

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: P831391

Luminaire Tested: S123DIP-S340D365U940-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831391
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-S340D365U940-4F0-1E-UDD-G1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: -

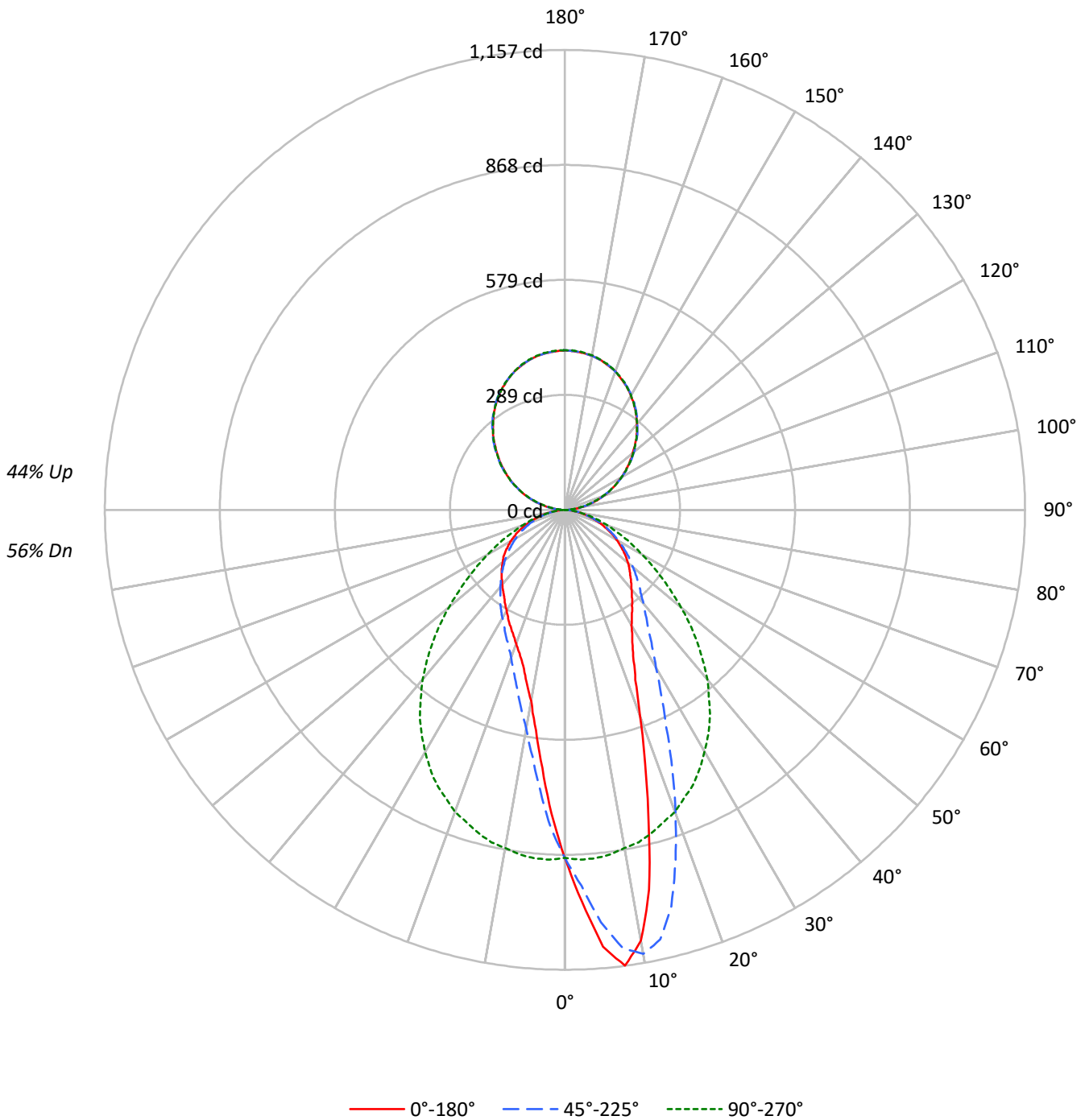
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2519.8 lumens
Efficiency: N/A
Efficacy: 112.5 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: General Diffuse

Input Watts (W): 22.4
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: P831391
CATALOG NUMBER: S123DIP-S340D365U940-4F0-1E-UDD-G1

Luminous Intensity Polar Plot



TEST NUMBER: P831391

CATALOG NUMBER: S123DIP-S340D365U940-4F0-1E-UDD-G1

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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56				
1	100	96	92	88	93	89	86	83	77	74	72	66	64	62	55	54	53	48				
2	91	84	78	73	85	79	73	69	68	64	61	58	56	53	49	47	46	41				
3	84	75	68	62	78	70	64	59	61	56	52	52	49	46	44	42	40	36				
4	77	67	59	53	71	62	56	50	54	49	45	47	43	40	40	37	35	31				
5	71	60	52	46	66	56	49	44	49	44	39	43	38	35	37	33	31	28				
6	66	54	46	41	61	51	44	39	45	39	35	39	35	31	34	30	28	25				
7	61	49	41	36	57	46	39	34	41	35	31	36	31	28	31	28	25	23				
8	57	45	37	32	53	42	36	31	38	32	28	33	29	25	29	25	23	21				
9	53	41	34	29	50	39	32	28	35	29	26	31	26	23	27	23	21	19				
10	50	38	31	26	47	36	30	25	32	27	23	29	24	21	25	22	19	17				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	9424	9424	9424	9424	9424
5°	11918	11249	9508	7662	7042
10°	12034	12398	9445	6108	5337
15°	9063	11510	9381	5173	4513
20°	6315	9314	9261	4523	4100
25°	4816	7163	9057	4162	3846
30°	4166	5691	8730	3905	3640
35°	3865	4804	8355	3721	3497
40°	3659	4310	7827	3545	3448
45°	3538	3988	7155	3408	3427
50°	3476	3734	6362	3282	3408
55°	3348	3549	5581	3164	3423
60°	3227	3350	4809	3053	3367
65°	3031	3161	4149	2934	3301
70°	2801	2921	3528	2735	3106
75°	2533	2620	3023	2541	2840
80°	2089	2294	2393	2219	2393
85°	1655	1853	1754	1877	1902

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 8170 cd/sqm



TEST NUMBER: P831391

CATALOG NUMBER: S123DIP-S340D365U940-4F0-1E-UDD-G1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.8	3.3
10°-20°	205.9	8.2
20°-30°	243.8	9.7
30°-40°	245.1	9.7
40°-50°	224.9	8.9
50°-60°	185.6	7.4
60°-70°	131.3	5.2
70°-80°	70.1	2.8
80°-90°	18.6	0.7
90°-100°	25.8	1.0
100°-110°	78.2	3.1
110°-120°	133.1	5.3
120°-130°	175.0	6.9
130°-140°	196.8	7.8
140°-150°	193.4	7.7
150°-160°	162.9	6.5
160°-170°	108.4	4.3
170°-180°	38.0	1.5
0°-30°	532.5	21.1
0°-40°	777.6	30.9
0°-60°	1188.2	47.2
0°-90°	1408.2	55.9
90°-120°	237.0	9.4
90°-150°	802.3	31.8
90°-180°	1112.0	44.1
0°-180°	2519.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	876	876	876	876	876	
5°	1103	1041	880	709	652	105
15°	813	1033	842	464	405	225
25°	406	603	763	350	324	191
35°	294	366	636	283	266	185
45°	232	262	470	224	225	180
55°	178	189	297	169	182	160
65°	119	124	163	115	130	118
75°	61	63	73	61	68	64
85°	13	15	14	15	15	15
90°	10	8	0	8	10	5
95°	25	23	19	23	25	25
105°	75	74	71	74	75	79
115°	134	134	134	134	134	133
125°	194	196	196	196	194	173
135°	254	256	254	256	254	195
145°	308	310	308	310	308	193
155°	353	354	353	354	353	162
165°	384	384	385	384	384	108
175°	399	399	400	399	399	38
180°	401	401	401	401	401	



TEST NUMBER: P831391

CATALOG NUMBER: S123DIP-S340D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5
2.5°	986.8	985.8	984.8	979.7	974.6	972.2	969.8	962.4	955.1	947.0	938.9
5°	1103.0	1105.9	1108.7	1105.5	1102.2	1092.2	1082.3	1069.1	1055.9	1041.1	1026.2
7.5°	1156.6	1158.3	1159.9	1157.9	1155.8	1153.2	1150.5	1138.8	1127.0	1111.7	1096.5
10°	1101.0	1104.6	1108.3	1116.2	1124.1	1133.1	1142.0	1140.4	1138.8	1134.3	1129.8
12.5°	978.7	983.2	987.6	1003.5	1019.3	1039.6	1059.9	1077.4	1094.9	1107.1	1119.3
15°	813.3	825.7	838.1	852.5	867.0	896.8	926.7	963.5	1000.2	1032.9	1065.6
17.5°	669.9	674.6	679.3	694.7	710.2	747.7	785.3	827.8	870.2	924.5	978.7
20°	551.3	555.6	559.8	580.1	600.5	629.9	659.4	707.1	754.8	813.1	871.4
22.5°	463.1	469.8	476.6	487.9	499.3	527.5	555.8	598.2	640.7	705.1	769.5
25°	405.5	410.3	415.2	422.1	429.0	451.6	474.1	509.1	544.0	603.1	662.2
27.5°	366.0	368.1	370.1	377.0	383.9	398.5	413.2	443.2	473.3	523.5	573.6
30°	335.2	336.6	338.0	344.1	350.2	360.2	370.1	391.8	413.6	457.9	502.1
32.5°	313.6	314.7	315.7	320.3	325.0	332.1	339.2	355.1	370.9	407.5	444.0
35°	294.1	294.7	295.4	298.8	302.3	307.5	312.8	324.8	336.8	365.6	394.5
37.5°	277.1	277.9	278.7	280.7	282.8	287.4	292.1	301.7	311.2	333.3	355.5
40°	260.4	261.8	263.3	264.7	266.1	270.0	273.8	281.1	288.4	306.7	325.0
42.5°	246.2	247.6	249.0	249.7	250.3	252.5	254.7	261.4	268.1	281.7	295.4
45°	232.4	233.0	233.6	234.2	234.8	236.7	238.5	244.4	250.3	262.0	273.8
47.5°	219.8	219.8	219.8	220.2	220.6	222.2	223.9	228.1	232.4	241.5	250.7
50°	207.6	207.6	207.6	207.0	206.4	207.4	208.4	211.7	214.9	223.0	231.2
52.5°	193.0	193.0	193.0	193.2	193.4	193.4	193.4	196.2	199.1	206.4	213.7
55°	178.4	179.2	180.0	179.4	178.8	179.2	179.6	181.4	183.2	189.1	195.0
57.5°	163.7	164.1	164.5	164.3	164.1	164.3	164.5	166.2	167.8	172.3	176.7
60°	149.9	149.9	149.9	149.5	149.1	149.5	149.9	150.7	151.5	155.6	159.7
62.5°	134.5	134.7	134.9	135.1	135.3	134.9	134.5	135.5	136.5	139.6	142.6
65°	119.0	119.2	119.4	120.1	120.7	120.3	119.8	120.9	121.9	124.1	126.3
67.5°	105.2	104.8	104.4	104.6	104.8	105.4	106.0	106.2	106.4	108.9	111.3
70°	89.0	89.4	89.8	89.6	89.4	89.6	89.8	90.4	91.0	92.8	94.7
72.5°	74.3	74.5	74.8	74.8	74.8	75.2	75.6	76.2	76.8	77.8	78.8
75°	60.9	60.9	60.9	61.3	61.8	62.0	62.2	62.2	62.2	63.0	63.8
77.5°	46.3	47.3	48.3	48.1	47.9	48.3	48.8	49.4	50.0	50.4	50.8
80°	33.7	33.7	33.7	33.9	34.1	34.7	35.3	35.8	36.2	37.0	37.8
82.5°	21.5	21.7	21.9	22.5	23.2	23.6	24.0	24.6	25.2	25.2	25.2
85°	13.4	13.0	12.6	13.0	13.4	13.8	14.2	14.4	14.6	15.0	15.4
87.5°	6.5	6.5	6.5	6.5	6.5	6.7	6.9	6.9	6.9	6.9	6.9
90°	9.5	9.3	9.2	9.0	8.9	8.7	8.4	8.1	7.8	7.6	6.7
92.5°	13.6	13.7	13.8	14.0	14.1	14.1	13.9	13.7	13.4	13.2	12.8
95°	24.6	24.6	24.6	24.6	24.6	24.4	24.2	23.9	23.6	23.3	22.8
97.5°	35.3	35.4	35.4	35.5	35.6	35.4	35.1	34.7	34.4	34.0	33.6
100°	47.9	47.8	47.6	47.5	47.3	47.2	47.0	46.7	46.5	46.3	46.0
102.5°	60.8	60.9	61.0	61.0	61.1	61.0	60.8	60.6	60.4	60.2	59.7
105°	75.0	74.9	74.7	74.6	74.4	74.4	74.4	74.4	74.4	74.4	73.7
107.5°	89.5	89.6	89.6	89.7	89.8	89.7	89.5	89.3	89.1	88.9	88.6
110°	104.3	104.4	104.6	104.7	104.9	104.8	104.5	104.2	104.0	103.7	103.5



TEST NUMBER: P831391

CATALOG NUMBER: S123DIP-S340D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	120.1	120.1	120.1	120.1	120.1	119.9	119.5	119.2	118.8	118.5	118.5
115°	134.2	134.3	134.4	134.5	134.5	134.5	134.5	134.4	134.3	134.2	134.4
117.5°	148.7	148.9	149.2	149.4	149.6	149.7	149.7	149.7	149.7	149.7	149.8
120°	164.2	164.3	164.5	164.6	164.7	164.8	164.9	165.0	165.1	165.1	165.5
122.5°	179.0	179.2	179.4	179.6	179.8	180.0	180.3	180.5	180.7	180.9	181.0
125°	193.8	194.1	194.4	194.6	194.9	195.2	195.5	195.8	196.0	196.3	196.5
127.5°	208.6	208.9	209.2	209.5	209.7	210.1	210.5	210.9	211.3	211.8	211.9
130°	223.1	223.6	224.1	224.6	225.1	225.5	225.7	226.0	226.3	226.6	226.8
132.5°	238.2	238.6	238.9	239.3	239.6	240.0	240.3	240.7	241.0	241.4	241.5
135°	254.0	254.1	254.3	254.4	254.5	254.8	255.0	255.3	255.6	255.9	255.9
137.5°	267.9	268.1	268.3	268.5	268.7	269.0	269.3	269.7	270.0	270.4	270.2
140°	281.4	281.9	282.4	282.9	283.4	283.6	283.7	283.8	283.9	283.9	283.9
142.5°	295.3	295.6	296.0	296.3	296.7	296.9	297.0	297.0	297.1	297.2	297.0
145°	308.5	308.8	309.1	309.3	309.6	309.8	309.9	309.9	310.0	310.1	309.9
147.5°	320.5	320.9	321.3	321.7	322.2	322.4	322.4	322.4	322.4	322.4	322.2
150°	331.8	332.2	332.7	333.1	333.5	333.7	333.7	333.7	333.7	333.7	333.6
152.5°	342.9	343.2	343.6	343.9	344.3	344.4	344.2	344.1	343.9	343.8	343.7
155°	352.6	353.1	353.6	354.1	354.6	354.7	354.4	354.1	353.8	353.6	353.5
157.5°	361.8	362.2	362.6	363.0	363.4	363.5	363.2	363.0	362.7	362.4	362.3
160°	370.6	370.9	371.1	371.4	371.7	371.7	371.3	371.0	370.6	370.3	370.3
162.5°	377.2	377.7	378.2	378.7	379.2	379.2	378.9	378.5	378.2	377.8	377.8
165°	383.5	384.0	384.5	385.0	385.5	385.5	385.1	384.7	384.2	383.8	383.8
167.5°	389.2	389.6	390.0	390.4	390.9	390.9	390.4	390.0	389.6	389.2	389.1
170°	393.3	393.8	394.3	394.7	395.2	395.2	394.7	394.3	393.8	393.3	393.3
172.5°	396.4	396.9	397.4	397.9	398.4	398.4	398.0	397.6	397.2	396.7	396.7
175°	398.6	399.1	399.6	400.1	400.6	400.6	400.2	399.8	399.4	398.9	398.9
177.5°	399.9	400.4	400.9	401.4	401.9	401.9	401.5	401.0	400.6	400.2	400.2
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2



TEST NUMBER: P831391

CATALOG NUMBER: S123DIP-S340D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5
2.5°	936.4	934.0	925.1	916.1	906.0	895.8	888.3	880.8	869.6	858.4	849.3
5°	1014.9	1003.5	984.6	965.7	940.1	914.5	897.2	880.0	856.8	833.7	815.2
7.5°	1077.0	1057.5	1031.1	1004.7	971.2	937.7	906.0	874.3	838.9	803.6	774.7
10°	1116.6	1103.4	1072.9	1042.5	997.6	952.7	908.4	864.1	818.6	773.1	734.9
12.5°	1120.5	1121.7	1093.7	1065.6	1014.9	964.1	910.2	856.4	799.1	741.8	697.4
15°	1086.6	1107.5	1092.0	1076.6	1025.4	974.2	908.0	841.8	775.8	709.7	658.4
17.5°	1023.6	1068.5	1070.7	1072.9	1021.8	970.6	897.2	823.9	749.2	674.4	620.4
20°	937.7	1003.9	1026.6	1049.4	1007.7	966.1	887.3	808.5	724.8	641.1	584.4
22.5°	849.9	930.3	972.0	1013.6	982.8	951.9	868.0	784.1	695.7	607.4	549.9
25°	750.0	837.7	901.7	965.7	946.8	927.9	845.2	762.6	668.5	574.5	515.8
27.5°	662.8	752.0	829.2	906.4	902.3	898.3	816.2	734.1	637.8	541.6	484.9
30°	585.2	668.3	754.6	841.0	850.9	860.9	781.7	702.4	605.9	509.5	454.8
32.5°	516.6	589.1	681.7	774.3	793.8	813.3	741.8	670.3	574.9	479.4	426.8
35°	460.3	526.1	618.7	711.4	735.7	760.1	698.0	635.8	542.8	449.7	399.6
37.5°	410.5	465.6	556.0	646.4	676.2	706.1	650.4	594.8	507.6	420.5	374.4
40°	369.3	413.6	496.7	579.7	614.3	648.8	602.9	557.0	474.3	391.6	349.2
42.5°	334.8	374.2	449.5	524.9	558.0	591.1	552.3	513.5	440.0	366.5	327.7
45°	305.3	336.8	405.3	473.7	505.2	536.7	503.4	470.0	405.3	340.5	304.3
47.5°	277.7	304.7	363.2	421.7	449.7	477.8	451.8	425.8	370.9	316.1	283.4
50°	252.9	274.6	325.8	377.0	401.4	425.8	402.8	379.9	334.8	289.7	261.2
52.5°	231.4	249.0	291.9	334.8	355.7	376.6	356.9	337.2	301.4	265.7	240.9
55°	210.0	225.1	262.2	299.4	313.6	327.9	312.6	297.4	268.5	239.7	218.8
57.5°	190.1	203.5	234.0	264.5	275.4	286.4	272.6	258.8	237.1	215.3	197.9
60°	170.6	181.6	207.0	232.4	239.1	245.8	234.6	223.4	208.2	193.0	177.3
62.5°	152.6	162.5	181.4	200.3	204.8	209.2	200.7	192.2	180.6	169.0	156.8
65°	133.9	141.4	156.8	172.3	175.1	177.9	170.4	162.9	154.2	145.4	136.5
67.5°	116.6	121.9	134.5	147.1	147.3	147.5	141.4	135.3	130.4	125.5	118.4
70°	99.7	104.8	113.1	121.5	121.7	121.9	117.0	112.1	108.5	104.8	99.5
72.5°	82.5	86.1	92.4	98.7	98.3	97.9	94.9	91.8	89.0	86.1	82.3
75°	66.8	69.9	74.1	78.4	77.2	76.0	74.3	72.7	70.3	67.8	65.4
77.5°	52.6	54.4	56.9	59.3	58.5	57.7	56.3	54.8	53.0	51.2	50.2
80°	38.6	39.4	41.0	42.7	42.3	41.8	40.2	38.6	38.2	37.8	36.4
82.5°	26.2	27.2	27.6	28.0	27.8	27.6	26.4	25.2	24.8	24.4	24.2
85°	15.6	15.8	16.0	16.3	15.6	15.0	14.6	14.2	14.2	14.2	14.0
87.5°	7.1	7.3	7.3	7.3	7.1	6.9	6.5	6.1	6.3	6.5	6.5
90°	5.7	4.8	3.9	3.1	2.4	1.7	1.0	0.3	1.0	1.7	2.4
92.5°	12.4	12.0	11.6	11.1	10.7	10.3	9.9	9.5	9.9	10.3	10.7
95°	22.2	21.6	21.1	20.6	20.1	19.6	19.1	18.6	19.1	19.6	20.1
97.5°	33.2	32.8	32.4	32.0	31.6	31.3	30.9	30.6	30.9	31.3	31.6
100°	45.6	45.3	44.9	44.5	44.1	43.7	43.3	42.9	43.3	43.7	44.1
102.5°	59.2	58.7	58.2	57.9	57.7	57.5	57.2	57.0	57.2	57.5	57.7
105°	73.1	72.5	71.8	71.5	71.3	71.2	71.0	70.9	71.0	71.2	71.3
107.5°	88.3	88.0	87.7	87.6	87.5	87.4	87.4	87.3	87.4	87.4	87.5
110°	103.4	103.3	103.1	103.0	102.8	102.7	102.6	102.4	102.6	102.7	102.8



TEST NUMBER: P831391

CATALOG NUMBER: S123DIP-S340D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	118.5	118.5	118.5	118.5	118.4	118.3	118.2	118.2	118.2	118.3	118.4
115°	134.5	134.7	134.8	134.8	134.6	134.3	134.1	133.9	134.1	134.3	134.6
117.5°	150.0	150.1	150.2	150.3	150.2	150.1	150.1	150.0	150.1	150.1	150.2
120°	165.8	166.2	166.5	166.5	166.1	165.6	165.2	164.8	165.2	165.6	166.1
122.5°	181.2	181.3	181.4	181.4	181.1	180.8	180.5	180.3	180.5	180.8	181.1
125°	196.6	196.7	196.9	196.8	196.6	196.4	196.2	196.0	196.2	196.4	196.6
127.5°	212.0	212.2	212.3	212.2	211.8	211.3	210.9	210.5	210.9	211.3	211.8
130°	227.0	227.2	227.4	227.2	226.7	226.1	225.6	225.0	225.6	226.1	226.7
132.5°	241.7	241.8	241.9	241.7	241.2	240.6	240.1	239.5	240.1	240.6	241.2
135°	256.0	256.1	256.2	256.0	255.6	255.1	254.7	254.3	254.7	255.1	255.6
137.5°	270.0	269.7	269.5	269.3	268.9	268.6	268.2	267.9	268.2	268.6	268.9
140°	283.8	283.7	283.6	283.4	283.1	282.7	282.4	282.0	282.4	282.7	283.1
142.5°	296.9	296.7	296.6	296.4	296.0	295.7	295.3	295.0	295.3	295.7	296.0
145°	309.7	309.5	309.2	309.1	308.9	308.8	308.6	308.5	308.6	308.8	308.9
147.5°	322.0	321.7	321.5	321.3	321.0	320.7	320.4	320.2	320.4	320.7	321.0
150°	333.4	333.3	333.2	333.0	332.9	332.7	332.6	332.5	332.6	332.7	332.9
152.5°	343.7	343.6	343.5	343.4	343.2	343.0	342.7	342.5	342.7	343.0	343.2
155°	353.4	353.4	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3
157.5°	362.3	362.2	362.1	362.1	362.2	362.3	362.3	362.4	362.3	362.3	362.2
160°	370.3	370.3	370.3	370.3	370.5	370.6	370.8	370.9	370.8	370.6	370.5
162.5°	377.7	377.6	377.6	377.6	377.8	378.0	378.3	378.5	378.3	378.0	377.8
165°	383.8	383.8	383.8	383.9	384.1	384.3	384.6	384.8	384.6	384.3	384.1
167.5°	389.0	389.0	388.9	389.0	389.3	389.6	389.8	390.1	389.8	389.6	389.3
170°	393.3	393.3	393.3	393.4	393.7	394.0	394.3	394.5	394.3	394.0	393.7
172.5°	396.7	396.7	396.7	396.9	397.2	397.4	397.7	398.0	397.7	397.4	397.2
175°	398.9	398.9	398.9	399.1	399.4	399.6	399.9	400.2	399.9	399.6	399.4
177.5°	400.2	400.2	400.2	400.3	400.6	400.9	401.2	401.5	401.2	400.9	400.6
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2



TEST NUMBER: P831391

CATALOG NUMBER: S123DIP-S340D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5
2.5°	840.2	832.2	824.3	818.2	812.1	801.8	791.4	789.0	786.5	783.1	779.6
5°	796.7	777.2	757.7	740.2	722.7	709.1	695.5	686.6	677.7	671.2	664.7
7.5°	745.9	716.7	687.4	666.7	646.0	626.3	606.6	600.3	594.0	585.4	576.9
10°	696.7	664.4	632.2	605.1	578.1	558.8	539.5	531.8	524.1	513.3	502.6
12.5°	652.9	617.5	582.2	555.0	527.7	509.1	490.4	479.2	468.0	461.9	455.8
15°	607.0	569.2	531.4	506.2	481.0	464.2	447.3	437.5	427.8	421.9	416.0
17.5°	566.3	529.0	491.6	467.4	443.2	427.8	412.4	403.8	395.3	390.8	386.4
20°	527.7	491.2	454.6	431.0	407.5	394.9	382.3	376.8	371.3	367.7	364.0
22.5°	492.4	456.4	420.5	400.4	380.3	370.1	360.0	356.1	352.2	349.2	346.1
25°	457.0	425.0	392.9	375.8	358.7	350.4	342.1	338.2	334.4	331.3	328.3
27.5°	428.2	397.5	366.9	352.2	337.6	331.1	324.6	321.6	318.5	315.7	312.8
30°	400.2	372.7	345.3	332.7	320.1	314.2	308.4	305.3	302.3	299.6	297.0
32.5°	374.2	350.6	327.0	315.5	303.9	299.0	294.1	290.5	286.8	284.8	282.8
35°	349.4	328.3	307.1	297.6	288.0	283.2	278.3	275.2	272.2	270.6	268.9
37.5°	328.3	309.4	290.5	281.3	272.2	267.5	262.9	260.2	257.6	257.0	256.4
40°	306.7	290.5	274.2	265.3	256.4	252.3	248.2	246.6	245.0	244.6	244.2
42.5°	288.9	273.0	257.2	249.0	240.9	237.5	234.0	233.2	232.4	233.0	233.6
45°	268.1	254.9	241.7	234.2	226.7	223.9	221.0	220.4	219.8	221.0	222.2
47.5°	250.7	238.5	226.3	219.2	212.1	210.0	208.0	207.8	207.6	209.2	210.9
50°	232.8	221.0	209.2	203.5	197.9	196.0	194.2	194.8	195.4	198.1	200.7
52.5°	216.1	205.2	194.2	188.9	183.6	182.4	181.2	182.6	184.0	186.9	189.7
55°	197.9	187.9	177.9	173.9	169.8	168.6	167.4	170.2	173.1	175.7	178.4
57.5°	180.4	171.6	162.9	159.3	155.6	155.4	155.2	157.8	160.5	163.3	166.2
60°	161.7	154.4	147.1	144.2	141.4	141.8	142.2	145.2	148.3	150.5	152.8
62.5°	144.6	138.5	132.4	129.8	127.2	128.2	129.2	132.2	135.3	137.9	140.6
65°	127.6	122.5	117.4	115.6	113.8	115.2	116.6	119.2	121.9	123.7	125.5
67.5°	111.3	107.1	102.8	101.4	99.9	101.4	102.8	105.4	108.1	109.9	111.7
70°	94.3	90.8	87.3	86.3	85.3	86.9	88.6	90.8	93.0	94.9	96.7
72.5°	78.4	75.8	73.1	72.9	72.7	74.1	75.6	77.8	80.0	81.3	82.5
75°	63.0	61.5	60.1	59.9	59.7	61.1	62.6	63.8	65.0	66.0	67.0
77.5°	49.2	47.9	46.7	46.9	47.1	48.1	49.2	50.4	51.6	52.2	52.8
80°	34.9	34.5	34.1	34.5	34.9	35.8	36.6	37.4	38.2	38.6	39.0
82.5°	24.0	23.6	23.2	23.8	24.4	25.0	25.6	26.2	26.8	27.0	27.2
85°	13.8	14.4	15.0	15.0	15.0	15.2	15.4	15.6	15.8	15.6	15.4
87.5°	6.5	6.7	6.9	6.9	6.9	7.1	7.3	7.3	7.3	7.1	6.9
90°	3.1	3.9	4.8	5.7	6.7	7.6	7.8	8.1	8.4	8.7	8.9
92.5°	11.1	11.6	12.0	12.4	12.8	13.2	13.4	13.7	13.9	14.1	14.1
95°	20.6	21.1	21.6	22.2	22.8	23.3	23.6	23.9	24.2	24.4	24.6
97.5°	32.0	32.4	32.8	33.2	33.6	34.0	34.4	34.7	35.1	35.4	35.6
100°	44.5	44.9	45.3	45.6	46.0	46.3	46.5	46.7	47.0	47.2	47.3
102.5°	57.9	58.2	58.7	59.2	59.7	60.2	60.4	60.6	60.8	61.0	61.1
105°	71.5	71.8	72.5	73.1	73.7	74.4	74.4	74.4	74.4	74.4	74.4
107.5°	87.6	87.7	88.0	88.3	88.6	88.9	89.1	89.3	89.5	89.7	89.8
110°	103.0	103.1	103.3	103.4	103.5	103.7	104.0	104.2	104.5	104.8	104.9



TEST NUMBER: P831391

CATALOG NUMBER: S123DIP-S340D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	118.5	118.5	118.5	118.5	118.5	118.5	118.8	119.2	119.5	119.9	120.1
115°	134.8	134.8	134.7	134.5	134.4	134.2	134.3	134.4	134.5	134.5	134.5
117.5°	150.3	150.2	150.1	150.0	149.8	149.7	149.7	149.7	149.7	149.7	149.6
120°	166.5	166.5	166.2	165.8	165.5	165.1	165.1	165.0	164.9	164.8	164.7
122.5°	181.4	181.4	181.3	181.2	181.0	180.9	180.7	180.5	180.3	180.0	179.8
125°	196.8	196.9	196.7	196.6	196.5	196.3	196.0	195.8	195.5	195.2	194.9
127.5°	212.2	212.3	212.2	212.0	211.9	211.8	211.3	210.9	210.5	210.1	209.7
130°	227.2	227.4	227.2	227.0	226.8	226.6	226.3	226.0	225.7	225.5	225.1
132.5°	241.7	241.9	241.8	241.7	241.5	241.4	241.0	240.7	240.3	240.0	239.6
135°	256.0	256.2	256.1	256.0	255.9	255.9	255.6	255.3	255.0	254.8	254.5
137.5°	269.3	269.5	269.7	270.0	270.2	270.4	270.0	269.7	269.3	269.0	268.7
140°	283.4	283.6	283.7	283.8	283.9	283.9	283.9	283.8	283.7	283.6	283.4
142.5°	296.4	296.6	296.7	296.9	297.0	297.2	297.1	297.0	297.0	296.9	296.7
145°	309.1	309.2	309.5	309.7	309.9	310.1	310.0	309.9	309.9	309.8	309.6
147.5°	321.3	321.5	321.7	322.0	322.2	322.4	322.4	322.4	322.4	322.4	322.2
150°	333.0	333.2	333.3	333.4	333.6	333.7	333.7	333.7	333.7	333.7	333.5
152.5°	343.4	343.5	343.6	343.7	343.7	343.8	343.9	344.1	344.2	344.4	344.3
155°	353.3	353.3	353.4	353.4	353.5	353.6	353.8	354.1	354.4	354.7	354.6
157.5°	362.1	362.1	362.2	362.3	362.3	362.4	362.7	363.0	363.2	363.5	363.4
160°	370.3	370.3	370.3	370.3	370.3	370.3	370.6	371.0	371.3	371.7	371.7
162.5°	377.6	377.6	377.6	377.7	377.8	377.8	378.2	378.5	378.9	379.2	379.2
165°	383.9	383.8	383.8	383.8	383.8	383.8	384.2	384.7	385.1	385.5	385.5
167.5°	389.0	388.9	389.0	389.0	389.1	389.2	389.6	390.0	390.4	390.9	390.9
170°	393.4	393.3	393.3	393.3	393.3	393.3	393.8	394.3	394.7	395.2	395.2
172.5°	396.9	396.7	396.7	396.7	396.7	396.7	397.2	397.6	398.0	398.4	398.4
175°	399.1	398.9	398.9	398.9	398.9	398.9	399.4	399.8	400.2	400.6	400.6
177.5°	400.3	400.2	400.2	400.2	400.2	400.2	400.6	401.0	401.5	401.9	401.9
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2



TEST NUMBER: P831391

CATALOG NUMBER: S123DIP-S340D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	875.5	875.5	875.5	875.5
2.5°	778.2	776.8	771.1	765.4
5°	659.8	654.9	653.3	651.7
7.5°	576.5	576.1	567.6	559.0
10°	503.2	503.8	496.1	488.3
12.5°	450.8	445.7	445.1	444.5
15°	411.3	406.7	405.9	405.0
17.5°	383.5	380.7	379.9	379.0
20°	362.4	360.8	359.3	357.9
22.5°	344.1	342.1	340.9	339.6
25°	326.4	324.6	324.2	323.8
27.5°	310.6	308.4	308.4	308.4
30°	295.6	294.1	293.5	292.9
32.5°	281.5	280.3	280.3	280.3
35°	268.3	267.7	266.9	266.1
37.5°	256.4	256.4	255.9	255.5
40°	244.8	245.4	245.4	245.4
42.5°	234.2	234.8	234.8	234.8
45°	223.2	224.3	224.7	225.1
47.5°	212.5	214.1	214.5	214.9
50°	201.9	203.1	203.3	203.5
52.5°	191.1	192.6	193.6	194.6
55°	179.8	181.2	181.8	182.4
57.5°	167.6	169.0	169.2	169.4
60°	154.2	155.6	156.0	156.4
62.5°	141.4	142.2	142.6	143.0
65°	126.8	128.0	128.8	129.6
67.5°	112.7	113.8	113.8	113.8
70°	97.1	97.5	98.1	98.7
72.5°	82.7	82.9	82.9	82.9
75°	67.4	67.8	68.0	68.3
77.5°	53.0	53.2	53.2	53.2
80°	38.8	38.6	38.6	38.6
82.5°	26.6	26.0	26.0	26.0
85°	15.2	15.0	15.2	15.4
87.5°	6.9	6.9	6.9	6.9
90°	9.0	9.2	9.3	9.5
92.5°	14.0	13.8	13.7	13.6
95°	24.6	24.6	24.6	24.6
97.5°	35.5	35.4	35.4	35.3
100°	47.5	47.6	47.8	47.9
102.5°	61.0	61.0	60.9	60.8
105°	74.6	74.7	74.9	75.0
107.5°	89.7	89.6	89.6	89.5
110°	104.7	104.6	104.4	104.3



TEST NUMBER: P831391

CATALOG NUMBER: S123DIP-S340D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	120.1	120.1	120.1	120.1
115°	134.5	134.4	134.3	134.2
117.5°	149.4	149.2	148.9	148.7
120°	164.6	164.5	164.3	164.2
122.5°	179.6	179.4	179.2	179.0
125°	194.6	194.4	194.1	193.8
127.5°	209.5	209.2	208.9	208.6
130°	224.6	224.1	223.6	223.1
132.5°	239.3	238.9	238.6	238.2
135°	254.4	254.3	254.1	254.0
137.5°	268.5	268.3	268.1	267.9
140°	282.9	282.4	281.9	281.4
142.5°	296.3	296.0	295.6	295.3
145°	309.3	309.1	308.8	308.5
147.5°	321.7	321.3	320.9	320.5
150°	333.1	332.7	332.2	331.8
152.5°	343.9	343.6	343.2	342.9
155°	354.1	353.6	353.1	352.6
157.5°	363.0	362.6	362.2	361.8
160°	371.4	371.1	370.9	370.6
162.5°	378.7	378.2	377.7	377.2
165°	385.0	384.5	384.0	383.5
167.5°	390.4	390.0	389.6	389.2
170°	394.7	394.3	393.8	393.3
172.5°	397.9	397.4	396.9	396.4
175°	400.1	399.6	399.1	398.6
177.5°	401.4	400.9	400.4	399.9
180°	401.2	401.2	401.2	401.2

TEST NUMBER: P831391

CATALOG NUMBER: S123DIP-S340D365U940-4F0-1E-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	11.90	12.77	12.81	13.70	14.88	14.13	15.01	15.04	15.93	17.12
	3H	13.54	14.33	14.47	15.26	16.48	15.56	16.34	16.48	17.28	18.49
	4H	14.12	14.86	15.06	15.80	17.02	16.01	16.75	16.95	17.69	18.91
	6H	14.49	15.17	15.44	16.12	17.35	16.28	16.97	17.24	17.91	19.15
	8H	14.59	15.24	15.55	16.20	17.43	16.35	17.00	17.31	17.96	19.19
	12H	14.63	15.25	15.60	16.21	17.46	16.37	16.98	17.33	17.94	19.20
4H	2H	12.47	13.21	13.42	14.15	15.37	14.30	15.04	15.24	15.98	17.20
	3H	14.30	14.92	15.26	15.89	17.13	15.92	16.53	16.87	17.50	18.74
	4H	15.00	15.56	15.96	16.53	17.79	16.50	17.06	17.46	18.03	19.29
	6H	15.48	15.96	16.45	16.95	18.21	16.91	17.39	17.88	18.38	19.64
	8H	15.61	16.06	16.59	17.05	18.32	17.02	17.47	18.00	18.45	19.73
	12H	15.68	16.09	16.68	17.09	18.36	17.06	17.47	18.06	18.47	19.75
8H	4H	15.27	15.72	16.25	16.70	17.98	16.61	17.06	17.59	18.04	19.31
	6H	15.86	16.23	16.86	17.25	18.53	17.11	17.48	18.11	18.51	19.78
	8H	16.06	16.39	17.08	17.40	18.69	17.29	17.62	18.30	18.63	19.92
	12H	16.19	16.48	17.20	17.48	18.82	17.39	17.68	18.41	18.69	20.02
12H	4H	15.27	15.68	16.27	16.68	17.95	16.58	16.99	17.58	17.99	19.27
	6H	15.91	16.24	16.92	17.25	18.54	17.13	17.45	18.14	18.47	19.76
	8H	16.14	16.43	17.16	17.44	18.77	17.33	17.61	18.34	18.62	19.96