

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: P832040

Luminaire Tested: S123RDIP-S340D1025U835-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832040
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-17)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDIP-S340D1025U835-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

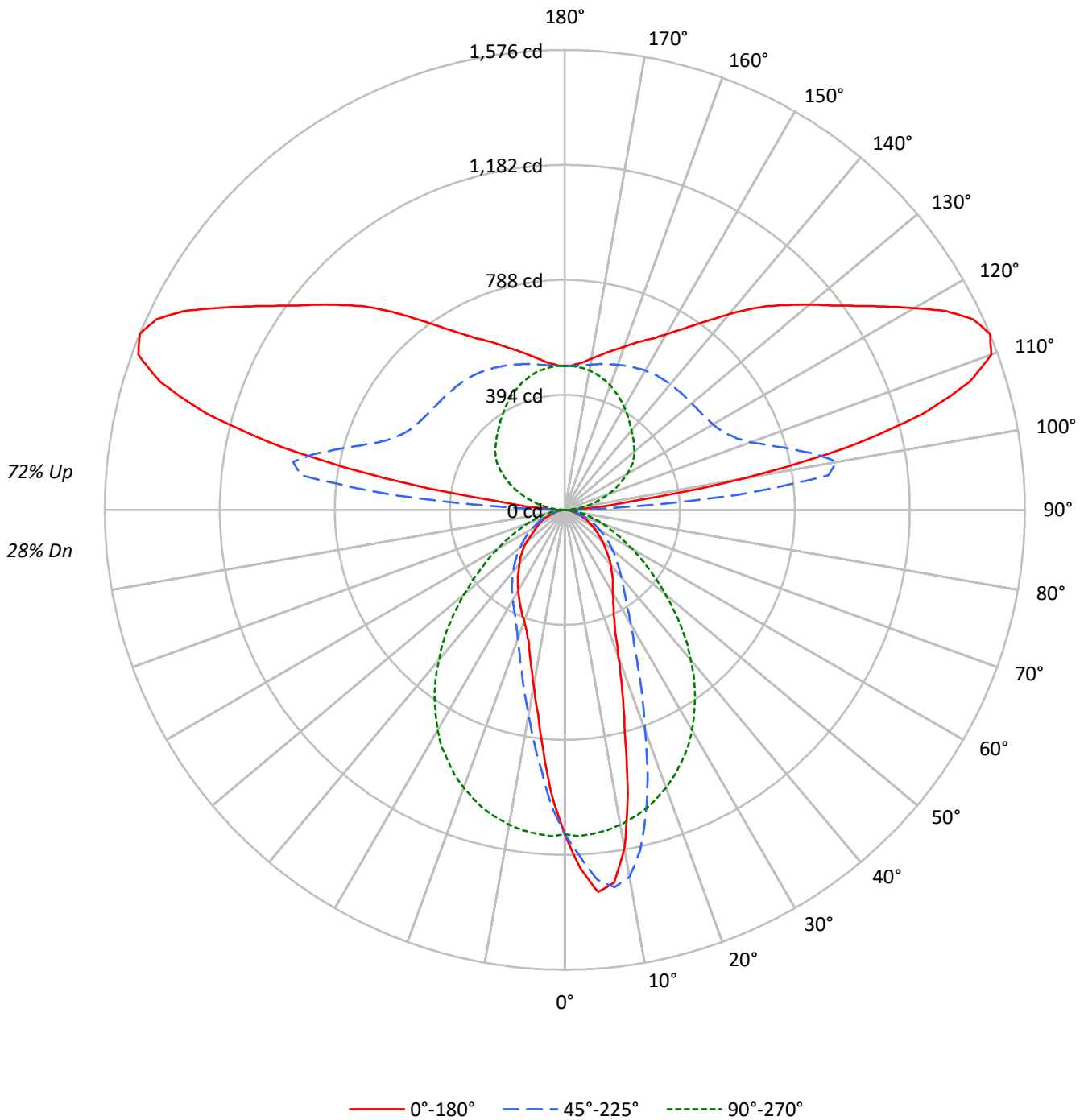
Lumens per Lamp: N/A
Luminaire Lumens: 5184.8 lumens
Efficiency: N/A
Efficacy: 135.4 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 38.3
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	71	71	71	53	53	53	36	36	36	28				
1	93	89	86	83	84	80	77	75	63	61	59	47	46	45	33	32	31	25				
2	85	79	73	68	76	71	66	62	56	53	50	42	40	38	29	28	27	22				
3	78	69	63	57	70	63	57	52	50	46	42	38	35	33	27	25	24	19				
4	72	62	54	49	64	56	49	45	44	40	37	34	31	29	24	22	21	17				
5	66	55	48	42	59	50	43	39	40	35	32	31	28	25	22	20	19	15				
6	61	50	42	37	54	45	38	34	36	31	28	28	25	22	20	18	17	13				
7	56	45	37	32	50	41	34	30	33	28	25	25	22	20	19	17	15	12				
8	52	41	34	29	47	37	31	26	30	25	22	23	20	18	17	15	14	11				
9	49	37	30	26	44	34	28	24	28	23	20	22	18	16	16	14	13	10				
10	46	34	27	23	41	31	25	21	25	21	18	20	17	15	15	13	12	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	2.0
10°-20°	234.3	4.5
20°-30°	268.8	5.2
30°-40°	265.0	5.1
40°-50°	233.7	4.5
50°-60°	179.8	3.5
60°-70°	118.2	2.3
70°-80°	57.4	1.1
80°-90°	17.2	0.3
90°-100°	267.6	5.2
100°-110°	783.4	15.1
110°-120°	765.0	14.8
120°-130°	609.2	11.8
130°-140°	480.7	9.3
140°-150°	358.6	6.9
150°-160°	250.0	4.8
160°-170°	146.9	2.8
170°-180°	47.8	0.9
0°-30°	604.4	11.7
0°-40°	869.4	16.8
0°-60°	1282.9	24.7
0°-90°	1475.7	28.5
90°-120°	1816.0	35.0
90°-150°	3264.5	63.0
90°-180°	3709.0	71.5
0°-180°	5184.8	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°	29	25	2	25	29	16
95°	116	592	34	592	116	188
105°	1270	802	116	802	1270	1267
115°	1544	614	205	614	1544	1506
125°	1218	573	284	573	1218	1102
135°	987	565	333	565	987	766
145°	772	558	380	558	772	490
155°	640	540	432	540	640	298
165°	558	517	472	517	558	159
175°	502	496	492	496	502	49
180°	493	493	493	493	493	



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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°	28.9	29.9	28.9	27.9	28.9	27.0	26.0	25.0	24.0	25.0	22.0
92.5°	52.9	54.9	53.9	57.9	59.9	66.9	76.9	98.8	138.7	185.7	205.6
95°	115.8	119.8	126.8	135.8	154.7	190.7	243.6	359.3	480.1	591.9	527.0
97.5°	237.6	248.5	272.5	310.4	377.3	491.1	622.9	825.5	941.3	910.3	679.8
100°	625.9	624.9	663.8	736.7	837.5	979.2	1096.0	1176.9	1141.9	945.3	638.8
102.5°	991.2	1020.1	1051.1	1105.0	1177.9	1254.7	1310.6	1293.6	1151.9	880.4	578.9
105°	1269.7	1274.7	1306.6	1344.5	1390.5	1416.4	1397.5	1297.6	1089.0	802.5	532.0
107.5°	1451.4	1462.3	1475.3	1493.3	1499.3	1472.3	1394.5	1237.7	999.2	733.7	498.1
110°	1555.2	1557.2	1559.2	1551.2	1523.2	1453.3	1327.6	1143.9	915.3	676.8	480.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1576.1	1575.1	1565.1	1536.2	1479.3	1384.5	1239.7	1051.1	842.5	638.8	470.1
115°	1544.2	1539.2	1519.2	1475.3	1400.4	1291.6	1144.9	971.2	786.6	613.9	469.1
117.5°	1474.3	1467.3	1437.4	1388.5	1310.6	1197.8	1063.1	909.3	749.6	596.9	470.1
120°	1382.5	1376.5	1352.5	1296.6	1217.8	1117.0	997.2	862.4	721.7	585.9	474.1
122.5°	1296.6	1288.6	1261.7	1212.8	1144.9	1053.1	944.3	825.5	698.7	578.9	481.1
125°	1217.8	1210.8	1185.8	1141.9	1078.0	998.2	902.4	793.6	679.8	573.0	488.1
127.5°	1149.9	1143.9	1121.0	1083.0	1025.1	951.3	863.4	764.6	661.8	570.0	496.1
130°	1094.0	1086.0	1065.1	1029.1	976.2	908.3	827.5	737.7	647.8	567.0	504.1
132.5°	1039.1	1034.1	1016.1	980.2	931.3	867.4	793.6	712.7	634.8	566.0	510.1
135°	987.2	980.2	962.2	932.3	883.4	826.5	761.6	690.7	623.9	565.0	516.1
137.5°	932.3	926.3	911.3	880.4	838.5	787.6	729.7	669.8	613.9	563.0	520.1
140°	874.4	875.4	859.4	831.5	793.6	750.6	702.7	651.8	604.9	562.0	524.0
142.5°	820.5	821.5	807.5	783.6	752.6	716.7	676.8	634.8	596.9	560.0	527.0
145°	771.6	769.6	761.6	740.6	715.7	686.7	654.8	621.9	589.9	558.0	528.0
147.5°	729.7	728.7	720.7	705.7	685.7	664.8	637.8	610.9	582.9	555.0	528.0
150°	693.7	693.7	687.7	676.8	661.8	642.8	621.9	598.9	575.9	551.0	528.0
152.5°	663.8	663.8	660.8	650.8	639.8	624.9	606.9	587.9	568.0	546.0	525.0
155°	639.8	638.8	636.8	628.9	619.9	607.9	592.9	576.9	560.0	540.0	523.0
157.5°	616.9	616.9	614.9	608.9	600.9	590.9	578.9	565.0	551.0	535.0	520.1
160°	594.9	595.9	595.9	589.9	582.9	575.9	566.0	555.0	542.0	529.0	518.1
162.5°	575.0	575.9	575.9	571.0	567.0	561.0	552.0	543.0	533.0	523.0	514.1
165°	558.0	558.0	559.0	555.0	551.0	546.0	539.0	533.0	525.0	517.1	510.1
167.5°	541.0	541.0	542.0	539.0	537.0	533.0	529.0	524.0	517.1	511.1	506.1
170°	526.0	526.0	527.0	525.0	524.0	522.0	518.1	515.1	510.1	505.1	502.1
172.5°	512.1	513.1	515.1	513.1	513.1	512.1	509.1	507.1	503.1	500.1	499.1
175°	502.1	503.1	504.1	503.1	503.1	503.1	501.1	500.1	498.1	496.1	496.1
177.5°	495.1	495.1	497.1	496.1	497.1	497.1	496.1	495.1	494.1	493.1	494.1
180°	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1



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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°	19.0	16.0	13.0	11.0	9.0	6.0	4.0	2.0	4.0	6.0	9.0
92.5°	153.7	100.8	68.9	50.9	40.9	31.9	22.0	15.0	22.0	31.9	40.9
95°	363.3	214.6	129.8	90.8	64.9	47.9	36.9	33.9	36.9	47.9	64.9
97.5°	404.3	231.6	147.7	104.8	78.9	63.9	54.9	53.9	54.9	63.9	78.9
100°	376.3	228.6	158.7	119.8	95.8	81.9	74.9	73.9	74.9	81.9	95.8
102.5°	352.4	232.6	171.7	136.8	115.8	102.8	96.8	94.8	96.8	102.8	115.8
105°	343.4	240.6	186.7	155.7	136.8	124.8	118.8	115.8	118.8	124.8	136.8
107.5°	341.4	253.5	205.6	176.7	158.7	146.7	140.7	137.7	140.7	146.7	158.7
110°	346.4	270.5	225.6	197.6	180.7	169.7	164.7	161.7	164.7	169.7	180.7



TEST NUMBER: P832040

CATALOG NUMBER: S123RDIP-S340D1025U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	356.3	287.5	246.6	219.6	202.6	191.7	186.7	183.7	186.7	191.7	202.6
115°	367.3	306.4	268.5	241.6	224.6	214.6	208.6	204.6	208.6	214.6	224.6
117.5°	381.3	326.4	288.5	263.5	244.6	235.6	230.6	225.6	230.6	235.6	244.6
120°	397.3	345.4	309.4	284.5	265.5	255.5	250.5	247.5	250.5	255.5	265.5
122.5°	412.2	365.3	330.4	303.4	285.5	274.5	269.5	266.5	269.5	274.5	285.5
125°	428.2	384.3	349.4	322.4	303.4	292.5	286.5	284.5	286.5	292.5	303.4
127.5°	441.2	401.3	367.3	340.4	319.4	308.4	301.5	298.5	301.5	308.4	319.4
130°	454.2	416.2	383.3	356.3	335.4	323.4	314.4	311.4	314.4	323.4	335.4
132.5°	466.1	429.2	397.3	371.3	350.4	335.4	325.4	321.4	325.4	335.4	350.4
135°	476.1	442.2	411.2	384.3	363.3	348.4	337.4	333.4	337.4	348.4	363.3
137.5°	484.1	451.2	421.2	396.3	375.3	359.3	348.4	344.4	348.4	359.3	375.3
140°	490.1	460.2	431.2	406.3	386.3	370.3	360.3	355.4	360.3	370.3	386.3
142.5°	496.1	467.1	439.2	416.2	396.3	382.3	371.3	367.3	371.3	382.3	396.3
145°	500.1	473.1	447.2	424.2	407.3	392.3	383.3	380.3	383.3	392.3	407.3
147.5°	503.1	478.1	454.2	434.2	417.2	404.3	395.3	393.3	395.3	404.3	417.2
150°	504.1	483.1	460.2	442.2	428.2	415.2	407.3	406.3	407.3	415.2	428.2
152.5°	506.1	486.1	467.1	450.2	438.2	427.2	419.2	419.2	419.2	427.2	438.2
155°	506.1	490.1	473.1	459.2	448.2	438.2	432.2	432.2	432.2	438.2	448.2
157.5°	507.1	492.1	478.1	467.1	457.2	448.2	443.2	442.2	443.2	448.2	457.2
160°	507.1	495.1	483.1	473.1	466.1	458.2	454.2	454.2	454.2	458.2	466.1
162.5°	506.1	496.1	486.1	478.1	472.1	466.1	463.2	463.2	463.2	466.1	472.1
165°	504.1	497.1	489.1	482.1	478.1	473.1	471.1	472.1	471.1	473.1	478.1
167.5°	503.1	497.1	491.1	486.1	483.1	479.1	478.1	479.1	478.1	479.1	483.1
170°	500.1	496.1	491.1	489.1	487.1	484.1	483.1	485.1	483.1	484.1	487.1
172.5°	499.1	496.1	492.1	491.1	490.1	488.1	488.1	489.1	488.1	488.1	490.1
175°	497.1	495.1	493.1	492.1	492.1	490.1	491.1	492.1	491.1	490.1	492.1
177.5°	496.1	494.1	493.1	493.1	493.1	492.1	493.1	494.1	493.1	492.1	493.1
180°	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1



TEST NUMBER: P832040

CATALOG NUMBER: S123RDIP-S340D1025U835-4F0-1E-UDD-G4

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°	11.0	13.0	16.0	19.0	22.0	25.0	24.0	25.0	26.0	27.0	28.9
92.5°	50.9	68.9	100.8	153.7	205.6	185.7	138.7	98.8	76.9	66.9	59.9
95°	90.8	129.8	214.6	363.3	527.0	591.9	480.1	359.3	243.6	190.7	154.7
97.5°	104.8	147.7	231.6	404.3	679.8	910.3	941.3	825.5	622.9	491.1	377.3
100°	119.8	158.7	228.6	376.3	638.8	945.3	1141.9	1176.9	1096.0	979.2	837.5
102.5°	136.8	171.7	232.6	352.4	578.9	880.4	1151.9	1293.6	1310.6	1254.7	1177.9
105°	155.7	186.7	240.6	343.4	532.0	802.5	1089.0	1297.6	1397.5	1416.4	1390.5
107.5°	176.7	205.6	253.5	341.4	498.1	733.7	999.2	1237.7	1394.5	1472.3	1499.3
110°	197.6	225.6	270.5	346.4	480.1	676.8	915.3	1143.9	1327.6	1453.3	1523.2



TEST NUMBER: P832040

CATALOG NUMBER: S123RDIP-S340D1025U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	219.6	246.6	287.5	356.3	470.1	638.8	842.5	1051.1	1239.7	1384.5	1479.3
115°	241.6	268.5	306.4	367.3	469.1	613.9	786.6	971.2	1144.9	1291.6	1400.4
117.5°	263.5	288.5	326.4	381.3	470.1	596.9	749.6	909.3	1063.1	1197.8	1310.6
120°	284.5	309.4	345.4	397.3	474.1	585.9	721.7	862.4	997.2	1117.0	1217.8
122.5°	303.4	330.4	365.3	412.2	481.1	578.9	698.7	825.5	944.3	1053.1	1144.9
125°	322.4	349.4	384.3	428.2	488.1	573.0	679.8	793.6	902.4	998.2	1078.0
127.5°	340.4	367.3	401.3	441.2	496.1	570.0	661.8	764.6	863.4	951.3	1025.1
130°	356.3	383.3	416.2	454.2	504.1	567.0	647.8	737.7	827.5	908.3	976.2
132.5°	371.3	397.3	429.2	466.1	510.1	566.0	634.8	712.7	793.6	867.4	931.3
135°	384.3	411.2	442.2	476.1	516.1	565.0	623.9	690.7	761.6	826.5	883.4
137.5°	396.3	421.2	451.2	484.1	520.1	563.0	613.9	669.8	729.7	787.6	838.5
140°	406.3	431.2	460.2	490.1	524.0	562.0	604.9	651.8	702.7	750.6	793.6
142.5°	416.2	439.2	467.1	496.1	527.0	560.0	596.9	634.8	676.8	716.7	752.6
145°	424.2	447.2	473.1	500.1	528.0	558.0	589.9	621.9	654.8	686.7	715.7
147.5°	434.2	454.2	478.1	503.1	528.0	555.0	582.9	610.9	637.8	664.8	685.7
150°	442.2	460.2	483.1	504.1	528.0	551.0	575.9	598.9	621.9	642.8	661.8
152.5°	450.2	467.1	486.1	506.1	525.0	546.0	568.0	587.9	606.9	624.9	639.8
155°	459.2	473.1	490.1	506.1	523.0	540.0	560.0	576.9	592.9	607.9	619.9
157.5°	467.1	478.1	492.1	507.1	520.1	535.0	551.0	565.0	578.9	590.9	600.9
160°	473.1	483.1	495.1	507.1	518.1	529.0	542.0	555.0	566.0	575.9	582.9
162.5°	478.1	486.1	496.1	506.1	514.1	523.0	533.0	543.0	552.0	561.0	567.0
165°	482.1	489.1	497.1	504.1	510.1	517.1	525.0	533.0	539.0	546.0	551.0
167.5°	486.1	491.1	497.1	503.1	506.1	511.1	517.1	524.0	529.0	533.0	537.0
170°	489.1	491.1	496.1	500.1	502.1	505.1	510.1	515.1	518.1	522.0	524.0
172.5°	491.1	492.1	496.1	499.1	499.1	500.1	503.1	507.1	509.1	512.1	513.1
175°	492.1	493.1	495.1	497.1	496.1	496.1	498.1	500.1	501.1	503.1	503.1
177.5°	493.1	493.1	494.1	496.1	494.1	493.1	494.1	495.1	496.1	497.1	497.1
180°	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1



TEST NUMBER: P832040

CATALOG NUMBER: S123RDIP-S340D1025U835-4F0-1E-UDD-G4

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°	27.9	28.9	29.9	28.9
92.5°	57.9	53.9	54.9	52.9
95°	135.8	126.8	119.8	115.8
97.5°	310.4	272.5	248.5	237.6
100°	736.7	663.8	624.9	625.9
102.5°	1105.0	1051.1	1020.1	991.2
105°	1344.5	1306.6	1274.7	1269.7
107.5°	1493.3	1475.3	1462.3	1451.4
110°	1551.2	1559.2	1557.2	1555.2



TEST NUMBER: P832040

CATALOG NUMBER: S123RDIP-S340D1025U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	1536.2	1565.1	1575.1	1576.1
115°	1475.3	1519.2	1539.2	1544.2
117.5°	1388.5	1437.4	1467.3	1474.3
120°	1296.6	1352.5	1376.5	1382.5
122.5°	1212.8	1261.7	1288.6	1296.6
125°	1141.9	1185.8	1210.8	1217.8
127.5°	1083.0	1121.0	1143.9	1149.9
130°	1029.1	1065.1	1086.0	1094.0
132.5°	980.2	1016.1	1034.1	1039.1
135°	932.3	962.2	980.2	987.2
137.5°	880.4	911.3	926.3	932.3
140°	831.5	859.4	875.4	874.4
142.5°	783.6	807.5	821.5	820.5
145°	740.6	761.6	769.6	771.6
147.5°	705.7	720.7	728.7	729.7
150°	676.8	687.7	693.7	693.7
152.5°	650.8	660.8	663.8	663.8
155°	628.9	636.8	638.8	639.8
157.5°	608.9	614.9	616.9	616.9
160°	589.9	595.9	595.9	594.9
162.5°	571.0	575.9	575.9	575.0
165°	555.0	559.0	558.0	558.0
167.5°	539.0	542.0	541.0	541.0
170°	525.0	527.0	526.0	526.0
172.5°	513.1	515.1	513.1	512.1
175°	503.1	504.1	503.1	502.1
177.5°	496.1	497.1	495.1	495.1
180°	493.1	493.1	493.1	493.1



TEST NUMBER: P832040

CATALOG NUMBER: S123RDIP-S340D1025U835-4F0-1E-UDD-G4

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	6.90	7.57	8.03	8.69	10.24	11.57	12.24	12.70	13.35	14.91
	3H	8.11	8.71	9.25	9.84	11.40	13.06	13.65	14.19	14.78	16.35
	4H	8.49	9.06	9.64	10.18	11.75	13.54	14.11	14.69	15.23	16.80
	6H	8.76	9.28	9.92	10.41	12.00	13.84	14.36	15.00	15.49	17.08
	8H	8.84	9.34	10.00	10.48	12.06	13.92	14.41	15.07	15.56	17.13
	12H	8.89	9.36	10.05	10.50	12.10	13.94	14.41	15.10	15.55	17.15
4H	2H	7.61	8.18	8.76	9.30	10.88	11.54	12.11	12.70	13.24	14.81
	3H	8.96	9.44	10.12	10.59	12.17	13.19	13.66	14.35	14.81	16.40
	4H	9.41	9.85	10.57	10.99	12.59	13.79	14.22	14.95	15.36	16.97
	6H	9.77	10.14	10.94	11.31	12.90	14.22	14.59	15.39	15.75	17.35
	8H	9.89	10.24	11.06	11.40	13.01	14.35	14.69	15.51	15.85	17.46
	12H	9.96	10.28	11.14	11.44	13.06	14.40	14.72	15.58	15.88	17.50
8H	4H	9.72	10.06	10.88	11.22	12.83	13.74	14.09	14.91	15.25	16.86
	6H	10.17	10.46	11.36	11.66	13.26	14.24	14.52	15.42	15.72	17.33
	8H	10.37	10.61	11.56	11.79	13.42	14.42	14.67	15.61	15.84	17.47
	12H	10.50	10.72	11.69	11.89	13.55	14.53	14.75	15.72	15.92	17.58
12H	4H	9.72	10.03	10.90	11.20	12.82	13.69	14.00	14.87	15.17	16.78
	6H	10.23	10.48	11.42	11.66	13.28	14.21	14.46	15.40	15.63	17.26
	8H	10.44	10.66	11.64	11.83	13.49	14.40	14.61	15.59	15.79	17.45