

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: P832066

Luminaire Tested: S123RDIP-S340D1195U835-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832066
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-9)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDIP-S340D1195U835-4F0-1E-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

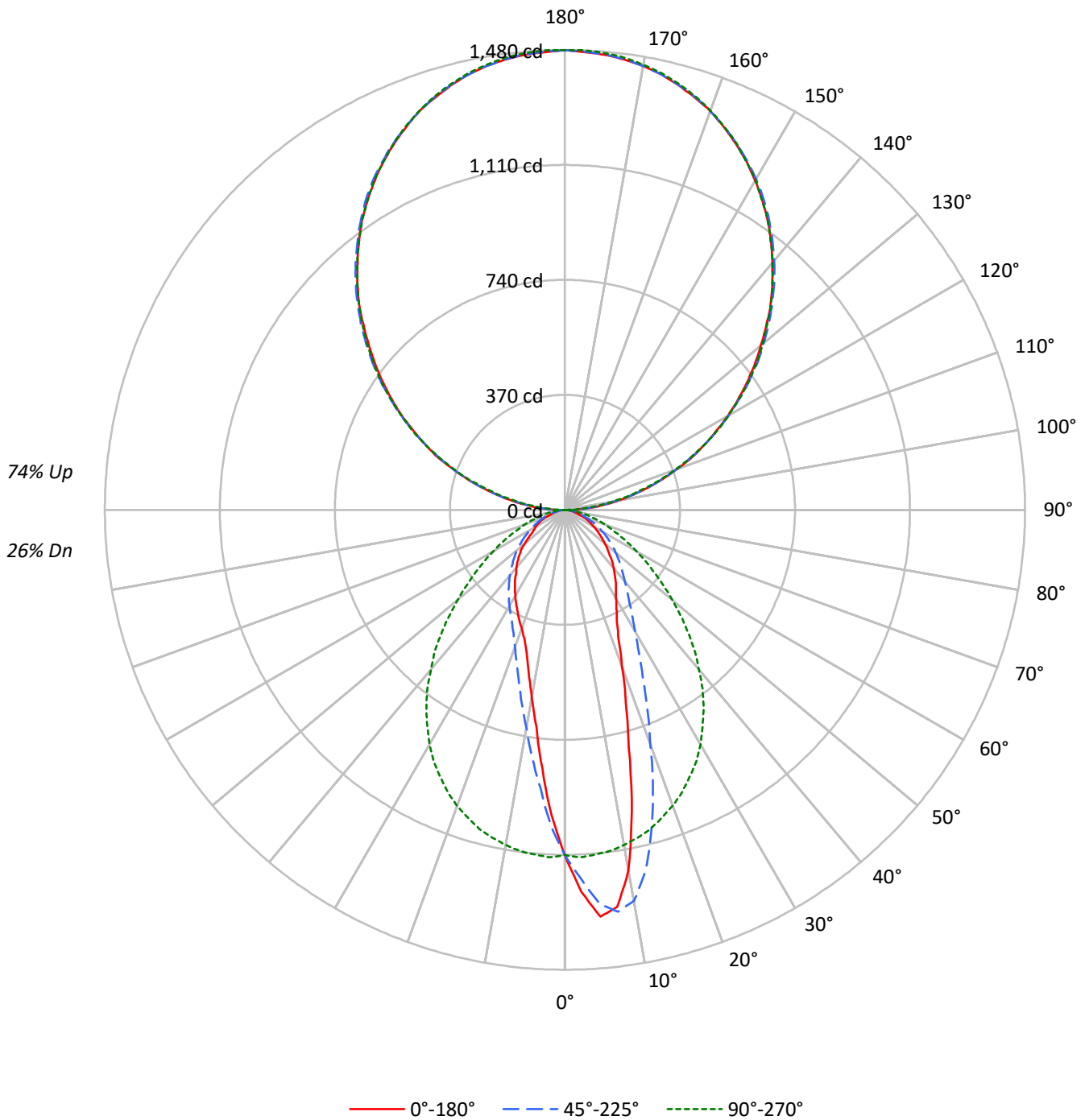
Lumens per Lamp: N/A
Luminaire Lumens: 5574.2 lumens
Efficiency: N/A
Efficacy: 128.4 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

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	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35	26				
1	93	89	85	82	83	80	77	74	62	60	58	46	45	44	31	30	30	23				
2	85	78	72	68	76	70	65	61	55	52	49	41	39	37	28	27	26	20				
3	78	69	62	57	69	62	56	52	49	45	42	36	34	32	25	24	23	18				
4	71	61	54	48	64	55	49	44	44	39	36	33	30	28	23	21	20	16				
5	66	55	47	42	58	49	43	38	39	35	31	30	27	24	21	19	18	14				
6	60	49	42	36	54	44	38	33	35	31	27	27	24	21	19	17	16	13				
7	56	44	37	32	50	40	34	29	32	28	24	25	22	19	18	16	14	11				
8	52	40	33	28	46	37	30	26	29	25	22	23	20	17	16	14	13	10				
9	48	37	30	25	43	34	27	23	27	23	19	21	18	16	15	13	12	10				
10	45	34	27	23	40	31	25	21	25	21	18	19	16	14	14	12	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	11958	11958	11958	11958	11958
5°	14199	13746	12034	9728	9031
10°	12865	13962	11973	7794	6686
15°	8857	11972	11847	6370	5289
20°	6161	9216	11609	5371	4648
25°	4696	7024	11263	4774	4284
30°	4088	5615	10829	4432	3969
35°	3753	4737	10217	4144	3681
40°	3424	4231	9414	3863	3417
45°	3092	3870	8549	3596	3154
50°	2807	3570	7529	3332	2830
55°	2539	3278	6548	3078	2428
60°	2275	2982	5688	2794	2295
65°	2099	2646	4895	2511	2170
70°	1706	2285	4271	2272	1762
75°	1497	1817	3618	1884	1551
80°	1358	1537	2963	1581	1469
85°	1235	1346	2248	1433	1346

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 9021 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.3	1.8
10°-20°	234.3	4.2
20°-30°	268.8	4.8
30°-40°	265.0	4.8
40°-50°	233.7	4.2
50°-60°	179.8	3.2
60°-70°	118.2	2.1
70°-80°	57.4	1.0
80°-90°	17.6	0.3
90°-100°	95.2	1.7
100°-110°	288.2	5.2
110°-120°	490.6	8.8
120°-130°	645.4	11.6
130°-140°	725.5	13.0
140°-150°	713.2	12.8
150°-160°	600.4	10.8
160°-170°	399.7	7.2
170°-180°	140.0	2.5
0°-30°	604.4	10.8
0°-40°	869.4	15.6
0°-60°	1282.9	23.0
0°-90°	1476.1	26.5
90°-120°	874.0	15.7
90°-150°	2958.0	53.1
90°-180°	4098.0	73.5
0°-180°	5574.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1111	1111	1111	1111	1111	
5°	1314	1272	1114	900	836	120
15°	795	1074	1063	572	475	224
25°	395	591	948	402	361	187
35°	286	360	778	315	280	178
45°	203	254	562	236	207	158
55°	135	175	349	164	129	121
65°	82	104	192	99	85	81
75°	36	44	87	45	37	39
85°	10	11	18	12	11	11
90°	35	28	1	28	35	17
95°	91	86	69	86	91	91
105°	276	274	261	274	276	293
115°	495	495	494	495	495	490
125°	715	724	723	724	715	639
135°	936	943	938	943	936	720
145°	1138	1143	1138	1143	1138	710
155°	1300	1304	1302	1304	1300	599
165°	1414	1415	1419	1415	1414	399
175°	1470	1471	1476	1471	1470	140
180°	1479	1479	1479	1479	1479	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9
2.5°	1231.2	1227.3	1223.4	1222.3	1221.2	1217.5	1213.9	1205.7	1197.5	1189.0	1180.6
5°	1314.1	1314.5	1315.0	1313.8	1312.7	1307.9	1303.1	1293.1	1283.1	1272.2	1261.2
7.5°	1288.6	1295.9	1303.1	1304.5	1305.9	1309.5	1313.2	1310.9	1308.6	1304.5	1300.4
10°	1177.0	1176.5	1176.1	1184.3	1192.5	1216.8	1241.2	1253.7	1266.2	1277.4	1288.6
12.5°	994.8	995.5	996.1	1023.0	1049.9	1072.9	1095.9	1127.8	1159.7	1194.1	1228.4
15°	794.8	806.0	817.1	841.1	865.0	899.6	934.2	977.0	1019.8	1074.3	1128.7
17.5°	652.7	657.5	662.3	685.3	708.3	741.1	773.9	822.4	870.9	941.0	1011.2
20°	537.9	542.3	546.6	563.2	579.8	611.3	642.7	688.9	735.2	804.6	874.1
22.5°	449.1	457.5	466.0	477.1	488.3	511.1	533.8	581.0	628.1	691.4	754.7
25°	395.4	399.2	403.1	412.7	422.2	444.1	466.0	497.2	528.4	591.4	654.5
27.5°	358.9	360.1	361.2	368.3	375.3	389.4	403.6	432.5	461.4	513.3	565.3
30°	328.9	330.9	333.0	338.4	343.9	354.1	364.4	384.9	405.4	451.8	498.3
32.5°	305.6	306.8	307.9	312.5	317.0	324.5	332.0	348.2	364.4	399.9	435.4
35°	285.6	285.8	286.0	289.5	292.9	300.2	307.5	320.9	334.3	360.5	386.7
37.5°	262.8	264.4	266.0	268.5	271.0	277.4	283.8	294.7	305.6	327.3	348.9
40°	243.7	245.1	246.4	249.4	252.3	257.3	262.4	272.4	282.4	301.1	319.8
42.5°	224.6	225.5	226.4	229.3	232.3	238.4	244.6	252.6	260.5	276.0	291.5
45°	203.1	205.4	207.7	210.9	214.1	219.3	224.6	232.8	241.0	254.2	267.4
47.5°	185.4	186.5	187.7	190.4	193.1	199.5	205.9	213.2	220.5	232.8	245.1
50°	167.6	168.1	168.5	171.0	173.5	179.2	184.9	193.4	201.8	213.2	224.6
52.5°	150.8	151.9	153.0	155.5	158.1	161.9	165.8	174.5	183.1	194.3	205.4
55°	135.3	136.0	136.6	138.5	140.3	144.8	149.4	156.9	164.4	174.7	184.9
57.5°	120.7	121.6	122.5	123.9	125.3	129.4	133.5	140.1	146.7	156.9	167.2
60°	105.7	106.8	107.9	109.5	111.1	114.3	117.5	123.4	129.4	138.5	147.6
62.5°	94.7	95.0	95.2	96.6	97.9	100.2	102.5	107.3	112.0	121.2	130.3
65°	82.4	83.1	83.8	84.5	85.2	87.0	88.8	92.9	97.0	103.9	110.7
67.5°	69.7	70.4	71.1	72.2	73.3	74.9	76.5	79.3	82.0	88.4	94.7
70°	54.2	54.2	54.2	56.0	57.8	60.6	63.3	65.4	67.4	72.6	77.9
72.5°	44.2	44.4	44.6	44.9	45.1	46.7	48.3	51.7	55.1	58.3	61.5
75°	36.0	36.2	36.4	36.7	36.9	37.3	37.8	38.9	40.1	43.7	47.4
77.5°	28.7	28.9	29.2	29.4	29.6	30.1	30.5	31.0	31.4	32.8	34.2
80°	21.9	22.1	22.3	22.5	22.8	23.0	23.2	23.7	24.1	24.8	25.5
82.5°	15.9	15.9	15.9	15.9	15.9	16.4	16.9	16.9	16.9	17.3	17.8
85°	10.0	10.0	10.0	10.2	10.5	10.5	10.5	10.7	10.9	10.9	10.9
87.5°	4.6	4.3	4.1	4.3	4.6	4.6	4.6	4.8	5.0	5.0	5.0
90°	34.9	34.3	33.8	33.3	32.8	32.0	31.0	30.0	28.9	27.9	24.5
92.5°	50.0	50.5	51.0	51.5	52.0	51.9	51.1	50.3	49.6	48.8	47.2
95°	90.6	90.6	90.6	90.6	90.6	90.1	89.1	88.0	87.0	86.0	83.9
97.5°	130.1	130.4	130.6	130.9	131.2	130.6	129.4	128.1	126.8	125.5	123.9
100°	176.6	176.1	175.6	175.1	174.5	173.9	173.1	172.3	171.6	170.8	169.5
102.5°	224.2	224.5	224.8	225.0	225.3	225.0	224.2	223.5	222.7	221.9	220.1
105°	276.5	276.0	275.5	275.0	274.5	274.2	274.2	274.2	274.2	274.2	271.9
107.5°	330.0	330.2	330.5	330.7	331.0	330.7	330.0	329.2	328.4	327.7	326.6
110°	384.6	385.1	385.6	386.1	386.6	386.4	385.4	384.3	383.3	382.3	381.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	442.7	442.7	442.7	442.7	442.7	442.0	440.7	439.4	438.2	436.9	436.9
115°	495.0	495.2	495.5	495.7	496.0	496.0	495.7	495.5	495.2	495.0	495.5
117.5°	548.4	549.2	550.0	550.7	551.5	551.9	551.9	551.9	551.9	551.9	552.4
120°	605.3	605.9	606.4	606.9	607.4	607.8	608.1	608.3	608.6	608.8	610.1
122.5°	659.9	660.7	661.5	662.3	663.0	663.8	664.6	665.4	666.1	666.9	667.4
125°	714.6	715.6	716.6	717.7	718.7	719.7	720.8	721.8	722.8	723.9	724.4
127.5°	769.2	770.2	771.2	772.3	773.3	774.6	776.1	777.7	779.2	780.8	781.3
130°	822.6	824.4	826.2	828.0	829.8	831.3	832.3	833.3	834.4	835.4	836.2
132.5°	878.4	879.7	881.0	882.3	883.5	884.8	886.1	887.4	888.7	890.0	890.5
135°	936.5	937.0	937.5	938.0	938.5	939.3	940.3	941.4	942.4	943.4	943.7
137.5°	987.6	988.4	989.1	989.9	990.7	991.7	993.0	994.3	995.6	996.9	996.1
140°	1037.6	1039.4	1041.2	1043.0	1044.8	1045.8	1046.1	1046.3	1046.6	1046.9	1046.6
142.5°	1088.7	1090.0	1091.3	1092.6	1093.8	1094.6	1094.9	1095.1	1095.4	1095.7	1095.1
145°	1137.5	1138.5	1139.5	1140.6	1141.6	1142.3	1142.5	1142.8	1143.0	1143.3	1142.5
147.5°	1181.6	1183.2	1184.7	1186.3	1187.8	1188.6	1188.6	1188.6	1188.6	1188.6	1187.8
150°	1223.5	1225.0	1226.6	1228.1	1229.7	1230.4	1230.4	1230.4	1230.4	1230.4	1229.9
152.5°	1264.1	1265.4	1266.7	1268.0	1269.3	1269.7	1269.2	1268.6	1268.1	1267.6	1267.4
155°	1300.1	1302.0	1303.8	1305.6	1307.4	1307.8	1306.7	1305.7	1304.7	1303.6	1303.4
157.5°	1333.8	1335.4	1336.9	1338.5	1340.0	1340.3	1339.3	1338.2	1337.2	1336.2	1335.9
160°	1366.4	1367.4	1368.4	1369.5	1370.5	1370.4	1369.1	1367.8	1366.5	1365.2	1365.2
162.5°	1390.8	1392.6	1394.4	1396.2	1398.0	1398.3	1397.0	1395.7	1394.4	1393.1	1392.8
165°	1414.0	1415.8	1417.6	1419.4	1421.2	1421.4	1419.8	1418.3	1416.7	1415.2	1415.2
167.5°	1434.9	1436.5	1438.0	1439.6	1441.1	1441.1	1439.6	1438.0	1436.5	1434.9	1434.7
170°	1450.0	1451.8	1453.6	1455.5	1457.3	1457.3	1455.5	1453.6	1451.8	1450.0	1450.0
172.5°	1461.6	1463.5	1465.3	1467.1	1468.9	1469.0	1467.5	1465.9	1464.4	1462.8	1462.8
175°	1469.8	1471.6	1473.4	1475.2	1477.0	1477.1	1475.6	1474.0	1472.5	1470.9	1470.9
177.5°	1474.4	1476.2	1478.0	1479.8	1481.7	1481.8	1480.2	1478.7	1477.1	1475.6	1475.6
180°	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9
2.5°	1179.5	1178.3	1167.4	1156.5	1145.8	1135.1	1127.1	1119.1	1105.7	1092.3	1083.8
5°	1252.6	1243.9	1226.6	1209.3	1183.4	1157.4	1135.5	1113.7	1085.9	1058.1	1034.9
7.5°	1293.3	1286.3	1265.3	1244.4	1210.0	1175.6	1141.4	1107.3	1066.3	1025.3	990.2
10°	1294.5	1300.4	1283.1	1265.8	1227.1	1188.4	1141.9	1095.4	1040.3	985.2	939.9
12.5°	1254.0	1279.5	1275.8	1272.2	1232.8	1193.4	1136.9	1080.4	1012.8	945.1	888.4
15°	1178.1	1227.5	1242.1	1256.7	1224.1	1191.5	1127.3	1063.1	983.6	904.1	839.0
17.5°	1080.4	1149.6	1188.1	1226.6	1202.9	1179.3	1108.9	1038.5	949.0	859.5	788.7
20°	964.7	1055.4	1115.7	1176.1	1167.4	1158.8	1086.1	1013.5	916.9	820.3	743.6
22.5°	850.4	946.0	1029.4	1112.7	1121.6	1130.5	1057.2	983.8	878.2	772.5	694.4
25°	751.8	849.0	948.3	1047.6	1067.7	1087.7	1018.0	948.3	838.8	729.2	651.6
27.5°	657.7	750.2	859.5	968.8	1005.3	1041.7	977.9	914.2	800.1	686.0	608.5
30°	581.0	663.6	775.2	886.8	937.6	988.4	929.9	871.3	758.2	645.0	569.1
32.5°	509.5	583.5	695.5	807.6	866.6	925.5	875.0	824.4	715.6	606.7	531.8
35°	453.0	519.3	623.8	728.3	794.4	860.4	819.0	777.5	671.2	564.8	494.0
37.5°	404.5	460.0	558.2	656.4	726.5	796.6	762.0	727.4	627.4	527.5	460.5
40°	364.4	409.0	500.4	591.7	660.5	729.2	699.6	670.0	580.5	491.0	428.4
42.5°	330.0	368.5	450.5	532.5	595.5	658.6	639.0	619.5	538.4	457.3	399.2
45°	299.7	332.0	404.2	476.4	534.5	592.6	577.1	561.6	491.7	421.8	368.5
47.5°	272.8	300.6	365.1	429.5	481.7	533.8	519.5	505.1	447.3	389.4	340.9
50°	248.2	271.9	325.7	379.4	426.3	473.2	461.4	449.6	401.7	353.9	312.0
52.5°	225.0	244.6	292.9	341.2	379.0	416.8	407.7	398.5	361.7	324.8	286.7
55°	202.9	220.9	261.7	302.4	334.8	367.1	358.0	348.9	320.2	291.5	258.0
57.5°	182.9	198.6	231.6	264.6	290.4	316.1	311.8	307.5	283.5	259.6	232.1
60°	161.7	175.8	204.3	232.8	253.5	274.2	269.2	264.2	247.1	230.0	206.3
62.5°	142.8	155.3	178.1	200.9	217.7	234.6	230.9	227.3	214.3	201.3	181.7
65°	123.0	135.3	153.7	172.2	185.4	198.6	195.4	192.2	182.4	172.6	156.9
67.5°	105.0	115.2	131.2	147.1	156.0	164.9	163.1	161.2	153.7	146.2	133.9
70°	86.8	95.7	108.9	122.1	128.2	134.4	135.1	135.7	128.9	122.1	113.0
72.5°	68.6	75.6	87.9	100.2	105.0	109.8	109.5	109.3	105.2	101.1	92.9
75°	52.6	57.8	67.4	77.0	81.1	85.2	86.1	87.0	83.1	79.3	74.7
77.5°	37.8	41.4	48.7	56.0	60.6	65.1	65.6	66.0	64.2	62.4	58.1
80°	26.6	27.8	32.3	36.9	41.7	46.5	47.1	47.8	46.0	44.2	41.4
82.5°	18.4	19.1	20.7	22.3	26.2	30.1	31.0	31.9	31.0	30.1	27.1
85°	11.2	11.4	12.1	12.8	14.6	16.4	17.3	18.2	17.8	17.3	15.7
87.5°	5.0	5.0	5.2	5.5	5.9	6.4	7.5	8.7	8.0	7.3	6.6
90°	21.2	17.8	14.5	11.5	8.9	6.3	3.7	1.2	3.7	6.3	8.9
92.5°	45.7	44.2	42.6	41.1	39.5	38.0	36.4	34.9	36.4	38.0	39.5
95°	81.8	79.8	77.7	75.8	74.0	72.2	70.4	68.6	70.4	72.2	74.0
97.5°	122.4	120.8	119.3	117.9	116.6	115.3	114.0	112.7	114.0	115.3	116.6
100°	168.2	166.9	165.6	164.2	162.7	161.1	159.6	158.0	159.6	161.1	162.7
102.5°	218.3	216.5	214.7	213.4	212.6	211.8	211.1	210.3	211.1	211.8	212.6
105°	269.6	267.2	264.9	263.5	263.0	262.5	261.9	261.4	261.9	262.5	263.0
107.5°	325.6	324.6	323.5	322.9	322.6	322.4	322.1	321.8	322.1	322.4	322.6
110°	381.2	380.7	380.2	379.7	379.2	378.6	378.1	377.6	378.1	378.6	379.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	436.9	436.9	436.9	436.7	436.5	436.2	436.0	435.7	436.0	436.2	436.5
115°	496.0	496.5	497.0	496.9	496.1	495.3	494.6	493.8	494.6	495.3	496.1
117.5°	552.9	553.4	554.0	554.1	553.8	553.6	553.3	553.1	553.3	553.6	553.8
120°	611.4	612.7	614.0	613.9	612.3	610.8	609.2	607.7	609.2	610.8	612.3
122.5°	668.0	668.5	669.0	668.7	667.7	666.7	665.6	664.6	665.6	666.7	667.7
125°	724.9	725.4	725.9	725.8	725.0	724.2	723.5	722.7	723.5	724.2	725.0
127.5°	781.8	782.3	782.8	782.3	780.8	779.2	777.7	776.1	777.7	779.2	780.8
130°	836.9	837.7	838.5	837.8	835.8	833.7	831.6	829.6	831.6	833.7	835.8
132.5°	891.0	891.6	892.1	891.3	889.2	887.2	885.1	883.0	885.1	887.2	889.2
135°	944.0	944.2	944.5	943.8	942.3	940.7	939.2	937.6	939.2	940.7	942.3
137.5°	995.3	994.6	993.8	992.8	991.5	990.2	988.9	987.6	988.9	990.2	991.5
140°	1046.3	1046.1	1045.8	1045.0	1043.8	1042.5	1041.2	1039.9	1041.2	1042.5	1043.8
142.5°	1094.6	1094.1	1093.6	1092.7	1091.4	1090.1	1088.8	1087.5	1088.8	1090.1	1091.4
145°	1141.7	1141.0	1140.2	1139.5	1139.0	1138.5	1138.0	1137.5	1138.0	1138.5	1139.0
147.5°	1187.1	1186.3	1185.5	1184.6	1183.6	1182.5	1181.5	1180.5	1181.5	1182.5	1183.6
150°	1229.4	1228.9	1228.4	1227.9	1227.3	1226.8	1226.3	1225.8	1226.3	1226.8	1227.3
152.5°	1267.1	1266.8	1266.6	1266.1	1265.3	1264.5	1263.7	1263.0	1263.7	1264.5	1265.3
155°	1303.1	1302.9	1302.6	1302.5	1302.5	1302.5	1302.5	1302.5	1302.5	1302.5	1302.5
157.5°	1335.6	1335.4	1335.1	1335.1	1335.4	1335.6	1335.9	1336.2	1335.9	1335.6	1335.4
160°	1365.2	1365.2	1365.2	1365.5	1366.0	1366.5	1367.0	1367.5	1367.0	1366.5	1366.0
162.5°	1392.6	1392.3	1392.1	1392.3	1393.1	1393.9	1394.6	1395.4	1394.6	1393.9	1393.1
165°	1415.2	1415.2	1415.2	1415.6	1416.3	1417.1	1417.9	1418.7	1417.9	1417.1	1416.3
167.5°	1434.4	1434.1	1433.9	1434.3	1435.3	1436.3	1437.4	1438.4	1437.4	1436.3	1435.3
170°	1450.0	1450.0	1450.0	1450.5	1451.6	1452.6	1453.6	1454.7	1453.6	1452.6	1451.6
172.5°	1462.8	1462.8	1462.8	1463.3	1464.4	1465.4	1466.4	1467.5	1466.4	1465.4	1464.4
175°	1470.9	1470.9	1470.9	1471.5	1472.5	1473.5	1474.6	1475.6	1474.6	1473.5	1472.5
177.5°	1475.6	1475.6	1475.6	1476.1	1477.1	1478.2	1479.2	1480.2	1479.2	1478.2	1477.1
180°	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9	1110.9
2.5°	1075.4	1062.4	1049.4	1040.1	1030.8	1019.1	1007.5	1007.1	1006.6	998.0	989.3
5°	1011.6	989.1	966.5	944.4	922.4	900.3	878.2	873.2	868.2	860.6	853.1
7.5°	955.2	919.2	883.2	854.9	826.7	804.6	782.5	767.5	752.5	740.8	729.2
10°	894.6	849.9	805.3	771.1	737.0	713.1	689.1	671.8	654.5	646.3	638.1
12.5°	831.7	783.2	734.7	701.2	667.7	639.0	610.3	594.6	578.9	567.5	556.1
15°	773.9	721.7	669.6	634.0	598.5	571.6	544.8	529.0	513.3	501.9	490.6
17.5°	717.8	665.2	612.6	576.6	540.7	516.3	491.9	476.7	461.4	454.3	447.3
20°	666.8	613.8	560.7	526.8	492.8	468.9	445.0	436.8	428.6	422.0	415.4
22.5°	616.3	565.3	514.2	481.7	449.1	431.8	414.5	407.9	401.3	396.3	391.3
25°	573.9	523.1	472.3	443.9	415.4	402.0	388.5	384.2	379.9	374.9	369.9
27.5°	531.1	482.8	434.5	411.8	389.0	378.1	367.1	361.7	356.2	352.1	348.0
30°	493.3	448.7	404.0	385.1	366.2	356.6	347.1	341.2	335.2	331.4	327.5
32.5°	456.9	417.2	377.6	361.4	345.3	335.9	326.6	320.9	315.2	310.6	306.1
35°	423.1	388.8	354.4	339.6	324.8	315.4	306.1	300.4	294.7	290.1	285.6
37.5°	393.5	362.3	331.1	317.2	303.4	295.2	287.0	281.0	275.1	270.3	265.5
40°	365.8	338.2	310.6	297.2	283.8	274.9	266.0	260.8	255.5	251.2	246.9
42.5°	341.2	315.9	290.6	277.4	264.2	255.8	247.3	241.2	235.0	232.5	230.0
45°	315.2	292.9	270.6	257.8	245.1	236.2	227.3	222.0	216.8	214.5	212.3
47.5°	292.4	271.7	251.0	238.4	225.9	217.9	210.0	205.9	201.8	198.6	195.4
50°	270.1	250.1	230.0	217.9	205.9	199.0	192.2	187.2	182.2	179.9	177.6
52.5°	248.7	230.5	212.3	200.0	187.7	181.1	174.5	170.1	165.8	161.0	156.2
55°	224.6	208.6	192.7	181.7	170.8	164.0	157.1	152.1	147.1	142.1	137.1
57.5°	204.5	188.8	173.1	163.3	153.5	146.9	140.3	134.8	129.4	125.3	121.2
60°	182.6	169.0	155.3	145.8	136.2	129.8	123.4	118.2	113.0	110.9	108.9
62.5°	162.2	149.4	136.6	128.2	119.8	113.6	107.5	104.1	100.7	99.3	97.9
65°	141.2	130.3	119.3	111.6	103.9	98.6	93.4	91.8	90.2	89.0	87.9
67.5°	121.6	112.3	102.9	96.1	89.3	85.6	82.0	80.2	78.3	77.0	75.6
70°	103.9	95.7	87.5	81.5	75.6	72.2	68.8	67.2	65.6	63.1	60.6
72.5°	84.7	78.3	72.0	67.4	62.9	59.9	56.9	53.7	50.6	48.3	46.0
75°	70.1	63.8	57.4	53.1	48.7	45.3	41.9	40.8	39.6	38.9	38.3
77.5°	53.7	48.3	42.8	39.4	36.0	34.4	32.8	32.1	31.4	31.2	31.0
80°	38.7	34.2	29.6	27.8	26.0	25.5	25.1	24.6	24.1	23.9	23.7
82.5°	24.1	21.9	19.6	19.1	18.7	18.4	18.2	18.0	17.8	17.5	17.3
85°	14.1	13.2	12.3	12.1	11.8	11.6	11.4	11.4	11.4	11.4	11.4
87.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.7	5.5
90°	11.5	14.5	17.8	21.2	24.5	27.9	28.9	30.0	31.0	32.0	32.8
92.5°	41.1	42.6	44.2	45.7	47.2	48.8	49.6	50.3	51.1	51.9	52.0
95°	75.8	77.7	79.8	81.8	83.9	86.0	87.0	88.0	89.1	90.1	90.6
97.5°	117.9	119.3	120.8	122.4	123.9	125.5	126.8	128.1	129.4	130.6	131.2
100°	164.2	165.6	166.9	168.2	169.5	170.8	171.6	172.3	173.1	173.9	174.5
102.5°	213.4	214.7	216.5	218.3	220.1	221.9	222.7	223.5	224.2	225.0	225.3
105°	263.5	264.9	267.2	269.6	271.9	274.2	274.2	274.2	274.2	274.2	274.5
107.5°	322.9	323.5	324.6	325.6	326.6	327.7	328.4	329.2	330.0	330.7	331.0
110°	379.7	380.2	380.7	381.2	381.7	382.3	383.3	384.3	385.4	386.4	386.6



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	436.7	436.9	436.9	436.9	436.9	436.9	438.2	439.4	440.7	442.0	442.7
115°	496.9	497.0	496.5	496.0	495.5	495.0	495.2	495.5	495.7	496.0	496.0
117.5°	554.1	554.0	553.4	552.9	552.4	551.9	551.9	551.9	551.9	551.9	551.5
120°	613.9	614.0	612.7	611.4	610.1	608.8	608.6	608.3	608.1	607.8	607.4
122.5°	668.7	669.0	668.5	668.0	667.4	666.9	666.1	665.4	664.6	663.8	663.0
125°	725.8	725.9	725.4	724.9	724.4	723.9	722.8	721.8	720.8	719.7	718.7
127.5°	782.3	782.8	782.3	781.8	781.3	780.8	779.2	777.7	776.1	774.6	773.3
130°	837.8	838.5	837.7	836.9	836.2	835.4	834.4	833.3	832.3	831.3	829.8
132.5°	891.3	892.1	891.6	891.0	890.5	890.0	888.7	887.4	886.1	884.8	883.5
135°	943.8	944.5	944.2	944.0	943.7	943.4	942.4	941.4	940.3	939.3	938.5
137.5°	992.8	993.8	994.6	995.3	996.1	996.9	995.6	994.3	993.0	991.7	990.7
140°	1045.0	1045.8	1046.1	1046.3	1046.6	1046.9	1046.6	1046.3	1046.1	1045.8	1044.8
142.5°	1092.7	1093.6	1094.1	1094.6	1095.1	1095.7	1095.4	1095.1	1094.9	1094.6	1093.8
145°	1139.5	1140.2	1141.0	1141.7	1142.5	1143.3	1143.0	1142.8	1142.5	1142.3	1141.6
147.5°	1184.6	1185.5	1186.3	1187.1	1187.8	1188.6	1188.6	1188.6	1188.6	1188.6	1187.8
150°	1227.9	1228.4	1228.9	1229.4	1229.9	1230.4	1230.4	1230.4	1230.4	1230.4	1229.7
152.5°	1266.1	1266.6	1266.8	1267.1	1267.4	1267.6	1268.1	1268.6	1269.2	1269.7	1269.3
155°	1302.5	1302.6	1302.9	1303.1	1303.4	1303.6	1304.7	1305.7	1306.7	1307.8	1307.4
157.5°	1335.1	1335.1	1335.4	1335.6	1335.9	1336.2	1337.2	1338.2	1339.3	1340.3	1340.0
160°	1365.5	1365.2	1365.2	1365.2	1365.2	1365.2	1366.5	1367.8	1369.1	1370.4	1370.5
162.5°	1392.3	1392.1	1392.3	1392.6	1392.8	1393.1	1394.4	1395.7	1397.0	1398.3	1398.0
165°	1415.6	1415.2	1415.2	1415.2	1415.2	1415.2	1416.7	1418.3	1419.8	1421.4	1421.2
167.5°	1434.3	1433.9	1434.1	1434.4	1434.7	1434.9	1436.5	1438.0	1439.6	1441.1	1441.1
170°	1450.5	1450.0	1450.0	1450.0	1450.0	1450.0	1451.8	1453.6	1455.5	1457.3	1457.3
172.5°	1463.3	1462.8	1462.8	1462.8	1462.8	1462.8	1464.4	1465.9	1467.5	1469.0	1468.9
175°	1471.5	1470.9	1470.9	1470.9	1470.9	1470.9	1472.5	1474.0	1475.6	1477.1	1477.0
177.5°	1476.1	1475.6	1475.6	1475.6	1475.6	1475.6	1477.1	1478.7	1480.2	1481.8	1481.7
180°	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1



TEST NUMBER: P832066

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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1110.9	1110.9	1110.9	1110.9
2.5°	987.0	984.8	983.8	982.9
5°	846.1	839.0	837.4	835.8
7.5°	726.3	723.3	713.5	703.7
10°	629.0	619.9	615.8	611.7
12.5°	547.7	539.3	537.9	536.6
15°	484.6	478.7	476.7	474.6
17.5°	443.2	439.1	436.6	434.1
20°	412.4	409.5	407.7	405.8
22.5°	389.0	386.7	385.3	384.0
25°	366.4	363.0	361.9	360.7
27.5°	345.0	342.1	340.9	339.8
30°	325.0	322.5	320.9	319.3
32.5°	303.1	300.2	299.3	298.3
35°	283.8	281.9	281.0	280.1
37.5°	263.3	261.0	259.6	258.3
40°	245.7	244.6	243.9	243.2
42.5°	228.0	225.9	225.7	225.5
45°	210.2	208.2	207.7	207.2
47.5°	193.6	191.8	191.5	191.3
50°	175.1	172.6	170.8	169.0
52.5°	154.0	151.7	150.1	148.5
55°	134.6	132.1	130.7	129.4
57.5°	120.0	118.9	118.2	117.5
60°	108.2	107.5	107.0	106.6
62.5°	97.2	96.6	96.6	96.6
65°	87.2	86.5	85.9	85.2
67.5°	74.2	72.9	72.6	72.4
70°	58.5	56.5	56.3	56.0
72.5°	45.8	45.5	45.1	44.6
75°	37.8	37.3	37.3	37.3
77.5°	30.5	30.1	30.1	30.1
80°	23.5	23.2	23.5	23.7
82.5°	17.3	17.3	17.1	16.9
85°	11.2	10.9	10.9	10.9
87.5°	5.5	5.5	5.5	5.5
90°	33.3	33.8	34.3	34.9
92.5°	51.5	51.0	50.5	50.0
95°	90.6	90.6	90.6	90.6
97.5°	130.9	130.6	130.4	130.1
100°	175.1	175.6	176.1	176.6
102.5°	225.0	224.8	224.5	224.2
105°	275.0	275.5	276.0	276.5
107.5°	330.7	330.5	330.2	330.0
110°	386.1	385.6	385.1	384.6



TEST NUMBER: P832066

CATALOG NUMBER: S123RDIP-S340D1195U835-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	442.7	442.7	442.7	442.7
115°	495.7	495.5	495.2	495.0
117.5°	550.7	550.0	549.2	548.4
120°	606.9	606.4	605.9	605.3
122.5°	662.3	661.5	660.7	659.9
125°	717.7	716.6	715.6	714.6
127.5°	772.3	771.2	770.2	769.2
130°	828.0	826.2	824.4	822.6
132.5°	882.3	881.0	879.7	878.4
135°	938.0	937.5	937.0	936.5
137.5°	989.9	989.1	988.4	987.6
140°	1043.0	1041.2	1039.4	1037.6
142.5°	1092.6	1091.3	1090.0	1088.7
145°	1140.6	1139.5	1138.5	1137.5
147.5°	1186.3	1184.7	1183.2	1181.6
150°	1228.1	1226.6	1225.0	1223.5
152.5°	1268.0	1266.7	1265.4	1264.1
155°	1305.6	1303.8	1302.0	1300.1
157.5°	1338.5	1336.9	1335.4	1333.8
160°	1369.5	1368.4	1367.4	1366.4
162.5°	1396.2	1394.4	1392.6	1390.8
165°	1419.4	1417.6	1415.8	1414.0
167.5°	1439.6	1438.0	1436.5	1434.9
170°	1455.5	1453.6	1451.8	1450.0
172.5°	1467.1	1465.3	1463.5	1461.6
175°	1475.2	1473.4	1471.6	1469.8
177.5°	1479.8	1478.0	1476.2	1474.4
180°	1479.1	1479.1	1479.1	1479.1



TEST NUMBER: P832066

CATALOG NUMBER: S123RDIP-S340D1195U835-4F0-1E-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	6.61	7.27	7.75	8.40	9.97	11.27	11.93	12.42	13.06	14.64
	3H	7.82	8.41	8.97	9.54	11.13	12.76	13.35	13.91	14.49	16.08
	4H	8.19	8.75	9.35	9.89	11.48	13.24	13.80	14.40	14.94	16.53
	6H	8.47	8.98	9.63	10.12	11.72	13.55	14.06	14.71	15.20	16.80
	8H	8.55	9.04	9.72	10.19	11.79	13.62	14.11	14.79	15.26	16.86
	12H	8.59	9.06	9.77	10.20	11.82	13.65	14.11	14.82	15.26	16.88
4H	2H	7.31	7.87	8.48	9.01	10.60	11.25	11.81	12.42	12.94	14.54
	3H	8.67	9.13	9.84	10.29	11.90	12.89	13.36	14.06	14.52	16.13
	4H	9.12	9.54	10.29	10.69	12.32	13.49	13.92	14.67	15.07	16.70
	6H	9.47	9.84	10.65	11.01	12.63	13.92	14.29	15.10	15.46	17.08
	8H	9.60	9.94	10.77	11.10	12.73	14.05	14.39	15.23	15.55	17.19
	12H	9.67	9.97	10.86	11.15	12.79	14.10	14.41	15.30	15.59	17.22
8H	4H	9.42	9.76	10.59	10.92	12.56	13.45	13.79	14.62	14.95	16.59
	6H	9.88	10.16	11.07	11.36	12.99	13.94	14.22	15.13	15.43	17.05
	8H	10.07	10.31	11.27	11.50	13.15	14.12	14.37	15.32	15.55	17.20
	12H	10.20	10.42	11.41	11.60	13.28	14.23	14.45	15.44	15.63	17.31
12H	4H	9.42	9.73	10.61	10.91	12.54	13.39	13.70	14.58	14.87	16.51
	6H	9.93	10.18	11.14	11.36	13.01	13.91	14.16	15.11	15.34	16.99
	8H	10.14	10.36	11.35	11.54	13.22	14.10	14.31	15.30	15.49	17.18