

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: P832246

Luminaire Tested: S123RDIP-S560D365U940-4F0-1E-UDD-G1

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P832246  
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-S560D365U940-4F0-1E-UDD-G1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: -

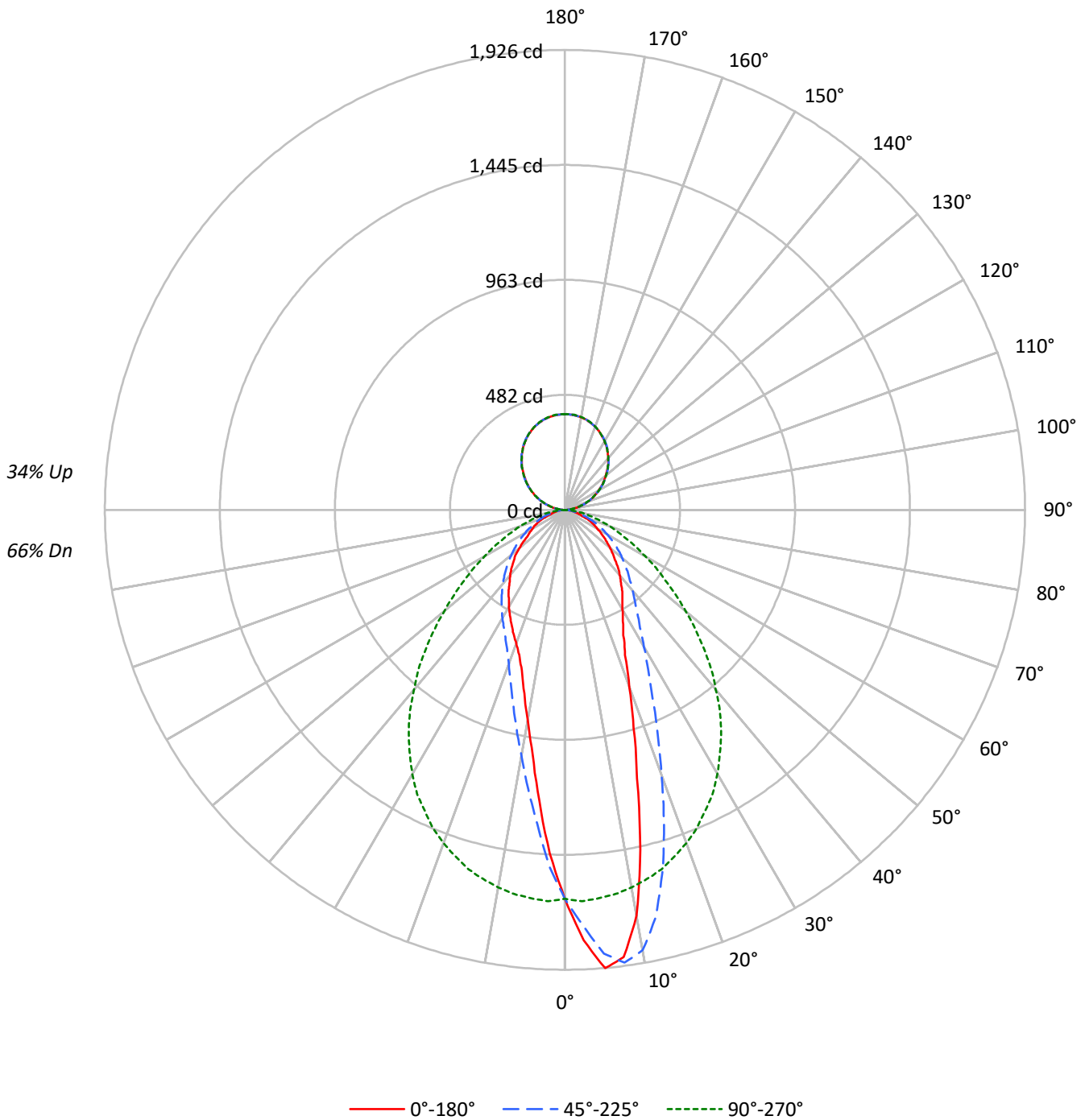
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3271.6 lumens  
Efficiency: N/A  
Efficacy: 110.5 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

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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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	71	71	71	66				
1	102	98	95	92	96	93	90	87	83	80	78	73	71	70	64	63	62	58				
2	94	87	81	77	89	83	77	73	74	70	66	65	63	60	58	56	54	50				
3	87	78	71	65	82	74	68	63	66	61	57	59	55	52	52	50	47	44				
4	80	70	62	57	75	66	60	54	60	54	50	53	49	46	48	45	42	39				
5	74	63	55	50	70	60	53	48	54	49	44	49	44	41	44	40	37	35				
6	69	57	50	44	65	55	48	42	50	44	39	45	40	37	40	37	34	31				
7	64	52	45	39	61	50	43	38	45	40	36	41	37	33	37	34	31	28				
8	60	48	41	36	57	46	39	34	42	36	32	38	34	30	35	31	28	26				
9	56	44	37	32	53	43	36	31	39	33	29	36	31	28	32	29	26	24				
10	53	41	34	30	50	39	33	29	36	31	27	33	29	25	30	27	24	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



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.4	4.5
10°-20°	343.5	10.5
20°-30°	394.1	12.0
30°-40°	388.5	11.9
40°-50°	342.6	10.5
50°-60°	263.5	8.1
60°-70°	173.3	5.3
70°-80°	84.2	2.6
80°-90°	22.1	0.7
90°-100°	25.8	0.8
100°-110°	78.2	2.4
110°-120°	133.1	4.1
120°-130°	175.0	5.4
130°-140°	196.8	6.0
140°-150°	193.4	5.9
150°-160°	162.9	5.0
160°-170°	108.4	3.3
170°-180°	38.0	1.2
0°-30°	886.1	27.1
0°-40°	1274.5	39.0
0°-60°	1880.6	57.5
0°-90°	2160.1	66.0
90°-120°	237.0	7.2
90°-150°	802.3	24.5
90°-180°	1112.0	34.0
0°-180°	3271.6	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°	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°	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°	9.5	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°	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°	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: P832246

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-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: P832246

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-UDD-G1

**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°	3.1	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: P832246

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-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: P832246

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-UDD-G1

**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°	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: P832246

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-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: P832246

CATALOG NUMBER: S123RDIP-S560D365U940-4F0-1E-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	12.09	13.04	12.91	13.87	14.90	16.75	17.70	17.57	18.53	19.56
	3H	13.32	14.17	14.15	15.01	16.06	18.26	19.11	19.09	19.95	21.01
	4H	13.71	14.50	14.56	15.35	16.42	18.76	19.55	19.60	20.40	21.47
	6H	13.99	14.73	14.85	15.59	16.66	19.07	19.81	19.93	20.66	21.74
	8H	14.08	14.78	14.95	15.66	16.74	19.16	19.85	20.02	20.73	21.81
	12H	14.14	14.80	15.01	15.67	16.78	19.19	19.85	20.06	20.72	21.83
4H	2H	12.82	13.62	13.68	14.47	15.54	16.76	17.56	17.61	18.41	19.48
	3H	14.20	14.87	15.07	15.75	16.83	18.43	19.09	19.29	19.97	21.06
	4H	14.66	15.27	15.54	16.15	17.25	19.04	19.64	19.92	20.52	21.63
	6H	15.04	15.56	15.93	16.46	17.57	19.48	20.00	20.38	20.90	22.02
	8H	15.17	15.65	16.06	16.55	17.67	19.62	20.10	20.51	21.00	22.12
	12H	15.25	15.68	16.16	16.60	17.73	19.68	20.12	20.60	21.04	22.16
8H	4H	14.99	15.47	15.88	16.37	17.49	19.02	19.50	19.91	20.40	21.52
	6H	15.46	15.85	16.38	16.79	17.92	19.52	19.91	20.44	20.85	21.98
	8H	15.65	16.00	16.58	16.93	18.08	19.70	20.05	20.63	20.99	22.13
	12H	15.79	16.10	16.73	17.03	18.22	19.82	20.13	20.75	21.06	22.25
12H	4H	15.00	15.44	15.92	16.35	17.48	18.97	19.40	19.88	20.32	21.45
	6H	15.51	15.87	16.44	16.80	17.94	19.49	19.84	20.42	20.78	21.92
	8H	15.74	16.05	16.67	16.97	18.17	19.69	20.00	20.62	20.92	22.12