631.0	632.1	633.2	635.0	636.8	638.5	640.3	641.3
120°	686.2	687.6	688.2	688.9	689.6	690.2	692.0	693.8	695.6	697.3	698.2
122.5°	742.5	743.7	744.6	745.5	746.3	747.2	748.3	749.5	750.6	751.7	752.3
125°	795.4	796.7	797.6	798.5	799.4	800.3	800.7	801.1	801.6	802.0	802.5
127.5°	847.4	848.8	849.9	851.0	852.2	853.3	853.9	854.6	855.3	855.9	856.0
130°	895.4	896.7	897.6	898.5	899.4	900.3	901.2	902.1	903.0	903.8	904.1
132.5°	941.4	942.6	943.3	944.0	944.6	945.3	946.2	947.1	948.0	948.9	949.0
135°	986.6	987.8	988.6	989.5	990.4	991.3	992.0	992.6	993.3	994.0	994.0
137.5°	1028.4	1029.5	1030.0	1030.4	1030.9	1031.3	1032.4	1033.5	1034.7	1035.8	1036.1
140°	1066.7	1067.7	1068.3	1069.0	1069.7	1070.3	1071.2	1072.1	1073.0	1073.9	1074.1
142.5°	1103.7	1104.7	1105.3	1106.0	1106.7	1107.3	1108.0	1108.7	1109.4	1110.0	1110.0
145°	1138.6	1139.6	1140.0	1140.5	1140.9	1141.4	1141.8	1142.2	1142.7	1143.1	1143.4
147.5°	1169.8	1170.6	1171.0	1171.5	1171.9	1172.4	1172.8	1173.3	1173.7	1174.1	1173.8
150°	1198.0	1198.6	1199.0	1199.5	1199.9	1200.4	1200.8	1201.3	1201.7	1202.2	1202.0
152.5°	1223.3	1223.5	1223.7	1223.9	1224.2	1224.4	1225.3	1226.2	1227.1	1227.9	1227.8
155°	1245.6	1245.5	1245.7	1245.9	1246.2	1246.4	1247.5	1248.6	1249.7	1250.8	1250.7
157.5°	1267.4	1267.3	1267.1	1266.8	1266.6	1266.4	1267.7	1269.1	1270.4	1271.7	1271.5
160°	1284.5	1284.3	1284.1	1283.8	1283.6	1283.4	1284.7	1286.1	1287.4	1288.7	1288.6
162.5°	1299.7	1299.3	1299.1	1298.9	1298.6	1298.4	1300.0	1301.5	1303.1	1304.6	1304.7
165°	1312.7	1312.3	1312.1	1311.9	1311.6	1311.4	1313.2	1315.0	1316.7	1318.5	1318.6
167.5°	1322.9	1322.4	1322.4	1322.4	1322.4	1322.4	1324.2	1326.0	1327.8	1329.5	1329.5
170°	1331.9	1331.4	1331.4	1331.4	1331.4	1331.4	1333.2	1335.0	1336.8	1338.5	1338.5
172.5°	1337.0	1336.5	1336.8	1337.0	1337.2	1337.4	1339.2	1341.0	1342.8	1344.5	1344.4
175°	1342.0	1341.5	1341.8	1342.0	1342.2	1342.4	1344.0	1345.5	1347.1	1348.6	1348.5
177.5°	1344.0	1343.5	1343.8	1344.0	1344.2	1344.4	1346.2	1348.0	1349.8	1351.5	1351.3
180°	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4



TEST NUMBER: P831360

CATALOG NUMBER: S123DIP-S340D1195U935-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	845.3	845.3	845.3	845.3
2.5°	751.4	750.0	744.5	739.0
5°	637.1	632.3	630.8	629.2
7.5°	556.6	556.2	548.0	539.8
10°	485.8	486.4	479.0	471.5
12.5°	435.2	430.3	429.7	429.1
15°	397.2	392.7	391.9	391.1
17.5°	370.3	367.6	366.8	366.0
20°	349.9	348.3	347.0	345.6
22.5°	332.3	330.3	329.1	327.9
25°	315.2	313.4	313.0	312.6
27.5°	299.9	297.7	297.7	297.7
30°	285.4	284.0	283.4	282.8
32.5°	271.8	270.7	270.7	270.7
35°	259.1	258.5	257.7	256.9
37.5°	247.5	247.5	247.1	246.7
40°	236.3	236.9	236.9	236.9
42.5°	226.1	226.7	226.7	226.7
45°	215.6	216.5	216.9	217.3
47.5°	205.2	206.7	207.1	207.5
50°	195.0	196.1	196.3	196.5
52.5°	184.6	185.9	186.9	187.9
55°	173.6	175.0	175.5	176.1
57.5°	161.8	163.2	163.4	163.6
60°	148.9	150.2	150.6	151.0
62.5°	136.5	137.3	137.7	138.1
65°	122.4	123.6	124.4	125.1
67.5°	108.9	109.8	109.8	109.8
70°	93.8	94.1	94.7	95.3
72.5°	79.8	80.0	80.0	80.0
75°	65.1	65.5	65.7	65.9
77.5°	51.2	51.4	51.4	51.4
80°	37.5	37.3	37.3	37.3
82.5°	25.7	25.1	25.1	25.1
85°	14.7	14.5	14.7	14.9
87.5°	6.7	6.7	6.7	6.7
90°	28.7	29.1	29.6	30.0
92.5°	33.3	33.6	33.8	34.0
95°	38.0	38.0	38.0	38.0
97.5°	40.3	40.6	40.8	41.0
100°	41.3	41.6	41.8	42.0
102.5°	41.7	42.1	42.6	43.0
105°	42.7	43.1	43.6	44.0
107.5°	191.4	162.3	133.2	104.0
110°	370.5	338.7	306.9	275.1



TEST NUMBER: P831360

CATALOG NUMBER: S123DIP-S340D1195U935-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	522.5	522.1	521.6	521.2
115°	585.5	586.4	587.3	588.2
117.5°	641.5	641.8	642.0	642.2
120°	698.2	698.2	698.2	698.2
122.5°	752.6	752.8	753.0	753.2
125°	802.9	803.4	803.8	804.3
127.5°	855.6	855.2	854.7	854.3
130°	903.6	903.2	902.7	902.3
132.5°	948.3	947.6	947.0	946.3
135°	993.3	992.6	992.0	991.3
137.5°	1035.7	1035.2	1034.8	1034.3
140°	1073.7	1073.2	1072.8	1072.3
142.5°	1109.4	1108.7	1108.0	1107.3
145°	1143.4	1143.4	1143.4	1143.4
147.5°	1172.7	1171.6	1170.5	1169.4
150°	1201.4	1200.7	1200.0	1199.4
152.5°	1226.7	1225.6	1224.5	1223.4
155°	1249.4	1248.1	1246.7	1245.4
157.5°	1269.7	1268.0	1266.2	1264.4
160°	1287.1	1285.5	1284.0	1282.4
162.5°	1303.4	1302.1	1300.7	1299.4
165°	1317.1	1315.5	1314.0	1312.4
167.5°	1327.8	1326.0	1324.2	1322.4
170°	1336.8	1335.0	1333.2	1331.4
172.5°	1342.4	1340.4	1338.4	1336.4
175°	1346.8	1345.0	1343.2	1341.4
177.5°	1349.1	1346.9	1344.6	1342.4
180°	1346.4	1346.4	1346.4	1346.4



TEST NUMBER: P831360

CATALOG NUMBER: S123DIP-S340D1195U935-4F0-1E-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	8.25	8.91	9.40	10.04	11.64	10.49	11.14	11.64	12.28	13.87
	3H	9.88	10.47	11.04	11.62	13.22	11.90	12.49	13.05	13.63	15.24
	4H	10.45	11.01	11.62	12.15	13.77	12.34	12.90	13.50	14.04	15.65
	6H	10.81	11.33	11.99	12.47	14.09	12.60	13.12	13.78	14.26	15.89
	8H	10.90	11.39	12.08	12.55	14.17	12.66	13.15	13.84	14.31	15.92
	12H	10.94	11.40	12.12	12.56	14.20	12.67	13.14	13.85	14.29	15.93
4H	2H	8.80	9.36	9.98	10.50	12.12	10.63	11.19	11.80	12.33	13.94
	3H	10.61	11.08	11.79	12.25	13.87	12.23	12.69	13.41	13.86	15.49
	4H	11.30	11.73	12.48	12.89	14.53	12.80	13.23	13.98	14.39	16.03
	6H	11.77	12.13	12.95	13.31	14.95	13.20	13.56	14.38	14.74	16.38
	8H	11.90	12.24	13.08	13.41	15.06	13.30	13.65	14.49	14.82	16.47
	12H	11.96	12.27	13.16	13.45	15.10	13.34	13.65	14.54	14.83	16.49
8H	4H	11.55	11.89	12.74	13.07	14.71	12.89	13.24	14.08	14.41	16.06
	6H	12.13	12.42	13.34	13.63	15.28	13.39	13.67	14.59	14.89	16.53
	8H	12.34	12.59	13.55	13.78	15.44	13.57	13.81	14.78	15.00	16.67
	12H	12.46	12.67	13.67	13.86	15.56	13.66	13.88	14.87	15.07	16.76
12H	4H	11.54	11.86	12.74	13.04	14.69	12.86	13.17	14.06	14.35	16.01
	6H	12.18	12.43	13.39	13.62	15.29	13.40	13.65	14.61	14.84	16.50
	8H	12.41	12.62	13.62	13.81	15.51	13.59	13.81	14.80	15.00	16.69