

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: P832111

Luminaire Tested: S123RDIP-S340D365U940-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832111
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-S340D365U940-4F0-1E-UDD-G1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: -

Summary

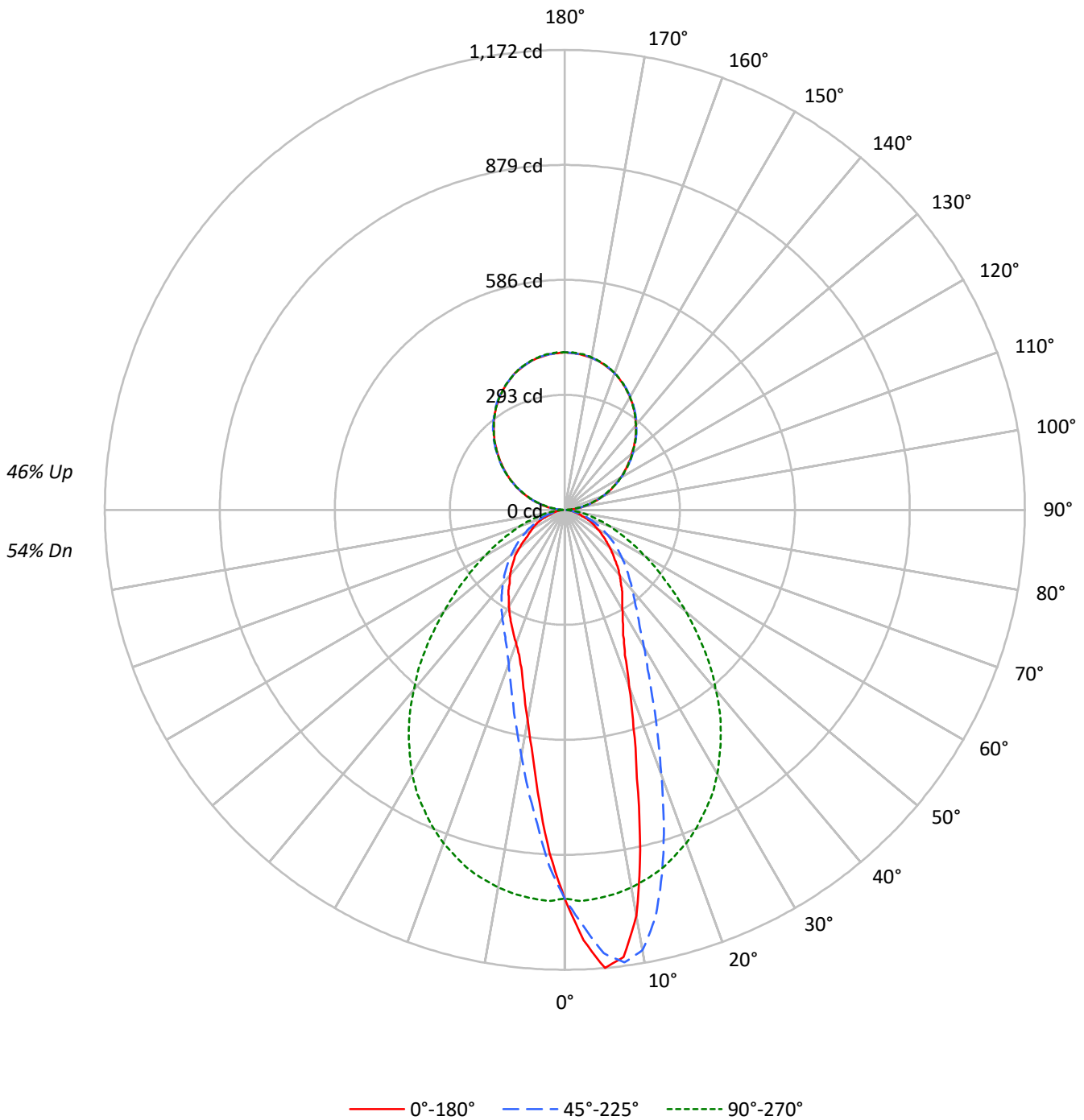
Lumens per Lamp: N/A
Luminaire Lumens: 2425.8 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 22.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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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	50	30	10	50	30	10	50	30	10	0				
RCR																																		
0	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54	54	54	42	42	42	30	30	30	24	24	24	18				
1	100	96	92	89	92	89	86	83	76	74	72	65	63	62	54	53	52	47	47	47	35	35	35	28	28	28	22	22	22	18				
2	91	84	79	74	85	79	74	70	68	64	61	58	55	53	49	47	45	41	41	41	32	32	32	26	26	26	21	21	21	18				
3	84	75	68	63	78	70	64	59	61	56	53	52	49	46	44	42	40	36	36	36	29	29	29	23	23	23	19	19	19	18				
4	77	67	60	54	72	63	56	51	55	50	46	47	44	40	40	38	35	32	32	32	26	26	26	21	21	21	18	18	18	18				
5	72	61	53	47	66	57	50	45	50	44	40	43	39	36	37	34	31	28	28	28	23	23	23	19	19	19	16	16	16	18				
6	66	55	47	42	62	52	45	40	45	40	36	39	35	32	34	31	28	26	26	26	22	22	22	18	18	18	15	15	15	18				
7	62	50	42	37	57	47	40	35	41	36	32	36	32	29	31	28	26	23	23	23	19	19	19	16	16	16	14	14	14	18				
8	58	46	38	33	54	43	37	32	38	33	29	34	29	26	29	26	24	21	21	21	18	18	18	15	15	15	13	13	13	18				
9	54	42	35	30	50	40	33	29	35	30	26	31	27	24	27	24	22	20	20	20	17	17	17	14	14	14	12	12	12	18				
10	51	39	32	27	47	37	31	26	33	28	24	29	25	22	26	22	20	18	18	18	16	16	16	14	14	14	12	12	12	18				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	10663	10663	10663	10663	10663
5°	12661	12257	10730	8674	8053
10°	11471	12450	10676	6949	5962
15°	7899	10674	10564	5680	4716
20°	5495	8219	10352	4789	4145
25°	4187	6264	10043	4257	3821
30°	3644	5008	9657	3952	3539
35°	3347	4225	9110	3696	3282
40°	3053	3773	8396	3444	3048
45°	2757	3449	7623	3206	2813
50°	2503	3183	6713	2972	2524
55°	2263	2924	5838	2744	2164
60°	2028	2659	5072	2493	2045
65°	1872	2358	4365	2239	1936
70°	1520	2039	3808	2027	1574
75°	1335	1622	3227	1680	1385
80°	1209	1370	2641	1407	1308
85°	1099	1198	2001	1284	1198

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 8044 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.3	3.7
10°-20°	208.9	8.6
20°-30°	239.7	9.9
30°-40°	236.3	9.7
40°-50°	208.4	8.6
50°-60°	160.3	6.6
60°-70°	105.4	4.3
70°-80°	51.2	2.1
80°-90°	13.8	0.6
90°-100°	25.8	1.1
100°-110°	78.2	3.2
110°-120°	133.1	5.5
120°-130°	175.0	7.2
130°-140°	196.8	8.1
140°-150°	193.4	8.0
150°-160°	162.9	6.7
160°-170°	108.4	4.5
170°-180°	38.0	1.6
0°-30°	539.0	22.2
0°-40°	775.3	32.0
0°-60°	1143.9	47.2
0°-90°	1314.3	54.2
90°-120°	237.0	9.8
90°-150°	802.3	33.1
90°-180°	1112.0	45.8
0°-180°	2425.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	991	991	991	991	991	
5°	1172	1134	993	803	745	107
15°	709	958	948	510	423	200
25°	352	527	846	358	322	167
35°	255	322	693	281	250	159
45°	181	227	501	211	185	141
55°	121	156	311	146	115	108
65°	74	93	171	88	76	72
75°	32	39	78	40	33	35
85°	9	10	16	10	10	9
90°	10	8	0	8	10	5
95°	25	23	19	23	25	25
105°	75	74	71	74	75	79
115°	134	134	134	134	134	133
125°	194	196	196	196	194	173
135°	254	256	254	256	254	195
145°	308	310	308	310	308	193
155°	353	354	353	354	353	162
165°	384	384	385	384	384	108
175°	399	399	400	399	399	38
180°	401	401	401	401	401	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	990.6	990.6	990.6	990.6	990.6	990.6	990.6	990.6	990.6	990.6	990.6
2.5°	1097.9	1094.4	1090.9	1089.9	1088.9	1085.7	1082.4	1075.1	1067.8	1060.3	1052.8
5°	1171.8	1172.2	1172.6	1171.6	1170.6	1166.3	1162.0	1153.1	1144.2	1134.4	1124.7
7.5°	1149.0	1155.5	1162.0	1163.2	1164.5	1167.7	1171.0	1168.9	1166.9	1163.2	1159.6
10°	1049.5	1049.1	1048.7	1056.0	1063.3	1085.1	1106.8	1118.0	1129.1	1139.1	1149.0
12.5°	887.1	887.7	888.3	912.2	936.2	956.7	977.2	1005.7	1034.1	1064.8	1095.4
15°	708.8	718.7	728.7	750.0	771.3	802.2	833.0	871.2	909.4	957.9	1006.5
17.5°	582.0	586.3	590.6	611.1	631.6	660.8	690.1	733.3	776.6	839.1	901.7
20°	479.7	483.5	487.4	502.2	517.0	545.1	573.1	614.3	655.5	717.5	779.4
22.5°	400.5	408.0	415.5	425.5	435.4	455.7	476.0	518.1	560.1	616.6	673.0
25°	352.5	356.0	359.5	368.0	376.5	396.0	415.5	443.3	471.1	527.4	583.7
27.5°	320.1	321.1	322.1	328.4	334.7	347.3	359.9	385.6	411.4	457.7	504.0
30°	293.2	295.1	296.9	301.8	306.7	315.8	324.9	343.2	361.5	402.9	444.3
32.5°	272.5	273.5	274.6	278.6	282.7	289.4	296.1	310.5	324.9	356.6	388.3
35°	254.7	254.9	255.1	258.1	261.2	267.7	274.2	286.1	298.1	321.5	344.8
37.5°	234.4	235.8	237.2	239.4	241.7	247.4	253.0	262.8	272.5	291.8	311.1
40°	217.3	218.5	219.7	222.4	225.0	229.5	233.9	242.9	251.8	268.5	285.1
42.5°	200.2	201.0	201.9	204.5	207.1	212.6	218.1	225.2	232.3	246.1	259.9
45°	181.1	183.2	185.2	188.1	190.9	195.6	200.2	207.5	214.9	226.6	238.4
47.5°	165.3	166.3	167.3	169.8	172.2	177.9	183.6	190.1	196.6	207.5	218.5
50°	149.5	149.9	150.3	152.5	154.7	159.8	164.9	172.4	179.9	190.1	200.2
52.5°	134.4	135.5	136.5	138.7	140.9	144.4	147.8	155.6	163.3	173.2	183.2
55°	120.6	121.2	121.8	123.5	125.1	129.2	133.2	139.9	146.6	155.8	164.9
57.5°	107.6	108.4	109.3	110.5	111.7	115.3	119.0	124.9	130.8	139.9	149.1
60°	94.2	95.2	96.3	97.7	99.1	101.9	104.8	110.1	115.3	123.5	131.6
62.5°	84.5	84.7	84.9	86.1	87.3	89.4	91.4	95.7	99.9	108.0	116.2
65°	73.5	74.1	74.7	75.3	76.0	77.6	79.2	82.9	86.5	92.6	98.7
67.5°	62.1	62.8	63.4	64.4	65.4	66.8	68.2	70.7	73.1	78.8	84.5
70°	48.3	48.3	48.3	50.0	51.6	54.0	56.5	58.3	60.1	64.8	69.5
72.5°	39.4	39.6	39.8	40.0	40.2	41.6	43.1	46.1	49.1	52.0	54.8
75°	32.1	32.3	32.5	32.7	32.9	33.3	33.7	34.7	35.7	39.0	42.2
77.5°	25.6	25.8	26.0	26.2	26.4	26.8	27.2	27.6	28.0	29.2	30.5
80°	19.5	19.7	19.9	20.1	20.3	20.5	20.7	21.1	21.5	22.1	22.7
82.5°	14.2	14.2	14.2	14.2	14.2	14.6	15.0	15.0	15.0	15.4	15.8
85°	8.9	8.9	8.9	9.1	9.3	9.3	9.3	9.5	9.7	9.7	9.7
87.5°	4.1	3.9	3.7	3.9	4.1	4.1	4.1	4.3	4.5	4.5	4.5
90°	9.5	9.3	9.2	9.0	8.9	8.7	8.4	8.1	7.8	7.6	6.7
92.5°	13.6	13.7	13.8	14.0	14.1	14.1	13.9	13.7	13.4	13.2	12.8
95°	24.6	24.6	24.6	24.6	24.6	24.4	24.2	23.9	23.6	23.3	22.8
97.5°	35.3	35.4	35.4	35.5	35.6	35.4	35.1	34.7	34.4	34.0	33.6
100°	47.9	47.8	47.6	47.5	47.3	47.2	47.0	46.7	46.5	46.3	46.0
102.5°	60.8	60.9	61.0	61.0	61.1	61.0	60.8	60.6	60.4	60.2	59.7
105°	75.0	74.9	74.7	74.6	74.4	74.4	74.4	74.4	74.4	74.4	73.7
107.5°	89.5	89.6	89.6	89.7	89.8	89.7	89.5	89.3	89.1	88.9	88.6
110°	104.3	104.4	104.6	104.7	104.9	104.8	104.5	104.2	104.0	103.7	103.5



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CANDELA DISTRIBUTION (continued):

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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	990.6	990.6	990.6	990.6	990.6	990.6	990.6	990.6	990.6	990.6	990.6
2.5°	1051.8	1050.7	1041.0	1031.2	1021.7	1012.2	1005.0	997.9	986.0	974.0	966.5
5°	1116.9	1109.2	1093.8	1078.4	1055.2	1032.1	1012.6	993.1	968.3	943.5	922.8
7.5°	1153.3	1147.0	1128.3	1109.6	1079.0	1048.3	1017.8	987.4	950.8	914.3	883.0
10°	1154.3	1159.6	1144.2	1128.7	1094.2	1059.7	1018.2	976.8	927.7	878.5	838.1
12.5°	1118.2	1140.9	1137.7	1134.4	1099.3	1064.1	1013.8	963.4	903.1	842.8	792.2
15°	1050.5	1094.6	1107.6	1120.6	1091.6	1062.5	1005.2	948.0	877.1	806.2	748.1
17.5°	963.4	1025.1	1059.5	1093.8	1072.7	1051.6	988.8	926.0	846.2	766.4	703.3
20°	860.2	941.1	994.9	1048.7	1041.0	1033.3	968.5	903.7	817.6	731.5	663.1
22.5°	758.3	843.6	917.9	992.3	1000.2	1008.1	942.7	877.3	783.1	688.8	619.2
25°	670.4	757.1	845.6	934.2	952.0	969.9	907.8	845.6	747.9	650.3	581.0
27.5°	586.5	668.9	766.4	863.9	896.4	928.9	872.0	815.2	713.4	611.7	542.6
30°	518.1	591.8	691.3	790.8	836.1	881.4	829.2	777.0	676.1	575.1	507.5
32.5°	454.3	520.3	620.2	720.1	772.7	825.3	780.2	735.2	638.1	541.0	474.2
35°	403.9	463.0	556.2	649.5	708.3	767.2	730.3	693.3	598.5	503.6	440.5
37.5°	360.7	410.2	497.7	585.3	647.8	710.4	679.5	648.6	559.5	470.3	410.6
40°	324.9	364.7	446.2	527.6	588.9	650.3	623.9	597.5	517.7	437.8	382.0
42.5°	294.3	328.6	401.7	474.8	531.1	587.3	569.8	552.4	480.1	407.8	356.0
45°	267.3	296.1	360.5	424.8	476.6	528.4	514.6	500.8	438.5	376.1	328.6
47.5°	243.3	268.1	325.5	383.0	429.5	476.0	463.2	450.4	398.8	347.3	304.0
50°	221.4	242.5	290.4	338.3	380.2	422.0	411.4	400.9	358.2	315.6	278.2
52.5°	200.6	218.1	261.2	304.2	337.9	371.6	363.5	355.4	322.5	289.6	255.7
55°	180.9	197.0	233.3	269.7	298.5	327.4	319.2	311.1	285.5	259.9	230.1
57.5°	163.1	177.1	206.5	236.0	258.9	281.9	278.0	274.2	252.8	231.5	206.9
60°	144.2	156.8	182.2	207.5	226.0	244.5	240.0	235.6	220.3	205.1	184.0
62.5°	127.3	138.5	158.8	179.1	194.1	209.2	205.9	202.7	191.1	179.5	162.1
65°	109.7	120.6	137.1	153.5	165.3	177.1	174.2	171.4	162.7	153.9	139.9
67.5°	93.6	102.8	117.0	131.2	139.1	147.0	145.4	143.8	137.1	130.4	119.4
70°	77.4	85.3	97.1	108.9	114.3	119.8	120.4	121.0	114.9	108.9	100.7
72.5°	61.1	67.4	78.4	89.4	93.6	97.9	97.7	97.5	93.8	90.2	82.9
75°	46.9	51.6	60.1	68.6	72.3	76.0	76.8	77.6	74.1	70.7	66.6
77.5°	33.7	37.0	43.5	50.0	54.0	58.1	58.5	58.9	57.3	55.6	51.8
80°	23.8	24.8	28.8	32.9	37.2	41.4	42.0	42.6	41.0	39.4	37.0
82.5°	16.4	17.1	18.5	19.9	23.4	26.8	27.6	28.4	27.6	26.8	24.2
85°	10.0	10.2	10.8	11.4	13.0	14.6	15.4	16.2	15.8	15.4	14.0
87.5°	4.5	4.5	4.7	4.9	5.3	5.7	6.7	7.7	7.1	6.5	5.9
90°	5.7	4.8	3.9	3.1	2.4	1.7	1.0	0.3	1.0	1.7	2.4
92.5°	12.4	12.0	11.6	11.1	10.7	10.3	9.9	9.5	9.9	10.3	10.7
95°	22.2	21.6	21.1	20.6	20.1	19.6	19.1	18.6	19.1	19.6	20.1
97.5°	33.2	32.8	32.4	32.0	31.6	31.3	30.9	30.6	30.9	31.3	31.6
100°	45.6	45.3	44.9	44.5	44.1	43.7	43.3	42.9	43.3	43.7	44.1
102.5°	59.2	58.7	58.2	57.9	57.7	57.5	57.2	57.0	57.2	57.5	57.7
105°	73.1	72.5	71.8	71.5	71.3	71.2	71.0	70.9	71.0	71.2	71.3
107.5°	88.3	88.0	87.7	87.6	87.5	87.4	87.4	87.3	87.4	87.4	87.5
110°	103.4	103.3	103.1	103.0	102.8	102.7	102.6	102.4	102.6	102.7	102.8



TEST NUMBER: P832111

CATALOG NUMBER: S123RDIP-S340D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P832111

CATALOG NUMBER: S123RDIP-S340D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	990.6	990.6	990.6	990.6	990.6	990.6	990.6	990.6	990.6	990.6	990.6
2.5°	958.9	947.4	935.8	927.5	919.1	908.8	898.4	898.0	897.6	889.9	882.2
5°	902.1	882.0	861.9	842.2	822.5	802.8	783.1	778.6	774.1	767.4	760.7
7.5°	851.7	819.6	787.5	762.4	737.2	717.5	697.8	684.4	671.0	660.6	650.3
10°	797.7	757.9	718.1	687.6	657.2	635.8	614.5	599.1	583.7	576.3	569.0
12.5°	741.6	698.4	655.1	625.3	595.4	569.8	544.3	530.2	516.2	506.1	495.9
15°	690.1	643.6	597.1	565.4	533.7	509.7	485.8	471.8	457.7	447.6	437.4
17.5°	640.1	593.2	546.3	514.2	482.1	460.4	438.7	425.0	411.4	405.1	398.8
20°	594.6	547.3	500.0	469.7	439.5	418.1	396.8	389.5	382.2	376.3	370.4
22.5°	549.5	504.0	458.6	429.5	400.5	385.0	369.6	363.7	357.8	353.4	348.9
25°	511.8	466.5	421.2	395.8	370.4	358.4	346.5	342.6	338.7	334.3	329.8
27.5°	473.6	430.5	387.5	367.2	346.9	337.1	327.4	322.5	317.6	314.0	310.3
30°	439.9	400.1	360.3	343.4	326.6	318.0	309.5	304.2	298.9	295.5	292.0
32.5°	407.4	372.0	336.7	322.3	307.9	299.5	291.2	286.1	281.1	277.0	272.9
35°	377.3	346.7	316.0	302.8	289.6	281.3	272.9	267.9	262.8	258.7	254.7
37.5°	350.9	323.1	295.3	282.9	270.5	263.2	255.9	250.6	245.3	241.1	236.8
40°	326.1	301.6	277.0	265.0	253.0	245.1	237.2	232.5	227.9	224.0	220.1
42.5°	304.2	281.7	259.1	247.4	235.6	228.1	220.5	215.1	209.6	207.3	205.1
45°	281.1	261.2	241.3	229.9	218.5	210.6	202.7	198.0	193.3	191.3	189.3
47.5°	260.8	242.3	223.8	212.6	201.5	194.3	187.2	183.6	179.9	177.1	174.2
50°	240.9	223.0	205.1	194.3	183.6	177.5	171.4	166.9	162.5	160.4	158.4
52.5°	221.8	205.5	189.3	178.3	167.3	161.4	155.6	151.7	147.8	143.6	139.3
55°	200.2	186.0	171.8	162.1	152.3	146.2	140.1	135.7	131.2	126.7	122.3
57.5°	182.4	168.4	154.3	145.6	136.9	131.0	125.1	120.2	115.3	111.7	108.0
60°	162.9	150.7	138.5	130.0	121.4	115.8	110.1	105.4	100.7	98.9	97.1
62.5°	144.6	133.2	121.8	114.3	106.8	101.3	95.9	92.8	89.8	88.5	87.3
65°	125.9	116.2	106.4	99.5	92.6	87.9	83.3	81.8	80.4	79.4	78.4
67.5°	108.4	100.1	91.8	85.7	79.6	76.4	73.1	71.5	69.9	68.6	67.4
70°	92.6	85.3	78.0	72.7	67.4	64.4	61.3	59.9	58.5	56.3	54.0
72.5°	75.5	69.9	64.2	60.1	56.1	53.4	50.8	47.9	45.1	43.1	41.0
75°	62.5	56.9	51.2	47.3	43.5	40.4	37.4	36.4	35.3	34.7	34.1
77.5°	47.9	43.1	38.2	35.1	32.1	30.7	29.2	28.6	28.0	27.8	27.6
80°	34.5	30.5	26.4	24.8	23.2	22.7	22.3	21.9	21.5	21.3	21.1
82.5°	21.5	19.5	17.5	17.1	16.7	16.4	16.2	16.0	15.8	15.6	15.4
85°	12.6	11.8	11.0	10.8	10.6	10.4	10.2	10.2	10.2	10.2	10.2
87.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.1	4.9
90°	3.1	3.9	4.8	5.7	6.7	7.6	7.8	8.1	8.4	8.7	8.9
92.5°	11.1	11.6	12.0	12.4	12.8	13.2	13.4	13.7	13.9	14.1	14.1
95°	20.6	21.1	21.6	22.2	22.8	23.3	23.6	23.9	24.2	24.4	24.6
97.5°	32.0	32.4	32.8	33.2	33.6	34.0	34.4	34.7	35.1	35.4	35.6
100°	44.5	44.9	45.3	45.6	46.0	46.3	46.5	46.7	47.0	47.2	47.3
102.5°	57.9	58.2	58.7	59.2	59.7	60.2	60.4	60.6	60.8	61.0	61.1
105°	71.5	71.8	72.5	73.1	73.7	74.4	74.4	74.4	74.4	74.4	74.4
107.5°	87.6	87.7	88.0	88.3	88.6	88.9	89.1	89.3	89.5	89.7	89.8
110°	103.0	103.1	103.3	103.4	103.5	103.7	104.0	104.2	104.5	104.8	104.9



TEST NUMBER: P832111

CATALOG NUMBER: S123RDIP-S340D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P832111

CATALOG NUMBER: S123RDIP-S340D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	990.6	990.6	990.6	990.6
2.5°	880.2	878.1	877.3	876.5
5°	754.4	748.1	746.7	745.3
7.5°	647.6	645.0	636.3	627.5
10°	560.9	552.8	549.1	545.5
12.5°	488.4	480.9	479.7	478.5
15°	432.2	426.9	425.0	423.2
17.5°	395.2	391.5	389.3	387.1
20°	367.8	365.1	363.5	361.9
22.5°	346.9	344.8	343.6	342.4
25°	326.8	323.7	322.7	321.7
27.5°	307.7	305.0	304.0	303.0
30°	289.8	287.6	286.1	284.7
32.5°	270.3	267.7	266.8	266.0
35°	253.0	251.4	250.6	249.8
37.5°	234.8	232.7	231.5	230.3
40°	219.1	218.1	217.5	216.9
42.5°	203.3	201.5	201.3	201.0
45°	187.4	185.6	185.2	184.8
47.5°	172.6	171.0	170.8	170.6
50°	156.2	153.9	152.3	150.7
52.5°	137.3	135.3	133.8	132.4
55°	120.0	117.8	116.6	115.3
57.5°	107.0	106.0	105.4	104.8
60°	96.5	95.9	95.4	95.0
62.5°	86.7	86.1	86.1	86.1
65°	77.8	77.2	76.6	76.0
67.5°	66.2	65.0	64.8	64.6
70°	52.2	50.4	50.2	50.0
72.5°	40.8	40.6	40.2	39.8
75°	33.7	33.3	33.3	33.3
77.5°	27.2	26.8	26.8	26.8
80°	20.9	20.7	20.9	21.1
82.5°	15.4	15.4	15.2	15.0
85°	10.0	9.7	9.7	9.7
87.5°	4.9	4.9	4.9	4.9
90°	9.0	9.2	9.3	9.5
92.5°	14.0	13.8	13.7	13.6
95°	24.6	24.6	24.6	24.6
97.5°	35.5	35.4	35.4	35.3
100°	47.5	47.6	47.8	47.9
102.5°	61.0	61.0	60.9	60.8
105°	74.6	74.7	74.9	75.0
107.5°	89.7	89.6	89.6	89.5
110°	104.7	104.6	104.4	104.3



TEST NUMBER: P832111

CATALOG NUMBER: S123RDIP-S340D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P832111

CATALOG NUMBER: S123RDIP-S340D365U940-4F0-1E-UDD-G1

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	9.35	10.20	10.29	11.14	12.35	14.02	14.86	14.95	15.80	17.01
	3H	10.58	11.33	11.52	12.28	13.52	15.52	16.27	16.46	17.22	18.46
	4H	10.96	11.67	11.92	12.62	13.87	16.01	16.72	16.97	17.67	18.92
	6H	11.24	11.89	12.21	12.85	14.11	16.32	16.97	17.29	17.93	19.19
	8H	11.33	11.95	12.30	12.93	14.18	16.40	17.02	17.37	18.00	19.25
	12H	11.38	11.97	12.36	12.94	14.22	16.43	17.02	17.41	17.99	19.27
4H	2H	10.08	10.79	11.04	11.74	12.99	14.01	14.72	14.98	15.68	16.93
	3H	11.45	12.04	12.42	13.02	14.28	15.67	16.26	16.65	17.25	18.51
	4H	11.91	12.44	12.89	13.42	14.71	16.28	16.82	17.26	17.80	19.08
	6H	12.27	12.73	13.27	13.74	15.02	16.72	17.18	17.71	18.18	19.47
	8H	12.40	12.83	13.39	13.82	15.12	16.85	17.28	17.84	18.28	19.57
	12H	12.47	12.86	13.49	13.87	15.18	16.91	17.30	17.92	18.31	19.61
8H	4H	12.22	12.65	13.21	13.65	14.94	16.25	16.68	17.24	17.67	18.97
	6H	12.68	13.04	13.70	14.08	15.37	16.74	17.10	17.76	18.14	19.43
	8H	12.88	13.19	13.90	14.21	15.53	16.93	17.24	17.96	18.27	19.58
	12H	13.02	13.29	14.05	14.31	15.67	17.05	17.32	18.08	18.34	19.70
12H	4H	12.23	12.62	13.24	13.63	14.93	16.20	16.59	17.21	17.60	18.90
	6H	12.74	13.05	13.77	14.08	15.39	16.72	17.03	17.75	18.06	19.37
	8H	12.96	13.23	13.99	14.25	15.61	16.91	17.19	17.94	18.21	19.57