

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: P832069

Luminaire Tested: S123RDIP-S340D1195U840-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832069
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-S340D1195U840-4F0-1E-UDD-G1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: -

Summary

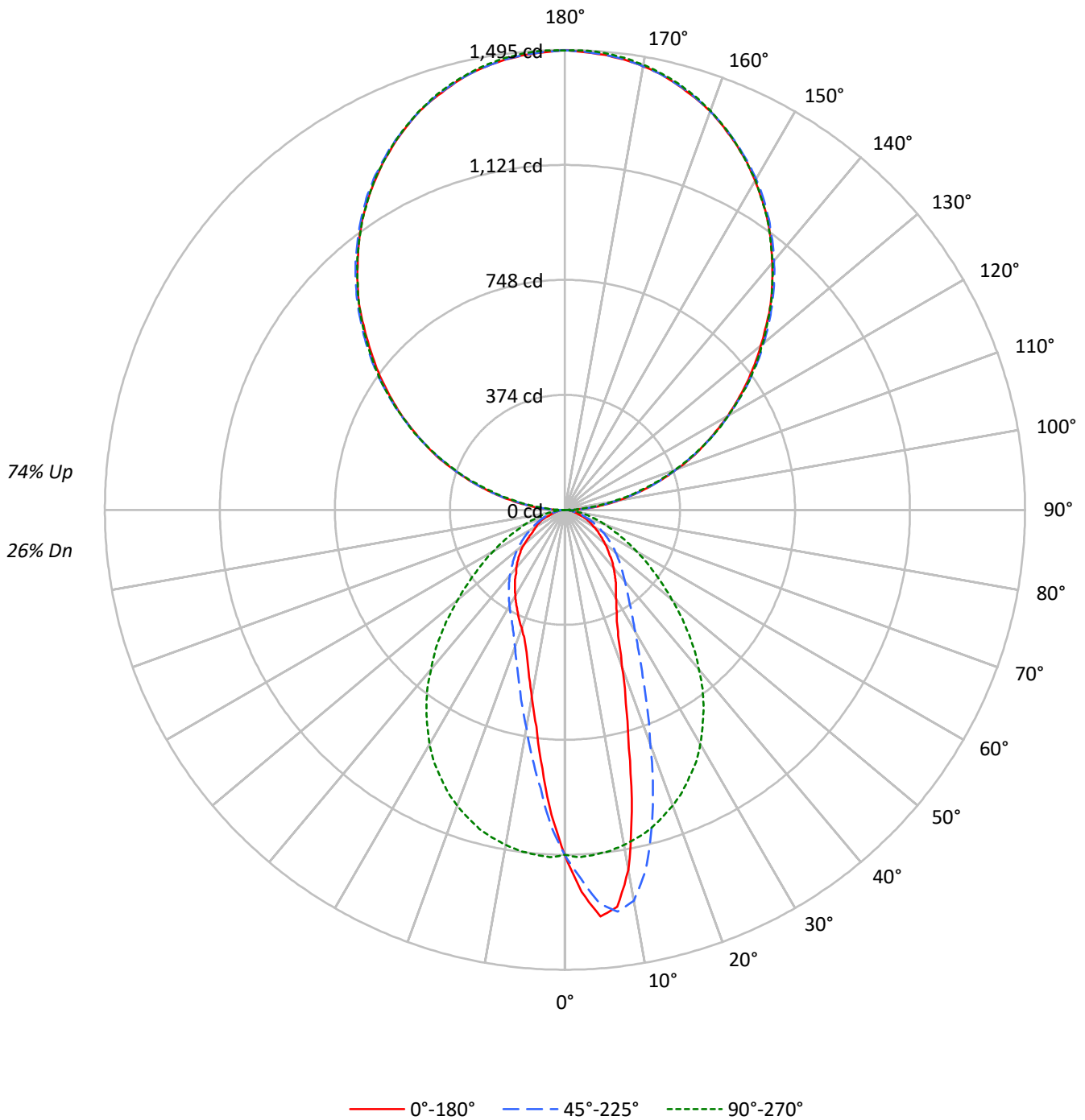
Lumens per Lamp: N/A
Luminaire Lumens: 5629.2 lumens
Efficiency: N/A
Efficacy: 129.7 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

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°	12076	12076	12076	12076	12076
5°	14338	13881	12151	9823	9121
10°	12991	14100	12091	7871	6753
15°	8945	12090	11964	6433	5341
20°	6222	9308	11724	5424	4694
25°	4742	7094	11374	4821	4327
30°	4128	5671	10936	4477	4007
35°	3790	4784	10318	4185	3717
40°	3458	4272	9507	3901	3451
45°	3124	3908	8634	3631	3186
50°	2835	3605	7603	3366	2858
55°	2563	3310	6611	3108	2451
60°	2297	3010	5744	2822	2316
65°	2122	2672	4944	2537	2190
70°	1721	2310	4315	2294	1781
75°	1510	1838	3656	1905	1568
80°	1370	1556	2994	1599	1481
85°	1247	1359	2272	1445	1359

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 9109 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.3	1.8
10°-20°	236.6	4.2
20°-30°	271.5	4.8
30°-40°	267.6	4.8
40°-50°	236.0	4.2
50°-60°	181.6	3.2
60°-70°	119.4	2.1
70°-80°	58.0	1.0
80°-90°	17.8	0.3
90°-100°	96.1	1.7
100°-110°	291.0	5.2
110°-120°	495.4	8.8
120°-130°	651.8	11.6
130°-140°	732.6	13.0
140°-150°	720.2	12.8
150°-160°	606.4	10.8
160°-170°	403.7	7.2
170°-180°	141.4	2.5
0°-30°	610.4	10.8
0°-40°	878.0	15.6
0°-60°	1295.5	23.0
0°-90°	1490.6	26.5
90°-120°	882.6	15.7
90°-150°	2987.2	53.1
90°-180°	4139.0	73.5
0°-180°	5629.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1122	1122	1122	1122	1122	
5°	1327	1285	1125	909	844	121
15°	803	1085	1074	577	479	227
25°	399	597	958	406	364	189
35°	288	364	785	318	283	180
45°	205	257	567	238	209	159
55°	137	176	352	166	131	123
65°	83	105	194	100	86	82
75°	36	44	88	46	38	39
85°	10	11	18	12	11	11
90°	35	28	1	28	35	17
95°	92	87	69	87	92	92
105°	279	277	264	277	279	296
115°	500	500	499	500	500	495
125°	722	731	730	731	722	645
135°	946	953	947	953	946	727
145°	1149	1155	1149	1155	1149	717
155°	1313	1316	1315	1316	1313	605
165°	1428	1429	1433	1429	1428	403
175°	1484	1486	1490	1486	1484	141
180°	1494	1494	1494	1494	1494	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9
2.5°	1243.3	1239.4	1235.5	1234.4	1233.2	1229.5	1225.8	1217.6	1209.3	1200.8	1192.3
5°	1327.0	1327.5	1328.0	1326.8	1325.7	1320.8	1316.0	1305.9	1295.8	1284.7	1273.7
7.5°	1301.3	1308.6	1316.0	1317.4	1318.8	1322.4	1326.1	1323.8	1321.5	1317.4	1313.2
10°	1188.6	1188.1	1187.7	1195.9	1204.2	1228.8	1253.4	1266.1	1278.7	1290.0	1301.3
12.5°	1004.6	1005.3	1006.0	1033.1	1060.3	1083.5	1106.7	1138.9	1171.1	1205.8	1240.6
15°	802.7	813.9	825.2	849.4	873.5	908.5	943.4	986.7	1029.9	1084.9	1139.8
17.5°	659.1	664.0	668.8	692.0	715.3	748.4	781.5	830.5	879.5	950.3	1021.2
20°	543.2	547.6	552.0	568.8	585.6	617.3	649.0	695.7	742.4	812.6	882.7
22.5°	453.5	462.0	470.6	481.8	493.1	516.1	539.1	586.7	634.3	698.2	762.2
25°	399.3	403.2	407.1	416.7	426.4	448.5	470.6	502.1	533.6	597.3	661.0
27.5°	362.5	363.6	364.8	371.9	379.0	393.3	407.5	436.7	466.0	518.4	570.8
30°	332.1	334.2	336.2	341.8	347.3	357.6	368.0	388.7	409.4	456.3	503.2
32.5°	308.6	309.8	310.9	315.5	320.1	327.7	335.3	351.7	368.0	403.9	439.7
35°	288.4	288.6	288.9	292.3	295.8	303.1	310.5	324.1	337.6	364.1	390.5
37.5°	265.4	267.0	268.6	271.2	273.7	280.1	286.6	297.6	308.6	330.5	352.3
40°	246.1	247.5	248.8	251.8	254.8	259.9	264.9	275.1	285.2	304.0	322.9
42.5°	226.8	227.7	228.6	231.6	234.6	240.8	247.0	255.1	263.1	278.7	294.4
45°	205.2	207.5	209.8	213.0	216.2	221.5	226.8	235.0	243.3	256.7	270.0
47.5°	187.2	188.4	189.5	192.3	195.0	201.5	207.9	215.3	222.6	235.0	247.5
50°	169.3	169.7	170.2	172.7	175.3	181.0	186.8	195.3	203.8	215.3	226.8
52.5°	152.3	153.4	154.6	157.1	159.6	163.5	167.4	176.2	184.9	196.2	207.5
55°	136.6	137.3	138.0	139.8	141.7	146.3	150.9	158.5	166.1	176.4	186.8
57.5°	121.9	122.8	123.7	125.1	126.5	130.6	134.8	141.4	148.1	158.5	168.8
60°	106.7	107.9	109.0	110.6	112.2	115.5	118.7	124.7	130.6	139.8	149.0
62.5°	95.7	95.9	96.1	97.5	98.9	101.2	103.5	108.3	113.2	122.4	131.6
65°	83.3	83.9	84.6	85.3	86.0	87.9	89.7	93.8	98.0	104.9	111.8
67.5°	70.4	71.1	71.8	72.9	74.1	75.7	77.3	80.0	82.8	89.2	95.7
70°	54.7	54.7	54.7	56.6	58.4	61.2	63.9	66.0	68.1	73.4	78.7
72.5°	44.6	44.8	45.1	45.3	45.5	47.1	48.8	52.2	55.7	58.9	62.1
75°	36.3	36.6	36.8	37.0	37.3	37.7	38.2	39.3	40.5	44.2	47.8
77.5°	29.0	29.2	29.4	29.7	29.9	30.4	30.8	31.3	31.7	33.1	34.5
80°	22.1	22.3	22.5	22.8	23.0	23.2	23.5	23.9	24.4	25.1	25.8
82.5°	16.1	16.1	16.1	16.1	16.1	16.6	17.0	17.0	17.0	17.5	17.9
85°	10.1	10.1	10.1	10.3	10.6	10.6	10.6	10.8	11.0	11.0	11.0
87.5°	4.6	4.4	4.1	4.4	4.6	4.6	4.6	4.8	5.1	5.1	5.1
90°	35.2	34.7	34.2	33.6	33.1	32.3	31.3	30.2	29.2	28.2	24.8
92.5°	50.5	51.0	51.5	52.0	52.5	52.4	51.6	50.8	50.1	49.3	47.7
95°	91.5	91.5	91.5	91.5	91.5	91.0	90.0	88.9	87.9	86.8	84.7
97.5°	131.4	131.7	131.9	132.2	132.5	131.9	130.6	129.3	128.0	126.7	125.2
100°	178.3	177.8	177.3	176.8	176.3	175.6	174.8	174.0	173.3	172.5	171.2
102.5°	226.5	226.7	227.0	227.2	227.5	227.2	226.5	225.7	224.9	224.1	222.3
105°	279.3	278.7	278.2	277.7	277.2	276.9	276.9	276.9	276.9	276.9	274.6
107.5°	333.2	333.5	333.8	334.0	334.3	334.0	333.2	332.4	331.7	330.9	329.8
110°	388.4	388.9	389.4	389.9	390.5	390.2	389.2	388.1	387.1	386.0	385.5

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CANDELA DISTRIBUTION (continued):

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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9
2.5°	1191.1	1190.0	1178.9	1167.9	1157.1	1146.3	1138.2	1130.2	1116.6	1103.0	1094.5
5°	1264.9	1256.2	1238.7	1221.2	1195.0	1168.8	1146.7	1124.6	1096.6	1068.5	1045.1
7.5°	1306.1	1299.0	1277.8	1256.7	1221.9	1187.2	1152.7	1118.2	1076.8	1035.4	1000.0
10°	1307.3	1313.2	1295.8	1278.3	1239.2	1200.1	1153.2	1106.2	1050.6	994.9	949.2
12.5°	1266.3	1292.1	1288.4	1284.7	1244.9	1205.1	1148.1	1091.1	1022.8	954.5	897.2
15°	1189.7	1239.6	1254.4	1269.1	1236.2	1203.3	1138.4	1073.6	993.3	913.1	847.3
17.5°	1091.1	1161.0	1199.9	1238.7	1214.8	1190.9	1119.8	1048.8	958.4	868.0	796.5
20°	974.2	1065.8	1126.7	1187.7	1178.9	1170.2	1096.8	1023.5	925.9	828.4	750.9
22.5°	858.8	955.4	1039.6	1123.7	1132.7	1141.7	1067.6	993.6	886.8	780.1	701.2
25°	759.2	857.4	957.7	1058.0	1078.2	1098.4	1028.1	957.7	847.1	736.4	658.0
27.5°	664.2	757.6	868.0	978.4	1015.2	1052.0	987.6	923.2	808.0	692.7	614.5
30°	586.7	670.2	782.9	895.6	946.9	998.2	939.0	879.9	765.6	651.3	574.7
32.5°	514.5	589.2	702.4	815.5	875.1	934.7	883.6	832.6	722.6	612.7	537.0
35°	457.4	524.4	629.9	735.5	802.2	868.9	827.0	785.2	677.8	570.4	498.8
37.5°	408.5	464.6	563.7	662.8	733.7	804.5	769.5	734.6	633.6	532.7	465.0
40°	368.0	413.1	505.3	597.5	667.0	736.4	706.5	676.6	586.2	495.9	432.6
42.5°	333.3	372.1	454.9	537.7	601.4	665.1	645.4	625.6	543.7	461.8	403.2
45°	302.7	335.3	408.2	481.1	539.8	598.4	582.8	567.2	496.5	425.9	372.1
47.5°	275.5	303.6	368.7	433.8	486.4	539.1	524.6	510.1	451.7	393.3	344.3
50°	250.7	274.6	328.9	383.2	430.5	477.9	466.0	454.0	405.7	357.4	315.1
52.5°	227.2	247.0	295.8	344.5	382.7	420.9	411.7	402.5	365.2	328.0	289.6
55°	204.9	223.1	264.3	305.4	338.1	370.7	361.5	352.3	323.4	294.4	260.6
57.5°	184.7	200.6	233.9	267.2	293.2	319.2	314.9	310.5	286.3	262.2	234.4
60°	163.3	177.6	206.3	235.0	256.0	276.9	271.8	266.8	249.5	232.3	208.4
62.5°	144.2	156.9	179.9	202.9	219.9	236.9	233.2	229.5	216.4	203.3	183.5
65°	124.2	136.6	155.2	173.9	187.2	200.6	197.3	194.1	184.2	174.3	158.5
67.5°	106.0	116.4	132.5	148.6	157.5	166.5	164.7	162.8	155.2	147.7	135.2
70°	87.6	96.6	109.9	123.3	129.5	135.7	136.4	137.1	130.2	123.3	114.1
72.5°	69.2	76.4	88.8	101.2	106.0	110.9	110.6	110.4	106.3	102.1	93.8
75°	53.1	58.4	68.1	77.7	81.9	86.0	86.9	87.9	83.9	80.0	75.4
77.5°	38.2	41.9	49.2	56.6	61.2	65.8	66.2	66.7	64.9	63.0	58.6
80°	26.9	28.1	32.7	37.3	42.1	46.9	47.6	48.3	46.5	44.6	41.9
82.5°	18.6	19.3	20.9	22.5	26.4	30.4	31.3	32.2	31.3	30.4	27.4
85°	11.3	11.5	12.2	12.9	14.7	16.6	17.5	18.4	17.9	17.5	15.9
87.5°	5.1	5.1	5.3	5.5	6.0	6.4	7.6	8.7	8.0	7.4	6.7
90°	21.4	18.0	14.6	11.6	9.0	6.4	3.8	1.2	3.8	6.4	9.0
92.5°	46.2	44.6	43.0	41.5	39.9	38.3	36.8	35.2	36.8	38.3	39.9
95°	82.7	80.6	78.5	76.5	74.7	72.9	71.1	69.2	71.1	72.9	74.7
97.5°	123.6	122.0	120.5	119.0	117.7	116.4	115.1	113.8	115.1	116.4	117.7
100°	169.9	168.6	167.3	165.8	164.3	162.7	161.1	159.6	161.1	162.7	164.3
102.5°	220.5	218.6	216.8	215.5	214.7	213.9	213.2	212.4	213.2	213.9	214.7
105°	272.2	269.9	267.5	266.1	265.6	265.0	264.5	264.0	264.5	265.0	265.6
107.5°	328.8	327.8	326.7	326.1	325.8	325.5	325.3	325.0	325.3	325.5	325.8
110°	385.0	384.5	383.9	383.4	382.9	382.4	381.9	381.3	381.9	382.4	382.9



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CANDELA DISTRIBUTION (continued):

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



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9
2.5°	1086.0	1072.9	1059.8	1050.4	1040.9	1029.2	1017.5	1017.0	1016.6	1007.8	999.1
5°	1021.6	998.8	976.1	953.8	931.5	909.1	886.8	881.8	876.7	869.1	861.5
7.5°	964.6	928.2	891.9	863.4	834.9	812.6	790.2	775.1	759.9	748.2	736.4
10°	903.4	858.3	813.2	778.7	744.2	720.1	695.9	678.5	661.0	652.7	644.4
12.5°	839.9	790.9	741.9	708.1	674.3	645.4	616.4	600.5	584.6	573.1	561.6
15°	781.5	728.8	676.2	640.3	604.4	577.3	550.1	534.3	518.4	506.9	495.4
17.5°	724.9	671.8	618.7	582.3	546.0	521.4	496.8	481.4	466.0	458.8	451.7
20°	673.4	619.8	566.2	532.0	497.7	473.5	449.4	441.1	432.8	426.2	419.5
22.5°	622.4	570.8	519.3	486.4	453.5	436.1	418.6	411.9	405.2	400.2	395.1
25°	579.6	528.3	477.0	448.2	419.5	405.9	392.4	388.0	383.6	378.6	373.5
27.5°	536.3	487.6	438.8	415.8	392.8	381.8	370.7	365.2	359.7	355.6	351.4
30°	498.2	453.1	408.0	388.9	369.8	360.2	350.5	344.5	338.5	334.6	330.7
32.5°	461.4	421.3	381.3	365.0	348.7	339.2	329.8	324.1	318.3	313.7	309.1
35°	427.3	392.6	357.9	342.9	328.0	318.5	309.1	303.4	297.6	293.0	288.4
37.5°	397.4	365.9	334.4	320.4	306.3	298.1	289.8	283.8	277.8	273.0	268.2
40°	369.4	341.5	313.7	300.1	286.6	277.6	268.6	263.3	258.0	253.7	249.3
42.5°	344.5	319.0	293.5	280.1	266.8	258.3	249.8	243.6	237.3	234.8	232.3
45°	318.3	295.8	273.2	260.3	247.5	238.5	229.5	224.2	218.9	216.6	214.4
47.5°	295.3	274.4	253.4	240.8	228.1	220.1	212.1	207.9	203.8	200.6	197.3
50°	272.8	252.5	232.3	220.1	207.9	201.0	194.1	189.1	184.0	181.7	179.4
52.5°	251.1	232.7	214.4	201.9	189.5	182.8	176.2	171.8	167.4	162.6	157.8
55°	226.8	210.7	194.6	183.5	172.5	165.6	158.7	153.6	148.6	143.5	138.5
57.5°	206.5	190.7	174.8	164.9	155.0	148.3	141.7	136.2	130.6	126.5	122.4
60°	184.5	170.7	156.9	147.2	137.5	131.1	124.7	119.4	114.1	112.0	109.9
62.5°	163.8	150.9	138.0	129.5	121.0	114.8	108.6	105.1	101.7	100.3	98.9
65°	142.6	131.6	120.5	112.7	104.9	99.6	94.3	92.7	91.1	89.9	88.8
67.5°	122.8	113.4	104.0	97.1	90.2	86.5	82.8	81.0	79.1	77.7	76.4
70°	104.9	96.6	88.3	82.3	76.4	72.9	69.5	67.8	66.2	63.7	61.2
72.5°	85.6	79.1	72.7	68.1	63.5	60.5	57.5	54.3	51.1	48.8	46.5
75°	70.8	64.4	58.0	53.6	49.2	45.8	42.3	41.2	40.0	39.3	38.6
77.5°	54.3	48.8	43.2	39.8	36.3	34.7	33.1	32.4	31.7	31.5	31.3
80°	39.1	34.5	29.9	28.1	26.2	25.8	25.3	24.8	24.4	24.1	23.9
82.5°	24.4	22.1	19.8	19.3	18.9	18.6	18.4	18.2	17.9	17.7	17.5
85°	14.3	13.3	12.4	12.2	12.0	11.7	11.5	11.5	11.5	11.5	11.5
87.5°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.7	5.5
90°	11.6	14.6	18.0	21.4	24.8	28.2	29.2	30.2	31.3	32.3	33.1
92.5°	41.5	43.0	44.6	46.2	47.7	49.3	50.1	50.8	51.6	52.4	52.5
95°	76.5	78.5	80.6	82.7	84.7	86.8	87.9	88.9	90.0	91.0	91.5
97.5°	119.0	120.5	122.0	123.6	125.2	126.7	128.0	129.3	130.6	131.9	132.5
100°	165.8	167.3	168.6	169.9	171.2	172.5	173.3	174.0	174.8	175.6	176.3
102.5°	215.5	216.8	218.6	220.5	222.3	224.1	224.9	225.7	226.5	227.2	227.5
105°	266.1	267.5	269.9	272.2	274.6	276.9	276.9	276.9	276.9	276.9	277.2
107.5°	326.1	326.7	327.8	328.8	329.8	330.9	331.7	332.4	333.2	334.0	334.3
110°	383.4	383.9	384.5	385.0	385.5	386.0	387.1	388.1	389.2	390.2	390.5



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CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P832069

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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1121.9	1121.9	1121.9	1121.9
2.5°	996.8	994.5	993.6	992.6
5°	854.4	847.3	845.7	844.1
7.5°	733.4	730.4	720.6	710.7
10°	635.2	626.0	621.9	617.8
12.5°	553.1	544.6	543.2	541.9
15°	489.4	483.4	481.4	479.3
17.5°	447.6	443.4	440.9	438.4
20°	416.5	413.5	411.7	409.8
22.5°	392.8	390.5	389.1	387.8
25°	370.1	366.6	365.5	364.3
27.5°	348.4	345.4	344.3	343.1
30°	328.2	325.7	324.1	322.4
32.5°	306.1	303.1	302.2	301.3
35°	286.6	284.7	283.8	282.9
37.5°	265.9	263.6	262.2	260.8
40°	248.2	247.0	246.3	245.6
42.5°	230.2	228.1	227.9	227.7
45°	212.3	210.2	209.8	209.3
47.5°	195.5	193.7	193.4	193.2
50°	176.9	174.3	172.5	170.7
52.5°	155.5	153.2	151.6	150.0
55°	135.9	133.4	132.0	130.6
57.5°	121.2	120.1	119.4	118.7
60°	109.2	108.6	108.1	107.6
62.5°	98.2	97.5	97.5	97.5
65°	88.1	87.4	86.7	86.0
67.5°	75.0	73.6	73.4	73.1
70°	59.1	57.0	56.8	56.6
72.5°	46.2	46.0	45.5	45.1
75°	38.2	37.7	37.7	37.7
77.5°	30.8	30.4	30.4	30.4
80°	23.7	23.5	23.7	23.9
82.5°	17.5	17.5	17.2	17.0
85°	11.3	11.0	11.0	11.0
87.5°	5.5	5.5	5.5	5.5
90°	33.6	34.2	34.7	35.2
92.5°	52.0	51.5	51.0	50.5
95°	91.5	91.5	91.5	91.5
97.5°	132.2	131.9	131.7	131.4
100°	176.8	177.3	177.8	178.3
102.5°	227.2	227.0	226.7	226.5
105°	277.7	278.2	278.7	279.3
107.5°	334.0	333.8	333.5	333.2
110°	389.9	389.4	388.9	388.4



TEST NUMBER: P832069

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CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P832069

CATALOG NUMBER: S123RDIP-S340D1195U840-4F0-1E-UDD-G1

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	6.64	7.30	7.79	8.43	10.00	11.31	11.97	12.45	13.10	14.67
	3H	7.85	8.44	9.00	9.58	11.17	12.80	13.38	13.95	14.52	16.11
	4H	8.23	8.78	9.39	9.92	11.52	13.28	13.84	14.44	14.97	16.57
	6H	8.50	9.01	9.67	10.15	11.76	13.58	14.09	14.75	15.23	16.84
	8H	8.58	9.07	9.75	10.22	11.82	13.66	14.14	14.82	15.30	16.90
	12H	8.63	9.09	9.80	10.24	11.86	13.68	14.14	14.85	15.29	16.91
4H	2H	7.35	7.91	8.51	9.04	10.64	11.28	11.84	12.45	12.98	14.57
	3H	8.70	9.17	9.87	10.33	11.93	12.93	13.39	14.10	14.55	16.16
	4H	9.15	9.58	10.32	10.73	12.35	13.53	13.96	14.70	15.11	16.73
	6H	9.51	9.87	10.69	11.05	12.66	13.96	14.32	15.13	15.50	17.11
	8H	9.63	9.97	10.81	11.14	12.77	14.08	14.43	15.26	15.59	17.22
	12H	9.70	10.01	10.89	11.18	12.82	14.14	14.45	15.33	15.62	17.26
8H	4H	9.45	9.79	10.63	10.96	12.59	13.48	13.82	14.66	14.99	16.62
	6H	9.91	10.19	11.11	11.40	13.03	13.97	14.25	15.17	15.46	17.09
	8H	10.10	10.35	11.31	11.53	13.18	14.16	14.40	15.36	15.59	17.24
	12H	10.24	10.45	11.44	11.64	13.32	14.27	14.48	15.47	15.66	17.35
12H	4H	9.46	9.77	10.65	10.94	12.58	13.42	13.73	14.62	14.91	16.55
	6H	9.97	10.21	11.17	11.40	13.05	13.95	14.19	15.15	15.38	17.03
	8H	10.18	10.40	11.39	11.58	13.26	14.13	14.35	15.34	15.53	17.21