

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: P832080

Luminaire Tested: S123RDIP-S340D1195U935-4F0-1E-UDD-G

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832080
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-5)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDIP-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

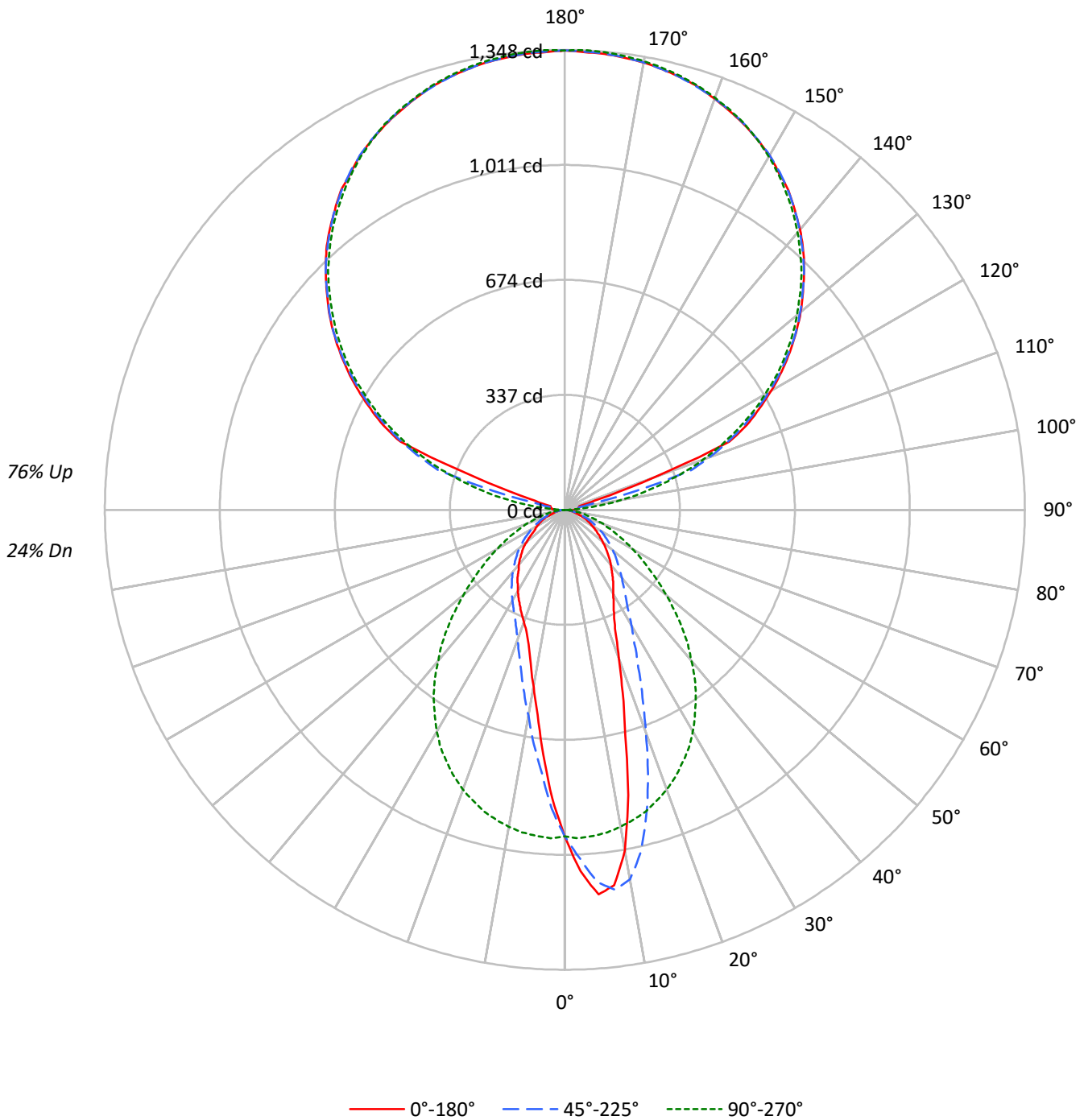
Lumens per Lamp: N/A
Luminaire Lumens: 5375.4 lumens
Efficiency: N/A
Efficacy: 123.9 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 43.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24				24
1	92	88	85	81	82	79	76	73	61	59	57	44	43	42	29	28	28	21				21
2	84	77	72	67	75	69	64	60	53	50	48	39	37	35	26	25	24	18				18
3	77	68	62	56	68	61	55	51	48	44	40	35	32	30	23	22	21	16				16
4	71	61	53	48	63	54	48	43	42	38	35	31	29	26	21	19	18	14				14
5	65	54	47	41	58	49	42	37	38	34	30	28	25	23	19	17	16	12				12
6	60	49	41	36	53	44	37	33	34	30	26	26	23	20	18	16	14	11				11
7	55	44	37	31	49	40	33	29	31	27	23	23	20	18	16	14	13	10				10
8	51	40	33	28	46	36	30	25	29	24	21	22	19	16	15	13	12	9				9
9	48	36	29	25	43	33	27	23	26	22	19	20	17	15	14	12	11	9				9
10	45	33	27	22	40	30	24	20	24	20	17	18	15	13	13	11	10	8				8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	10296	10296	10296	10296	10296
5°	12225	11835	10361	8375	7775
10°	11076	12021	10309	6710	5757
15°	7626	10307	10200	5485	4553
20°	5306	7936	9995	4624	4002
25°	4043	6048	9697	4111	3689
30°	3519	4835	9324	3817	3417
35°	3231	4079	8796	3569	3169
40°	2948	3642	8106	3326	2942
45°	2662	3331	7360	3095	2716
50°	2416	3073	6482	2870	2436
55°	2186	2822	5637	2650	2091
60°	1959	2566	4898	2407	1976
65°	1808	2277	4215	2162	1867
70°	1470	1970	3679	1958	1517
75°	1289	1564	3115	1622	1339
80°	1165	1327	2554	1364	1265
85°	1062	1161	1939	1235	1161

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 7767 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.2	1.6
10°-20°	201.7	3.8
20°-30°	231.5	4.3
30°-40°	228.2	4.2
40°-50°	201.2	3.7
50°-60°	154.8	2.9
60°-70°	101.8	1.9
70°-80°	49.4	0.9
80°-90°	15.1	0.3
90°-100°	47.5	0.9
100°-110°	229.5	4.3
110°-120°	562.5	10.5
120°-130°	714.1	13.3
130°-140°	762.9	14.2
140°-150°	713.4	13.3
150°-160°	575.4	10.7
160°-170°	371.3	6.9
170°-180°	128.0	2.4
0°-30°	520.4	9.7
0°-40°	748.5	13.9
0°-60°	1104.5	20.5
0°-90°	1270.9	23.6
90°-120°	839.4	15.6
90°-150°	3029.8	56.4
90°-180°	4105.0	76.4
0°-180°	5375.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	956	956	956	956	956	
5°	1131	1095	959	775	720	103
15°	684	925	915	492	409	193
25°	340	509	816	346	311	161
35°	246	310	669	272	241	153
45°	175	219	484	203	178	136
55°	116	150	300	141	111	104
65°	71	89	166	85	73	70
75°	31	38	75	39	32	33
85°	9	9	16	10	9	9
90°	30	24	1	24	30	13
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	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	956.5	956.5	956.5	956.5	956.5	956.5	956.5	956.5	956.5	956.5	956.5
2.5°	1060.0	1056.7	1053.4	1052.4	1051.4	1048.3	1045.1	1038.1	1031.0	1023.8	1016.5
5°	1131.4	1131.8	1132.2	1131.2	1130.2	1126.1	1122.0	1113.4	1104.7	1095.3	1085.9
7.5°	1109.5	1115.7	1122.0	1123.2	1124.4	1127.5	1130.6	1128.7	1126.7	1123.2	1119.6
10°	1013.4	1013.0	1012.6	1019.6	1026.7	1047.7	1068.7	1079.5	1090.2	1099.8	1109.5
12.5°	856.5	857.1	857.7	880.8	904.0	923.8	943.6	971.0	998.5	1028.1	1057.7
15°	684.3	693.9	703.6	724.1	744.7	774.5	804.3	841.2	878.1	924.9	971.8
17.5°	562.0	566.1	570.2	590.0	609.8	638.1	666.3	708.1	749.8	810.2	870.6
20°	463.2	466.9	470.6	484.9	499.2	526.3	553.4	593.2	633.0	692.8	752.6
22.5°	386.7	393.9	401.2	410.8	420.4	440.0	459.6	500.2	540.8	595.3	649.8
25°	340.4	343.7	347.1	355.3	363.5	382.4	401.2	428.1	454.9	509.2	563.6
27.5°	309.0	310.0	311.0	317.1	323.1	335.3	347.5	372.4	397.3	442.0	486.7
30°	283.1	284.9	286.7	291.4	296.1	304.9	313.7	331.4	349.0	389.0	429.0
32.5°	263.1	264.1	265.1	269.0	273.0	279.4	285.9	299.8	313.7	344.3	374.9
35°	245.9	246.1	246.3	249.2	252.2	258.4	264.7	276.3	287.9	310.4	333.0
37.5°	226.3	227.7	229.0	231.2	233.3	238.8	244.3	253.7	263.1	281.8	300.4
40°	209.8	211.0	212.2	214.7	217.3	221.6	225.9	234.5	243.1	259.2	275.3
42.5°	193.3	194.1	194.9	197.5	200.0	205.3	210.6	217.5	224.3	237.7	251.0
45°	174.9	176.9	178.8	181.6	184.3	188.8	193.3	200.4	207.5	218.8	230.2
47.5°	159.6	160.6	161.6	163.9	166.3	171.8	177.3	183.5	189.8	200.4	211.0
50°	144.3	144.7	145.1	147.3	149.4	154.3	159.2	166.5	173.7	183.5	193.3
52.5°	129.8	130.8	131.8	133.9	136.1	139.4	142.8	150.2	157.7	167.3	176.9
55°	116.5	117.1	117.7	119.2	120.8	124.7	128.6	135.1	141.6	150.4	159.2
57.5°	103.9	104.7	105.5	106.7	107.8	111.4	114.9	120.6	126.3	135.1	143.9
60°	91.0	92.0	92.9	94.3	95.7	98.4	101.2	106.3	111.4	119.2	127.1
62.5°	81.6	81.8	82.0	83.1	84.3	86.3	88.2	92.4	96.5	104.3	112.2
65°	71.0	71.6	72.2	72.7	73.3	74.9	76.5	80.0	83.5	89.4	95.3
67.5°	60.0	60.6	61.2	62.2	63.1	64.5	65.9	68.2	70.6	76.1	81.6
70°	46.7	46.7	46.7	48.2	49.8	52.2	54.5	56.3	58.0	62.6	67.1
72.5°	38.0	38.2	38.4	38.6	38.8	40.2	41.6	44.5	47.5	50.2	52.9
75°	31.0	31.2	31.4	31.6	31.8	32.2	32.6	33.5	34.5	37.6	40.8
77.5°	24.7	24.9	25.1	25.3	25.5	25.9	26.3	26.7	27.1	28.2	29.4
80°	18.8	19.0	19.2	19.4	19.6	19.8	20.0	20.4	20.8	21.4	22.0
82.5°	13.7	13.7	13.7	13.7	13.7	14.1	14.5	14.5	14.5	14.9	15.3
85°	8.6	8.6	8.6	8.8	9.0	9.0	9.0	9.2	9.4	9.4	9.4
87.5°	3.9	3.7	3.5	3.7	3.9	3.9	3.9	4.1	4.3	4.3	4.3
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



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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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	956.5	956.5	956.5	956.5	956.5	956.5	956.5	956.5	956.5	956.5	956.5
2.5°	1015.5	1014.5	1005.1	995.7	986.5	977.3	970.4	963.6	952.0	940.4	933.2
5°	1078.5	1071.0	1056.1	1041.2	1018.9	996.5	977.7	958.9	934.9	911.0	891.0
7.5°	1113.6	1107.5	1089.5	1071.4	1041.8	1012.2	982.8	953.4	918.1	882.8	852.6
10°	1114.6	1119.6	1104.7	1089.8	1056.5	1023.2	983.2	943.2	895.7	848.3	809.2
12.5°	1079.6	1101.6	1098.5	1095.3	1061.4	1027.5	978.9	930.2	872.0	813.8	764.9
15°	1014.4	1056.9	1069.5	1082.0	1054.0	1025.9	970.6	915.3	846.9	778.5	722.4
17.5°	930.2	989.8	1023.0	1056.1	1035.7	1015.3	954.7	894.2	817.1	740.0	679.0
20°	830.6	908.7	960.6	1012.6	1005.1	997.7	935.1	872.6	789.4	706.3	640.2
22.5°	732.2	814.5	886.3	958.1	965.7	973.4	910.2	847.1	756.1	665.1	597.9
25°	647.3	731.0	816.5	902.0	919.3	936.5	876.5	816.5	722.2	627.9	561.0
27.5°	566.3	645.9	740.0	834.1	865.5	896.9	842.0	787.1	688.8	590.6	523.9
30°	500.2	571.4	667.5	763.6	807.3	851.0	800.6	750.2	652.8	555.3	490.0
32.5°	438.6	502.4	598.8	695.3	746.1	796.9	753.4	709.8	616.1	522.4	457.9
35°	390.0	447.1	537.1	627.1	683.9	740.8	705.1	669.4	577.9	486.3	425.3
37.5°	348.2	396.1	480.6	565.1	625.5	685.9	656.1	626.3	540.2	454.1	396.5
40°	313.7	352.2	430.8	509.4	568.6	627.9	602.4	576.9	499.8	422.8	368.8
42.5°	284.1	317.3	387.9	458.4	512.8	567.1	550.2	533.4	463.5	393.7	343.7
45°	258.0	285.9	348.1	410.2	460.2	510.2	496.9	483.5	423.3	363.2	317.3
47.5°	234.9	258.8	314.3	369.8	414.7	459.6	447.3	434.9	385.1	335.3	293.5
50°	213.7	234.1	280.4	326.7	367.1	407.5	397.3	387.1	345.9	304.7	268.6
52.5°	193.7	210.6	252.2	293.7	326.3	358.8	351.0	343.2	311.4	279.6	246.9
55°	174.7	190.2	225.3	260.4	288.2	316.1	308.2	300.4	275.7	251.0	222.2
57.5°	157.5	171.0	199.4	227.9	250.0	272.2	268.4	264.7	244.1	223.5	199.8
60°	139.2	151.4	175.9	200.4	218.2	236.1	231.8	227.5	212.8	198.0	177.7
62.5°	122.9	133.7	153.3	172.9	187.5	202.0	198.8	195.7	184.5	173.3	156.5
65°	105.9	116.5	132.4	148.2	159.6	171.0	168.2	165.5	157.1	148.6	135.1
67.5°	90.4	99.2	112.9	126.7	134.3	142.0	140.4	138.8	132.4	125.9	115.3
70°	74.7	82.4	93.7	105.1	110.4	115.7	116.3	116.9	111.0	105.1	97.3
72.5°	59.0	65.1	75.7	86.3	90.4	94.5	94.3	94.1	90.6	87.1	80.0
75°	45.3	49.8	58.0	66.3	69.8	73.3	74.1	74.9	71.6	68.2	64.3
77.5°	32.6	35.7	42.0	48.2	52.2	56.1	56.5	56.9	55.3	53.7	50.0
80°	22.9	23.9	27.8	31.8	35.9	40.0	40.6	41.2	39.6	38.0	35.7
82.5°	15.9	16.5	17.8	19.2	22.5	25.9	26.7	27.5	26.7	25.9	23.3
85°	9.6	9.8	10.4	11.0	12.5	14.1	14.9	15.7	15.3	14.9	13.5
87.5°	4.3	4.3	4.5	4.7	5.1	5.5	6.5	7.5	6.9	6.3	5.7
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



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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



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	956.5	956.5	956.5	956.5	956.5	956.5	956.5	956.5	956.5	956.5	956.5
2.5°	925.9	914.7	903.6	895.5	887.5	877.5	867.5	867.1	866.7	859.2	851.8
5°	871.0	851.6	832.2	813.2	794.1	775.1	756.1	751.8	747.5	741.0	734.5
7.5°	822.4	791.4	760.4	736.1	711.8	692.8	673.8	660.8	647.9	637.9	627.9
10°	770.2	731.8	693.4	663.9	634.5	613.9	593.4	578.5	563.6	556.5	549.4
12.5°	716.1	674.3	632.6	603.7	574.9	550.2	525.5	512.0	498.5	488.6	478.8
15°	666.3	621.4	576.5	545.9	515.3	492.2	469.0	455.5	442.0	432.2	422.4
17.5°	618.1	572.8	527.5	496.5	465.5	444.5	423.5	410.4	397.3	391.2	385.1
20°	574.1	528.5	482.8	453.5	424.3	403.7	383.2	376.1	369.0	363.3	357.7
22.5°	530.6	486.7	442.8	414.7	386.7	371.8	356.9	351.2	345.5	341.2	336.9
25°	494.1	450.4	406.7	382.2	357.7	346.1	334.5	330.8	327.1	322.8	318.4
27.5°	457.3	415.7	374.1	354.5	334.9	325.5	316.1	311.4	306.7	303.1	299.6
30°	424.7	386.3	347.9	331.6	315.3	307.1	298.8	293.7	288.6	285.3	282.0
32.5°	393.3	359.2	325.1	311.2	297.3	289.2	281.2	276.3	271.4	267.5	263.5
35°	364.3	334.7	305.1	292.4	279.6	271.6	263.5	258.6	253.7	249.8	245.9
37.5°	338.8	312.0	285.1	273.1	261.2	254.1	247.1	242.0	236.9	232.8	228.6
40°	314.9	291.2	267.5	255.9	244.3	236.7	229.0	224.5	220.0	216.3	212.6
42.5°	293.7	272.0	250.2	238.8	227.5	220.2	212.9	207.7	202.4	200.2	198.0
45°	271.4	252.2	232.9	222.0	211.0	203.3	195.7	191.2	186.7	184.7	182.8
47.5°	251.8	233.9	216.1	205.3	194.5	187.7	180.8	177.3	173.7	171.0	168.2
50°	232.6	215.3	198.0	187.7	177.3	171.4	165.5	161.2	156.9	154.9	152.9
52.5°	214.1	198.4	182.8	172.2	161.6	155.9	150.2	146.5	142.8	138.6	134.5
55°	193.3	179.6	165.9	156.5	147.1	141.2	135.3	131.0	126.7	122.4	118.0
57.5°	176.1	162.6	149.0	140.6	132.2	126.5	120.8	116.1	111.4	107.8	104.3
60°	157.3	145.5	133.7	125.5	117.3	111.8	106.3	101.8	97.3	95.5	93.7
62.5°	139.6	128.6	117.7	110.4	103.1	97.8	92.6	89.6	86.7	85.5	84.3
65°	121.6	112.2	102.7	96.1	89.4	84.9	80.4	79.0	77.6	76.7	75.7
67.5°	104.7	96.7	88.6	82.7	76.9	73.7	70.6	69.0	67.5	66.3	65.1
70°	89.4	82.4	75.3	70.2	65.1	62.2	59.2	57.8	56.5	54.3	52.2
72.5°	72.9	67.5	62.0	58.0	54.1	51.6	49.0	46.3	43.5	41.6	39.6
75°	60.4	54.9	49.4	45.7	42.0	39.0	36.1	35.1	34.1	33.5	32.9
77.5°	46.3	41.6	36.9	33.9	31.0	29.6	28.2	27.6	27.1	26.9	26.7
80°	33.3	29.4	25.5	23.9	22.4	22.0	21.6	21.2	20.8	20.6	20.4
82.5°	20.8	18.8	16.9	16.5	16.1	15.9	15.7	15.5	15.3	15.1	14.9
85°	12.2	11.4	10.6	10.4	10.2	10.0	9.8	9.8	9.8	9.8	9.8
87.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.9	4.7
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

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CATALOG NUMBER: S123RDIP-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: P832080

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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	956.5	956.5	956.5	956.5
2.5°	849.8	847.9	847.1	846.3
5°	728.5	722.4	721.0	719.6
7.5°	625.3	622.8	614.3	605.9
10°	541.6	533.7	530.2	526.7
12.5°	471.6	464.3	463.2	462.0
15°	417.3	412.2	410.4	408.6
17.5°	381.6	378.1	375.9	373.7
20°	355.1	352.6	351.0	349.4
22.5°	334.9	333.0	331.8	330.6
25°	315.5	312.6	311.6	310.6
27.5°	297.1	294.5	293.5	292.6
30°	279.8	277.7	276.3	274.9
32.5°	261.0	258.4	257.7	256.9
35°	244.3	242.8	242.0	241.2
37.5°	226.7	224.7	223.5	222.4
40°	211.6	210.6	210.0	209.4
42.5°	196.3	194.5	194.3	194.1
45°	181.0	179.2	178.8	178.4
47.5°	166.7	165.1	164.9	164.7
50°	150.8	148.6	147.1	145.5
52.5°	132.6	130.6	129.2	127.8
55°	115.9	113.7	112.6	111.4
57.5°	103.3	102.4	101.8	101.2
60°	93.1	92.6	92.2	91.8
62.5°	83.7	83.1	83.1	83.1
65°	75.1	74.5	73.9	73.3
67.5°	63.9	62.7	62.6	62.4
70°	50.4	48.6	48.4	48.2
72.5°	39.4	39.2	38.8	38.4
75°	32.6	32.2	32.2	32.2
77.5°	26.3	25.9	25.9	25.9
80°	20.2	20.0	20.2	20.4
82.5°	14.9	14.9	14.7	14.5
85°	9.6	9.4	9.4	9.4
87.5°	4.7	4.7	4.7	4.7
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: P832080

CATALOG NUMBER: S123RDIP-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: P832080

CATALOG NUMBER: S123RDIP-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	5.64	6.28	6.80	7.42	9.03	10.30	10.94	11.46	12.09	13.69
	3H	6.84	7.42	8.01	8.57	10.19	11.79	12.36	12.95	13.51	15.13
	4H	7.22	7.76	8.39	8.91	10.54	12.27	12.81	13.44	13.96	15.59
	6H	7.49	7.99	8.67	9.14	10.78	12.57	13.07	13.75	14.23	15.86
	8H	7.57	8.05	8.76	9.22	10.84	12.64	13.12	13.83	14.29	15.92
	12H	7.62	8.07	8.80	9.23	10.88	12.67	13.12	13.86	14.28	15.93
4H	2H	6.34	6.88	7.52	8.03	9.66	10.27	10.82	11.46	11.97	13.60
	3H	7.69	8.14	8.88	9.32	10.96	11.91	12.37	13.10	13.55	15.18
	4H	8.14	8.56	9.33	9.72	11.38	12.51	12.93	13.70	14.10	15.75
	6H	8.50	8.85	9.69	10.04	11.69	12.94	13.30	14.14	14.49	16.13
	8H	8.62	8.95	9.81	10.13	11.79	13.07	13.40	14.26	14.58	16.24
	12H	8.69	8.99	9.89	10.18	11.84	13.12	13.43	14.33	14.62	16.28
8H	4H	8.44	8.77	9.63	9.95	11.61	12.47	12.80	13.66	13.98	15.64
	6H	8.90	9.17	10.11	10.39	12.05	12.96	13.23	14.17	14.46	16.11
	8H	9.09	9.33	10.31	10.53	12.21	13.14	13.38	14.36	14.58	16.26
	12H	9.22	9.43	10.44	10.63	12.34	13.25	13.46	14.47	14.66	16.37
12H	4H	8.44	8.75	9.65	9.93	11.60	12.41	12.71	13.62	13.90	15.57
	6H	8.96	9.19	10.17	10.39	12.07	12.93	13.17	14.15	14.37	16.05
	8H	9.17	9.37	10.38	10.57	12.28	13.12	13.33	14.34	14.52	16.23