

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: P832247

Luminaire Tested: S123RDIP-S560D365U940-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832247
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-S560D365U940-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

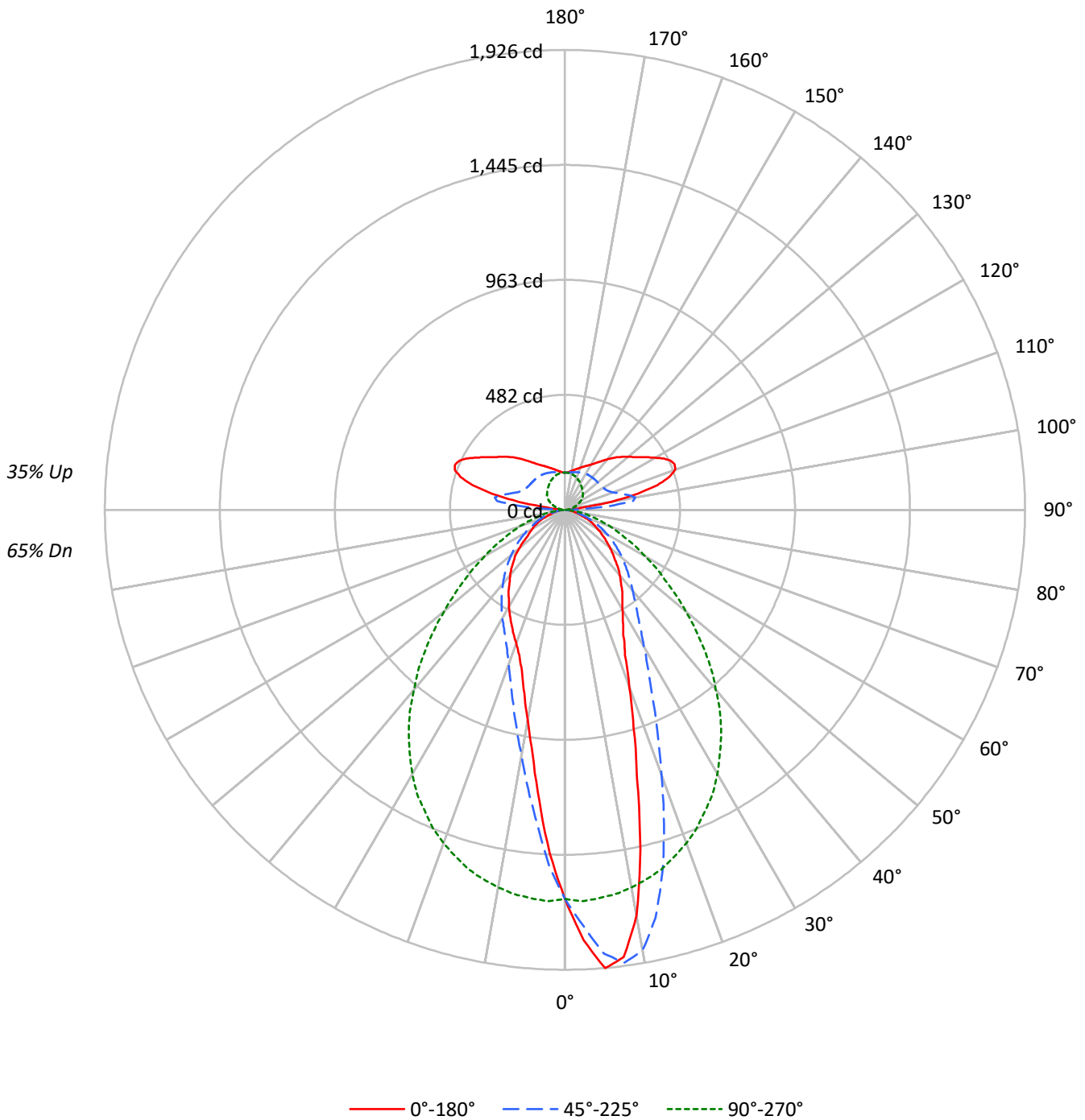
Lumens per Lamp: N/A
Luminaire Lumens: 3331.1 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 29.6
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

TEST NUMBER: P832247

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-UDD-G4

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	111	111	111	111	104	104	104	104	92	92	92	80	80	80	70	70	70	65																												
1	102	98	94	91	96	92	89	86	82	80	77	72	70	69	63	62	61	57																												
2	94	87	81	76	88	82	77	73	73	69	66	65	62	59	57	55	53	49																												
3	86	78	71	65	81	73	67	62	66	61	57	58	55	52	52	49	47	43																												
4	80	70	62	56	75	66	59	54	59	54	50	53	49	45	47	44	41	38																												
5	74	63	55	49	69	60	53	48	54	48	44	48	44	40	43	40	37	34																												
6	69	57	49	44	65	54	47	42	49	43	39	44	40	36	40	36	33	31																												
7	64	52	44	39	60	50	43	38	45	39	35	41	36	33	37	33	30	28																												
8	60	48	40	35	56	46	39	34	42	36	32	38	33	30	34	30	28	25																												
9	56	44	37	32	53	42	36	31	39	33	29	35	31	27	32	28	25	23																												
10	53	41	34	29	50	39	33	28	36	31	27	33	28	25	30	26	23	22																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	17530	17530	17530	17530	17530
5°	20815	20151	17640	14260	13239
10°	18859	20467	17552	11425	9802
15°	12985	17549	17367	9338	7754
20°	9033	13511	17018	7874	6814
25°	6884	10297	16511	6999	6280
30°	5992	8233	15877	6498	5818
35°	5502	6945	14977	6076	5397
40°	5019	6202	13801	5663	5011
45°	4533	5672	12533	5270	4625
50°	4114	5233	11035	4886	4148
55°	3721	4806	9599	4511	3558
60°	3335	4370	8338	4097	3363
65°	3079	3876	7177	3683	3181
70°	2502	3352	6263	3330	2584
75°	2196	2666	5303	2761	2279
80°	1990	2256	4345	2318	2151
85°	1815	1976	3298	2100	1976

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 13224 cd/sqm



TEST NUMBER: P832247

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-UDD-G4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.4	4.5
10°-20°	343.5	10.3
20°-30°	394.1	11.8
30°-40°	388.5	11.7
40°-50°	342.6	10.3
50°-60°	263.5	7.9
60°-70°	173.3	5.2
70°-80°	84.2	2.5
80°-90°	22.1	0.7
90°-100°	84.5	2.5
100°-110°	247.3	7.4
110°-120°	241.5	7.3
120°-130°	192.3	5.8
130°-140°	151.7	4.6
140°-150°	113.2	3.4
150°-160°	78.9	2.4
160°-170°	46.4	1.4
170°-180°	15.1	0.5
0°-30°	886.1	26.6
0°-40°	1274.5	38.3
0°-60°	1880.6	56.5
0°-90°	2160.1	64.8
90°-120°	573.3	17.2
90°-150°	1030.6	30.9
90°-180°	1171.0	35.2
0°-180°	3331.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1629	1629	1629	1629	1629	
5°	1926	1865	1633	1320	1225	176
15°	1165	1575	1558	838	696	329
25°	580	867	1390	589	529	274
35°	419	528	1140	462	411	261
45°	298	373	823	346	304	231
55°	198	256	512	240	190	178
65°	121	152	282	145	125	118
75°	53	64	128	66	55	57
85°	15	16	27	17	16	16
90°	9	8	1	8	9	6
95°	37	187	11	187	37	59
105°	401	253	37	253	401	400
115°	488	194	65	194	488	475
125°	384	181	90	181	384	348
135°	312	178	105	178	312	242
145°	244	176	120	176	244	155
155°	202	170	136	170	202	94
165°	176	163	149	163	176	50
175°	158	157	155	157	158	15
180°	156	156	156	156	156	



TEST NUMBER: P832247

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6
2.5°	1804.9	1799.2	1793.5	1791.8	1790.2	1784.8	1779.5	1767.5	1755.5	1743.1	1730.8
5°	1926.4	1927.1	1927.7	1926.1	1924.4	1917.4	1910.4	1895.7	1881.0	1865.0	1848.9
7.5°	1889.0	1899.7	1910.4	1912.4	1914.4	1919.7	1925.1	1921.7	1918.4	1912.4	1906.4
10°	1725.4	1724.7	1724.1	1736.1	1748.1	1783.8	1819.6	1837.9	1856.3	1872.6	1889.0
12.5°	1458.3	1459.3	1460.3	1499.7	1539.1	1572.8	1606.6	1653.3	1700.0	1750.4	1800.9
15°	1165.2	1181.5	1197.9	1233.0	1268.0	1318.8	1369.5	1432.3	1495.0	1574.8	1654.6
17.5°	956.9	963.9	970.9	1004.6	1038.3	1086.4	1134.5	1205.6	1276.7	1379.5	1482.4
20°	788.6	794.9	801.3	825.6	850.0	896.1	942.2	1009.9	1077.7	1179.5	1281.4
22.5°	658.4	670.7	683.1	699.4	715.8	749.2	782.6	851.7	920.8	1013.6	1106.4
25°	579.6	585.3	590.9	605.0	619.0	651.0	683.1	728.8	774.6	867.0	959.5
27.5°	526.2	527.8	529.5	539.9	550.2	570.9	591.6	634.0	676.4	752.5	828.7
30°	482.1	485.1	488.1	496.1	504.1	519.2	534.2	564.2	594.3	662.4	730.5
32.5°	448.0	449.7	451.4	458.1	464.7	475.8	486.8	510.5	534.2	586.3	638.3
35°	418.7	419.0	419.3	424.3	429.3	440.0	450.7	470.4	490.1	528.5	566.9
37.5°	385.3	387.6	390.0	393.6	397.3	406.6	416.0	432.0	448.0	479.8	511.5
40°	357.2	359.2	361.2	365.6	369.9	377.3	384.6	399.3	414.0	441.4	468.7
42.5°	329.2	330.5	331.9	336.2	340.5	349.6	358.6	370.3	381.9	404.6	427.3
45°	297.8	301.1	304.5	309.2	313.8	321.5	329.2	341.2	353.2	372.6	392.0
47.5°	271.8	273.4	275.1	279.1	283.1	292.5	301.8	312.5	323.2	341.2	359.2
50°	245.7	246.4	247.1	250.7	254.4	262.8	271.1	283.5	295.8	312.5	329.2
52.5°	221.0	222.7	224.4	228.0	231.7	237.4	243.1	255.7	268.4	284.8	301.1
55°	198.3	199.3	200.3	203.0	205.7	212.3	219.0	230.0	241.0	256.1	271.1
57.5°	176.9	178.3	179.6	181.6	183.6	189.6	195.6	205.3	215.0	230.0	245.1
60°	154.9	156.6	158.3	160.6	162.9	167.6	172.3	181.0	189.6	203.0	216.3
62.5°	138.9	139.2	139.6	141.6	143.6	146.9	150.2	157.2	164.3	177.6	191.0
65°	120.9	121.9	122.9	123.9	124.9	127.5	130.2	136.2	142.2	152.2	162.3
67.5°	102.2	103.2	104.2	105.8	107.5	109.8	112.2	116.2	120.2	129.5	138.9
70°	79.5	79.5	79.5	82.1	84.8	88.8	92.8	95.8	98.8	106.5	114.2
72.5°	64.8	65.1	65.4	65.8	66.1	68.4	70.8	75.8	80.8	85.5	90.1
75°	52.8	53.1	53.4	53.8	54.1	54.8	55.4	57.1	58.8	64.1	69.4
77.5°	42.1	42.4	42.7	43.1	43.4	44.1	44.7	45.4	46.1	48.1	50.1
80°	32.1	32.4	32.7	33.1	33.4	33.7	34.1	34.7	35.4	36.4	37.4
82.5°	23.4	23.4	23.4	23.4	23.4	24.0	24.7	24.7	24.7	25.4	26.0
85°	14.7	14.7	14.7	15.0	15.4	15.4	15.4	15.7	16.0	16.0	16.0
87.5°	6.7	6.3	6.0	6.3	6.7	6.7	6.7	7.0	7.3	7.3	7.3
90°	9.1	9.5	9.1	8.8	9.1	8.5	8.2	7.9	7.6	7.9	6.9
92.5°	16.7	17.3	17.0	18.3	18.9	21.1	24.3	31.2	43.8	58.6	64.9
95°	36.6	37.8	40.0	42.9	48.8	60.2	76.9	113.4	151.6	186.9	166.4
97.5°	75.0	78.5	86.0	98.0	119.1	155.0	196.6	260.6	297.2	287.4	214.6
100°	197.6	197.3	209.6	232.6	264.4	309.1	346.0	371.5	360.5	298.4	201.7
102.5°	312.9	322.0	331.8	348.8	371.8	396.1	413.7	408.4	363.6	277.9	182.8
105°	400.8	402.4	412.5	424.5	439.0	447.1	441.2	409.6	343.8	253.4	168.0
107.5°	458.2	461.6	465.7	471.4	473.3	464.8	440.2	390.7	315.4	231.6	157.2
110°	490.9	491.6	492.2	489.7	480.9	458.8	419.1	361.1	289.0	213.6	151.6



TEST NUMBER: P832247

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	497.6	497.2	494.1	485.0	467.0	437.1	391.4	331.8	266.0	201.7	148.4
115°	487.5	485.9	479.6	465.7	442.1	407.8	361.4	306.6	248.3	193.8	148.1
117.5°	465.4	463.2	453.8	438.3	413.7	378.1	335.6	287.1	236.7	188.4	148.4
120°	436.4	434.5	427.0	409.3	384.4	352.6	314.8	272.3	227.8	185.0	149.7
122.5°	409.3	406.8	398.3	382.9	361.4	332.4	298.1	260.6	220.6	182.8	151.9
125°	384.4	382.2	374.4	360.5	340.3	315.1	284.9	250.5	214.6	180.9	154.1
127.5°	363.0	361.1	353.9	341.9	323.6	300.3	272.6	241.4	208.9	179.9	156.6
130°	345.4	342.8	336.2	324.9	308.2	286.8	261.2	232.9	204.5	179.0	159.1
132.5°	328.0	326.5	320.8	309.4	294.0	273.8	250.5	225.0	200.4	178.7	161.0
135°	311.6	309.4	303.8	294.3	278.9	260.9	240.4	218.1	196.9	178.4	162.9
137.5°	294.3	292.4	287.7	277.9	264.7	248.6	230.3	211.4	193.8	177.7	164.2
140°	276.0	276.4	271.3	262.5	250.5	237.0	221.8	205.8	191.0	177.4	165.4
142.5°	259.0	259.3	254.9	247.4	237.6	226.3	213.6	200.4	188.4	176.8	166.4
145°	243.6	243.0	240.4	233.8	225.9	216.8	206.7	196.3	186.2	176.1	166.7
147.5°	230.3	230.0	227.5	222.8	216.5	209.9	201.4	192.8	184.0	175.2	166.7
150°	219.0	219.0	217.1	213.6	208.9	202.9	196.3	189.1	181.8	173.9	166.7
152.5°	209.6	209.6	208.6	205.5	202.0	197.3	191.6	185.6	179.3	172.4	165.7
155°	202.0	201.7	201.0	198.5	195.7	191.9	187.2	182.1	176.8	170.5	165.1
157.5°	194.7	194.7	194.1	192.2	189.7	186.5	182.8	178.4	173.9	168.9	164.2
160°	187.8	188.1	188.1	186.2	184.0	181.8	178.7	175.2	171.1	167.0	163.5
162.5°	181.5	181.8	181.8	180.2	179.0	177.1	174.3	171.4	168.3	165.1	162.3
165°	176.1	176.1	176.5	175.2	173.9	172.4	170.2	168.3	165.7	163.2	161.0
167.5°	170.8	170.8	171.1	170.2	169.5	168.3	167.0	165.4	163.2	161.3	159.8
170°	166.1	166.1	166.4	165.7	165.4	164.8	163.5	162.6	161.0	159.4	158.5
172.5°	161.7	162.0	162.6	162.0	162.0	161.7	160.7	160.1	158.8	157.9	157.6
175°	158.5	158.8	159.1	158.8	158.8	158.8	158.2	157.9	157.2	156.6	156.6
177.5°	156.3	156.3	156.9	156.6	156.9	156.9	156.6	156.3	156.0	155.7	156.0
180°	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7



TEST NUMBER: P832247

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6
2.5°	1729.1	1727.4	1711.4	1695.4	1679.7	1664.0	1652.3	1640.6	1620.9	1601.2	1588.9
5°	1836.3	1823.6	1798.2	1772.8	1734.8	1696.7	1664.6	1632.6	1591.9	1551.1	1517.1
7.5°	1896.0	1885.7	1854.9	1824.2	1773.8	1723.4	1673.3	1623.2	1563.2	1503.1	1451.6
10°	1897.7	1906.4	1881.0	1855.6	1798.9	1742.1	1674.0	1605.9	1525.1	1444.3	1377.9
12.5°	1838.3	1875.6	1870.3	1865.0	1807.2	1749.4	1666.6	1583.9	1484.7	1385.5	1302.4
15°	1727.1	1799.5	1820.9	1842.3	1794.5	1746.8	1652.6	1558.5	1442.0	1325.4	1230.0
17.5°	1583.9	1685.3	1741.8	1798.2	1763.5	1728.7	1625.6	1522.4	1391.2	1260.0	1156.2
20°	1414.2	1547.1	1635.6	1724.1	1711.4	1698.7	1592.2	1485.7	1344.1	1202.6	1090.1
22.5°	1246.6	1386.9	1509.1	1631.3	1644.3	1657.3	1549.8	1442.3	1287.4	1132.5	1018.0
25°	1102.1	1244.6	1390.2	1535.8	1565.2	1594.5	1492.4	1390.2	1229.6	1069.0	955.2
27.5°	964.2	1099.7	1260.0	1420.3	1473.7	1527.1	1433.6	1340.1	1172.9	1005.6	892.1
30°	851.7	972.9	1136.5	1300.1	1374.5	1449.0	1363.2	1277.4	1111.4	945.5	834.3
32.5°	746.9	855.4	1019.6	1183.9	1270.4	1356.8	1282.7	1208.6	1049.0	889.4	779.6
35°	664.1	761.2	914.5	1067.7	1164.5	1261.3	1200.6	1139.8	983.9	828.0	724.2
37.5°	592.9	674.4	818.3	962.2	1065.0	1167.9	1117.1	1066.4	919.8	773.2	675.1
40°	534.2	599.6	733.5	867.4	968.2	1069.0	1025.6	982.2	851.0	719.8	628.0
42.5°	483.8	540.2	660.4	780.6	873.1	965.5	936.8	908.1	789.3	670.4	585.3
45°	439.4	486.8	592.6	698.4	783.6	868.7	846.0	823.3	720.8	618.3	540.2
47.5°	400.0	440.7	535.2	629.7	706.1	782.6	761.5	740.5	655.7	570.9	499.8
50°	363.9	398.6	477.4	556.2	625.0	693.8	676.4	659.0	588.9	518.8	457.4
52.5°	329.9	358.6	429.3	500.1	555.5	611.0	597.6	584.3	530.2	476.1	420.3
55°	297.5	323.8	383.6	443.4	490.8	538.2	524.8	511.5	469.4	427.3	378.3
57.5°	268.1	291.1	339.5	388.0	425.7	463.4	457.1	450.7	415.7	380.6	340.2
60°	237.0	257.7	299.5	341.2	371.6	402.0	394.6	387.3	362.2	337.2	302.5
62.5°	209.3	227.7	261.1	294.5	319.2	343.9	338.5	333.2	314.2	295.1	266.4
65°	180.3	198.3	225.4	252.4	271.8	291.1	286.5	281.8	267.4	253.1	230.0
67.5°	153.9	168.9	192.3	215.7	228.7	241.7	239.0	236.4	225.4	214.3	196.3
70°	127.2	140.2	159.6	179.0	188.0	197.0	198.0	199.0	189.0	179.0	165.6
72.5°	100.5	110.8	128.9	146.9	153.9	160.9	160.6	160.3	154.2	148.2	136.2
75°	77.1	84.8	98.8	112.8	118.9	124.9	126.2	127.5	121.9	116.2	109.5
77.5°	55.4	60.8	71.4	82.1	88.8	95.5	96.2	96.8	94.1	91.5	85.1
80°	39.1	40.7	47.4	54.1	61.1	68.1	69.1	70.1	67.4	64.8	60.8
82.5°	27.0	28.0	30.4	32.7	38.4	44.1	45.4	46.7	45.4	44.1	39.7
85°	16.4	16.7	17.7	18.7	21.4	24.0	25.4	26.7	26.0	25.4	23.0
87.5°	7.3	7.3	7.7	8.0	8.7	9.3	11.0	12.7	11.7	10.7	9.7
90°	6.0	5.0	4.1	3.5	2.8	1.9	1.3	0.6	1.3	1.9	2.8
92.5°	48.5	31.8	21.7	16.1	12.9	10.1	6.9	4.7	6.9	10.1	12.9
95°	114.7	67.7	41.0	28.7	20.5	15.1	11.7	10.7	11.7	15.1	20.5
97.5°	127.6	73.1	46.6	33.1	24.9	20.2	17.3	17.0	17.3	20.2	24.9
100°	118.8	72.2	50.1	37.8	30.3	25.8	23.6	23.3	23.6	25.8	30.3
102.5°	111.2	73.4	54.2	43.2	36.6	32.5	30.6	29.9	30.6	32.5	36.6
105°	108.4	75.9	58.9	49.2	43.2	39.4	37.5	36.6	37.5	39.4	43.2
107.5°	107.8	80.0	64.9	55.8	50.1	46.3	44.4	43.5	44.4	46.3	50.1
110°	109.3	85.4	71.2	62.4	57.0	53.6	52.0	51.0	52.0	53.6	57.0



TEST NUMBER: P832247

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	112.5	90.8	77.8	69.3	64.0	60.5	58.9	58.0	58.9	60.5	64.0
115°	116.0	96.7	84.8	76.3	70.9	67.7	65.9	64.6	65.9	67.7	70.9
117.5°	120.4	103.0	91.1	83.2	77.2	74.4	72.8	71.2	72.8	74.4	77.2
120°	125.4	109.0	97.7	89.8	83.8	80.7	79.1	78.1	79.1	80.7	83.8
122.5°	130.1	115.3	104.3	95.8	90.1	86.7	85.1	84.1	85.1	86.7	90.1
125°	135.2	121.3	110.3	101.8	95.8	92.3	90.4	89.8	90.4	92.3	95.8
127.5°	139.3	126.7	116.0	107.5	100.8	97.4	95.2	94.2	95.2	97.4	100.8
130°	143.4	131.4	121.0	112.5	105.9	102.1	99.3	98.3	99.3	102.1	105.9
132.5°	147.2	135.5	125.4	117.2	110.6	105.9	102.7	101.5	102.7	105.9	110.6
135°	150.3	139.6	129.8	121.3	114.7	110.0	106.5	105.2	106.5	110.0	114.7
137.5°	152.8	142.4	133.0	125.1	118.5	113.4	110.0	108.7	110.0	113.4	118.5
140°	154.7	145.3	136.1	128.3	121.9	116.9	113.8	112.2	113.8	116.9	121.9
142.5°	156.6	147.5	138.6	131.4	125.1	120.7	117.2	116.0	117.2	120.7	125.1
145°	157.9	149.4	141.2	133.9	128.6	123.8	121.0	120.1	121.0	123.8	128.6
147.5°	158.8	150.9	143.4	137.1	131.7	127.6	124.8	124.2	124.8	127.6	131.7
150°	159.1	152.5	145.3	139.6	135.2	131.1	128.6	128.3	128.6	131.1	135.2
152.5°	159.8	153.5	147.5	142.1	138.3	134.9	132.3	132.3	132.3	134.9	138.3
155°	159.8	154.7	149.4	145.0	141.5	138.3	136.4	136.4	136.4	138.3	141.5
157.5°	160.1	155.4	150.9	147.5	144.3	141.5	139.9	139.6	139.9	141.5	144.3
160°	160.1	156.3	152.5	149.4	147.2	144.6	143.4	143.4	143.4	144.6	147.2
162.5°	159.8	156.6	153.5	150.9	149.0	147.2	146.2	146.2	146.2	147.2	149.0
165°	159.1	156.9	154.4	152.2	150.9	149.4	148.7	149.0	148.7	149.4	150.9
167.5°	158.8	156.9	155.0	153.5	152.5	151.3	150.9	151.3	150.9	151.3	152.5
170°	157.9	156.6	155.0	154.4	153.8	152.8	152.5	153.1	152.5	152.8	153.8
172.5°	157.6	156.6	155.4	155.0	154.7	154.1	154.1	154.4	154.1	154.1	154.7
175°	156.9	156.3	155.7	155.4	155.4	154.7	155.0	155.4	155.0	154.7	155.4
177.5°	156.6	156.0	155.7	155.7	155.7	155.4	155.7	156.0	155.7	155.4	155.7
180°	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7



TEST NUMBER: P832247

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6	1628.6
2.5°	1576.5	1557.5	1538.4	1524.8	1511.1	1494.0	1477.0	1476.3	1475.7	1463.0	1450.3
5°	1483.0	1450.0	1416.9	1384.5	1352.1	1319.8	1287.4	1280.0	1272.7	1261.7	1250.7
7.5°	1400.2	1347.5	1294.7	1253.3	1211.9	1179.5	1147.2	1125.1	1103.1	1086.1	1069.0
10°	1311.4	1246.0	1180.5	1130.5	1080.4	1045.3	1010.3	984.9	959.5	947.5	935.5
12.5°	1219.3	1148.2	1077.0	1028.0	978.9	936.8	894.8	871.7	848.7	832.0	815.3
15°	1134.5	1058.0	981.6	929.5	877.4	838.0	798.6	775.6	752.5	735.8	719.1
17.5°	1052.3	975.2	898.1	845.3	792.6	756.9	721.1	698.8	676.4	666.1	655.7
20°	977.6	899.8	822.0	772.2	722.5	687.4	652.4	640.4	628.3	618.7	609.0
22.5°	903.4	828.7	753.9	706.1	658.4	633.0	607.6	598.0	588.3	580.9	573.6
25°	841.3	766.9	692.4	650.7	609.0	589.3	569.6	563.2	556.9	549.5	542.2
27.5°	778.6	707.8	637.0	603.6	570.2	554.2	538.2	530.2	522.2	516.2	510.1
30°	723.1	657.7	592.3	564.6	536.9	522.8	508.8	500.1	491.4	485.8	480.1
32.5°	669.7	611.6	553.5	529.8	506.1	492.4	478.8	470.4	462.1	455.4	448.7
35°	620.3	569.9	519.5	497.8	476.1	462.4	448.7	440.4	432.0	425.3	418.7
37.5°	576.9	531.2	485.4	465.1	444.7	432.7	420.7	412.0	403.3	396.3	389.3
40°	536.2	495.8	455.4	435.7	416.0	403.0	390.0	382.3	374.6	368.3	361.9
42.5°	500.1	463.1	426.0	406.6	387.3	374.9	362.6	353.6	344.5	340.9	337.2
45°	462.1	429.3	396.6	377.9	359.2	346.2	333.2	325.5	317.8	314.5	311.2
47.5°	428.7	398.3	367.9	349.6	331.2	319.5	307.8	301.8	295.8	291.1	286.5
50°	396.0	366.6	337.2	319.5	301.8	291.8	281.8	274.4	267.1	263.8	260.4
52.5°	364.6	337.9	311.2	293.1	275.1	265.4	255.7	249.4	243.1	236.0	229.0
55°	329.2	305.8	282.4	266.4	250.4	240.4	230.4	223.0	215.7	208.3	201.0
57.5°	299.8	276.8	253.7	239.4	225.0	215.3	205.7	197.6	189.6	183.6	177.6
60°	267.8	247.7	227.7	213.7	199.7	190.3	181.0	173.3	165.6	162.6	159.6
62.5°	237.7	219.0	200.3	188.0	175.6	166.6	157.6	152.6	147.6	145.6	143.6
65°	207.0	191.0	174.9	163.6	152.2	144.6	136.9	134.5	132.2	130.5	128.9
67.5°	178.3	164.6	150.9	140.9	130.9	125.5	120.2	117.5	114.8	112.8	110.8
70°	152.2	140.2	128.2	119.5	110.8	105.8	100.8	98.5	96.2	92.5	88.8
72.5°	124.2	114.8	105.5	98.8	92.1	87.8	83.5	78.8	74.1	70.8	67.4
75°	102.8	93.5	84.1	77.8	71.4	66.4	61.4	59.8	58.1	57.1	56.1
77.5°	78.8	70.8	62.8	57.8	52.8	50.4	48.1	47.1	46.1	45.7	45.4
80°	56.8	50.1	43.4	40.7	38.1	37.4	36.7	36.1	35.4	35.1	34.7
82.5°	35.4	32.1	28.7	28.0	27.4	27.0	26.7	26.4	26.0	25.7	25.4
85°	20.7	19.4	18.0	17.7	17.4	17.0	16.7	16.7	16.7	16.7	16.7
87.5°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.3	8.0
90°	3.5	4.1	5.0	6.0	6.9	7.9	7.6	7.9	8.2	8.5	9.1
92.5°	16.1	21.7	31.8	48.5	64.9	58.6	43.8	31.2	24.3	21.1	18.9
95°	28.7	41.0	67.7	114.7	166.4	186.9	151.6	113.4	76.9	60.2	48.8
97.5°	33.1	46.6	73.1	127.6	214.6	287.4	297.2	260.6	196.6	155.0	119.1
100°	37.8	50.1	72.2	118.8	201.7	298.4	360.5	371.5	346.0	309.1	264.4
102.5°	43.2	54.2	73.4	111.2	182.8	277.9	363.6	408.4	413.7	396.1	371.8
105°	49.2	58.9	75.9	108.4	168.0	253.4	343.8	409.6	441.2	447.1	439.0
107.5°	55.8	64.9	80.0	107.8	157.2	231.6	315.4	390.7	440.2	464.8	473.3
110°	62.4	71.2	85.4	109.3	151.6	213.6	289.0	361.1	419.1	458.8	480.9



TEST NUMBER: P832247

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	69.3	77.8	90.8	112.5	148.4	201.7	266.0	331.8	391.4	437.1	467.0
115°	76.3	84.8	96.7	116.0	148.1	193.8	248.3	306.6	361.4	407.8	442.1
117.5°	83.2	91.1	103.0	120.4	148.4	188.4	236.7	287.1	335.6	378.1	413.7
120°	89.8	97.7	109.0	125.4	149.7	185.0	227.8	272.3	314.8	352.6	384.4
122.5°	95.8	104.3	115.3	130.1	151.9	182.8	220.6	260.6	298.1	332.4	361.4
125°	101.8	110.3	121.3	135.2	154.1	180.9	214.6	250.5	284.9	315.1	340.3
127.5°	107.5	116.0	126.7	139.3	156.6	179.9	208.9	241.4	272.6	300.3	323.6
130°	112.5	121.0	131.4	143.4	159.1	179.0	204.5	232.9	261.2	286.8	308.2
132.5°	117.2	125.4	135.5	147.2	161.0	178.7	200.4	225.0	250.5	273.8	294.0
135°	121.3	129.8	139.6	150.3	162.9	178.4	196.9	218.1	240.4	260.9	278.9
137.5°	125.1	133.0	142.4	152.8	164.2	177.7	193.8	211.4	230.3	248.6	264.7
140°	128.3	136.1	145.3	154.7	165.4	177.4	191.0	205.8	221.8	237.0	250.5
142.5°	131.4	138.6	147.5	156.6	166.4	176.8	188.4	200.4	213.6	226.3	237.6
145°	133.9	141.2	149.4	157.9	166.7	176.1	186.2	196.3	206.7	216.8	225.9
147.5°	137.1	143.4	150.9	158.8	166.7	175.2	184.0	192.8	201.4	209.9	216.5
150°	139.6	145.3	152.5	159.1	166.7	173.9	181.8	189.1	196.3	202.9	208.9
152.5°	142.1	147.5	153.5	159.8	165.7	172.4	179.3	185.6	191.6	197.3	202.0
155°	145.0	149.4	154.7	159.8	165.1	170.5	176.8	182.1	187.2	191.9	195.7
157.5°	147.5	150.9	155.4	160.1	164.2	168.9	173.9	178.4	182.8	186.5	189.7
160°	149.4	152.5	156.3	160.1	163.5	167.0	171.1	175.2	178.7	181.8	184.0
162.5°	150.9	153.5	156.6	159.8	162.3	165.1	168.3	171.4	174.3	177.1	179.0
165°	152.2	154.4	156.9	159.1	161.0	163.2	165.7	168.3	170.2	172.4	173.9
167.5°	153.5	155.0	156.9	158.8	159.8	161.3	163.2	165.4	167.0	168.3	169.5
170°	154.4	155.0	156.6	157.9	158.5	159.4	161.0	162.6	163.5	164.8	165.4
172.5°	155.0	155.4	156.6	157.6	157.6	157.9	158.8	160.1	160.7	161.7	162.0
175°	155.4	155.7	156.3	156.9	156.6	156.6	157.2	157.9	158.2	158.8	158.8
177.5°	155.7	155.7	156.0	156.6	156.0	155.7	156.0	156.3	156.6	156.9	156.9
180°	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7



TEST NUMBER: P832247

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1628.6	1628.6	1628.6	1628.6
2.5°	1447.0	1443.6	1442.3	1441.0
5°	1240.3	1230.0	1227.6	1225.3
7.5°	1064.7	1060.4	1046.0	1031.6
10°	922.1	908.8	902.8	896.8
12.5°	802.9	790.6	788.6	786.6
15°	710.5	701.8	698.8	695.8
17.5°	649.7	643.7	640.0	636.3
20°	604.6	600.3	597.6	594.9
22.5°	570.2	566.9	564.9	562.9
25°	537.2	532.2	530.5	528.8
27.5°	505.8	501.5	499.8	498.1
30°	476.4	472.8	470.4	468.1
32.5°	444.4	440.0	438.7	437.4
35°	416.0	413.3	412.0	410.7
37.5°	385.9	382.6	380.6	378.6
40°	360.2	358.6	357.6	356.6
42.5°	334.2	331.2	330.9	330.5
45°	308.2	305.2	304.5	303.8
47.5°	283.8	281.1	280.8	280.4
50°	256.7	253.1	250.4	247.7
52.5°	225.7	222.4	220.0	217.7
55°	197.3	193.6	191.6	189.6
57.5°	175.9	174.3	173.3	172.3
60°	158.6	157.6	156.9	156.2
62.5°	142.6	141.6	141.6	141.6
65°	127.9	126.9	125.9	124.9
67.5°	108.8	106.8	106.5	106.2
70°	85.8	82.8	82.5	82.1
72.5°	67.1	66.8	66.1	65.4
75°	55.4	54.8	54.8	54.8
77.5°	44.7	44.1	44.1	44.1
80°	34.4	34.1	34.4	34.7
82.5°	25.4	25.4	25.0	24.7
85°	16.4	16.0	16.0	16.0
87.5°	8.0	8.0	8.0	8.0
90°	8.8	9.1	9.5	9.1
92.5°	18.3	17.0	17.3	16.7
95°	42.9	40.0	37.8	36.6
97.5°	98.0	86.0	78.5	75.0
100°	232.6	209.6	197.3	197.6
102.5°	348.8	331.8	322.0	312.9
105°	424.5	412.5	402.4	400.8
107.5°	471.4	465.7	461.6	458.2
110°	489.7	492.2	491.6	490.9



TEST NUMBER: P832247

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	485.0	494.1	497.2	497.6
115°	465.7	479.6	485.9	487.5
117.5°	438.3	453.8	463.2	465.4
120°	409.3	427.0	434.5	436.4
122.5°	382.9	398.3	406.8	409.3
125°	360.5	374.4	382.2	384.4
127.5°	341.9	353.9	361.1	363.0
130°	324.9	336.2	342.8	345.4
132.5°	309.4	320.8	326.5	328.0
135°	294.3	303.8	309.4	311.6
137.5°	277.9	287.7	292.4	294.3
140°	262.5	271.3	276.4	276.0
142.5°	247.4	254.9	259.3	259.0
145°	233.8	240.4	243.0	243.6
147.5°	222.8	227.5	230.0	230.3
150°	213.6	217.1	219.0	219.0
152.5°	205.5	208.6	209.6	209.6
155°	198.5	201.0	201.7	202.0
157.5°	192.2	194.1	194.7	194.7
160°	186.2	188.1	188.1	187.8
162.5°	180.2	181.8	181.8	181.5
165°	175.2	176.5	176.1	176.1
167.5°	170.2	171.1	170.8	170.8
170°	165.7	166.4	166.1	166.1
172.5°	162.0	162.6	162.0	161.7
175°	158.8	159.1	158.8	158.5
177.5°	156.6	156.9	156.3	156.3
180°	155.7	155.7	155.7	155.7



TEST NUMBER: P832247

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-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	11.99	12.93	12.82	13.77	14.82	16.66	17.59	17.49	18.44	19.48
	3H	13.22	14.06	14.07	14.91	15.99	18.16	19.00	19.01	19.85	20.93
	4H	13.61	14.40	14.47	15.26	16.34	18.66	19.45	19.52	20.31	21.39
	6H	13.90	14.62	14.77	15.49	16.59	18.98	19.70	19.85	20.57	21.67
	8H	13.99	14.68	14.87	15.56	16.66	19.06	19.75	19.94	20.63	21.73
	12H	14.04	14.70	14.93	15.58	16.70	19.09	19.75	19.98	20.63	21.75
4H	2H	12.73	13.52	13.59	14.38	15.46	16.66	17.45	17.53	18.31	19.40
	3H	14.11	14.76	14.98	15.65	16.75	18.33	18.99	19.21	19.88	20.98
	4H	14.57	15.16	15.45	16.05	17.18	18.94	19.54	19.83	20.43	21.55
	6H	14.94	15.45	15.84	16.37	17.50	19.39	19.90	20.29	20.81	21.94
	8H	15.07	15.54	15.97	16.45	17.60	19.52	20.00	20.42	20.90	22.05
	12H	15.15	15.58	16.07	16.50	17.65	19.58	20.01	20.51	20.94	22.09
8H	4H	14.89	15.36	15.79	16.27	17.42	18.92	19.39	19.82	20.30	21.44
	6H	15.36	15.75	16.29	16.70	17.84	19.42	19.81	20.35	20.76	21.90
	8H	15.55	15.90	16.49	16.84	18.00	19.60	19.95	20.54	20.89	22.05
	12H	15.69	16.00	16.64	16.93	18.14	19.72	20.03	20.67	20.96	22.17
12H	4H	14.90	15.33	15.83	16.26	17.41	18.87	19.30	19.79	20.23	21.37
	6H	15.41	15.76	16.36	16.71	17.86	19.39	19.74	20.33	20.68	21.84
	8H	15.64	15.94	16.58	16.88	18.09	19.59	19.89	20.53	20.83	22.04