

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: P831553

Luminaire Tested: S123DIP-S560D585U940-4F0-1E-UDD-G1

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831553  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S560D585U940-4F0-1E-UDD-G1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: -

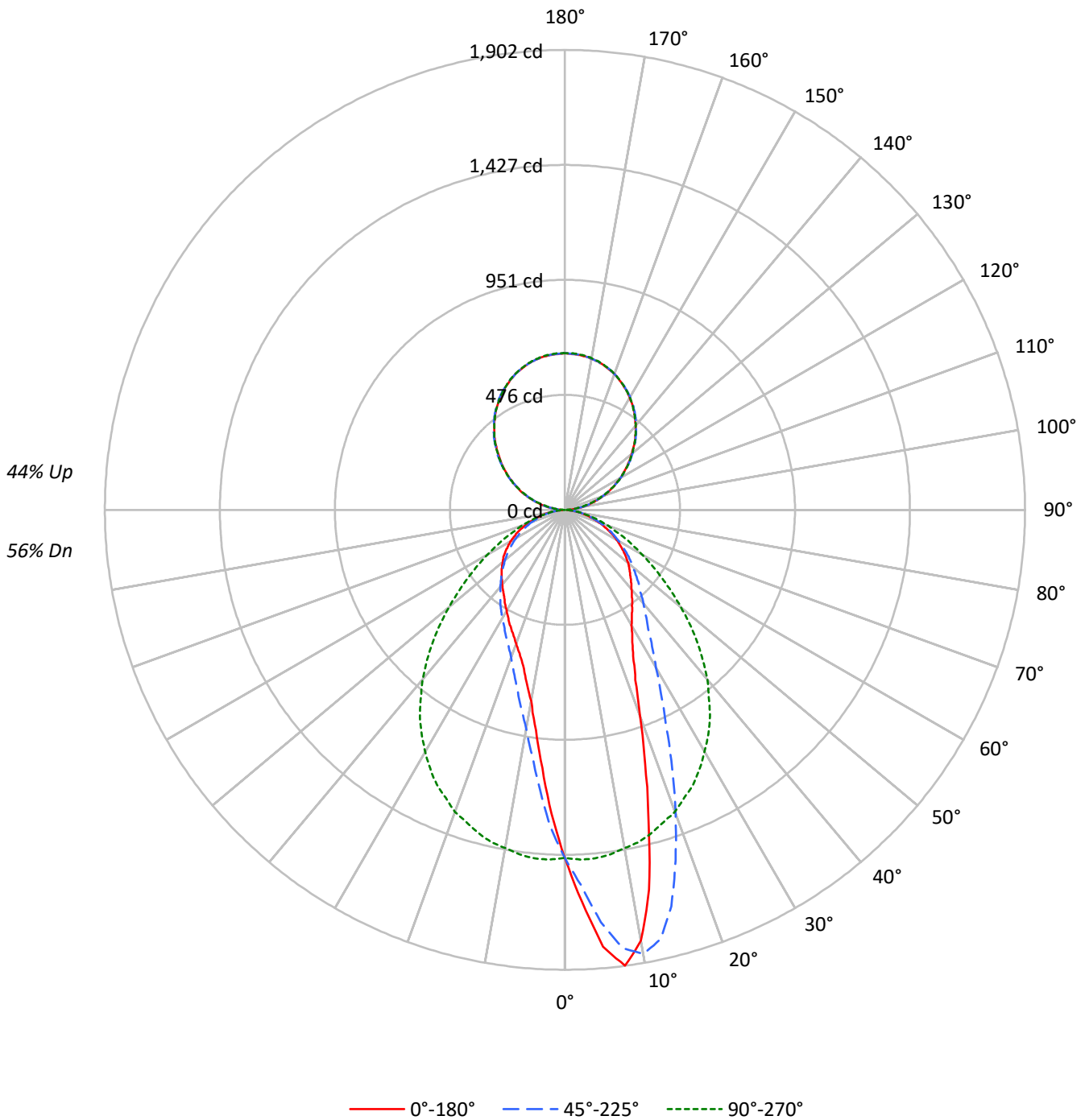
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4109.1 lumens  
Efficiency: N/A  
Efficacy: 118.1 lumens/watt  
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 34.8  
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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56				56
1	100	96	92	89	93	89	86	83	77	75	73	66	64	63	56	54	53				49	
2	91	84	78	73	85	79	74	69	68	64	61	59	56	53	50	48	46				42	
3	84	75	68	62	78	70	64	59	61	56	52	52	49	46	45	42	40				36	
4	77	67	59	53	72	62	56	50	55	49	45	47	43	40	41	38	35				32	
5	71	60	52	46	66	56	49	44	49	44	40	43	39	35	37	34	31				28	
6	66	54	46	41	61	51	44	39	45	39	35	39	35	31	34	31	28				25	
7	61	49	42	36	57	46	39	35	41	35	31	36	32	28	31	28	25				23	
8	57	45	38	32	53	43	36	31	38	32	28	33	29	26	29	26	23				21	
9	53	41	34	29	50	39	33	28	35	29	26	31	26	23	27	24	21				19	
10	50	38	31	27	47	36	30	25	32	27	23	29	24	21	25	22	19				17	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	15493	15493	15493	15493	15493
5°	19594	18493	15632	12597	11575
10°	19783	20382	15527	10041	8775
15°	14900	18923	15422	8504	7421
20°	10381	15313	15224	7436	6740
25°	7917	11776	14890	6842	6322
30°	6848	9355	14353	6421	5986
35°	6355	7899	13736	6117	5749
40°	6015	7086	12867	5828	5668
45°	5815	6558	11764	5602	5632
50°	5715	6141	10458	5397	5603
55°	5502	5834	9175	5202	5628
60°	5307	5507	7907	5018	5535
65°	4984	5196	6821	4824	5428
70°	4604	4803	5800	4497	5108
75°	4167	4304	4974	4180	4666
80°	3434	3769	3936	3645	3936
85°	2717	3051	2890	3088	3137

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 13431 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.1	3.3
10°-20°	338.5	8.2
20°-30°	400.8	9.8
30°-40°	403.0	9.8
40°-50°	369.8	9.0
50°-60°	305.2	7.4
60°-70°	215.9	5.3
70°-80°	115.2	2.8
80°-90°	30.6	0.7
90°-100°	41.7	1.0
100°-110°	126.2	3.1
110°-120°	214.8	5.2
120°-130°	282.5	6.9
130°-140°	317.6	7.7
140°-150°	312.2	7.6
150°-160°	262.9	6.4
160°-170°	175.0	4.3
170°-180°	61.3	1.5
0°-30°	875.4	21.3
0°-40°	1278.4	31.1
0°-60°	1953.4	47.5
0°-90°	2315.1	56.3
90°-120°	382.6	9.3
90°-150°	1294.9	31.5
90°-180°	1794.0	43.7
0°-180°	4109.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1439	1439	1439	1439	1439	
5°	1813	1712	1447	1166	1071	173
15°	1337	1698	1384	763	666	369
25°	667	992	1254	576	532	315
35°	484	601	1045	466	438	304
45°	382	431	773	368	370	296
55°	293	311	489	277	300	262
65°	196	204	268	189	213	194
75°	100	104	120	100	112	105
85°	22	25	23	25	25	25
90°	15	12	0	12	15	9
95°	40	38	30	38	40	40
105°	121	120	114	120	121	128
115°	217	217	216	217	217	215
125°	313	317	316	317	313	280
135°	410	413	410	413	410	315
145°	498	500	498	500	498	311
155°	569	571	570	571	569	262
165°	619	620	621	620	619	175
175°	643	644	646	644	643	61
180°	648	648	648	648	648	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3
2.5°	1622.3	1620.7	1619.0	1610.6	1602.3	1598.3	1594.3	1582.3	1570.2	1556.9	1543.5
5°	1813.4	1818.0	1822.7	1817.4	1812.0	1795.7	1779.3	1757.6	1735.9	1711.5	1687.1
7.5°	1901.5	1904.2	1906.9	1903.5	1900.2	1895.8	1891.5	1872.1	1852.8	1827.7	1802.7
10°	1810.0	1816.0	1822.0	1835.1	1848.1	1862.8	1877.5	1874.8	1872.1	1864.8	1857.4
12.5°	1609.0	1616.3	1623.7	1649.7	1675.8	1709.2	1742.6	1771.3	1800.0	1820.0	1840.1
15°	1337.1	1357.5	1377.9	1401.6	1425.3	1474.4	1523.5	1583.9	1644.4	1698.1	1751.9
17.5°	1101.4	1109.1	1116.7	1142.1	1167.5	1229.3	1291.1	1360.8	1430.6	1519.8	1609.0
20°	906.3	913.4	920.4	953.8	987.2	1035.6	1084.0	1162.5	1241.0	1336.8	1432.6
22.5°	761.4	772.4	783.4	802.1	820.9	867.3	913.7	983.5	1053.3	1159.1	1265.0
25°	666.6	674.6	682.6	693.9	705.3	742.4	779.4	836.9	894.3	991.5	1088.7
27.5°	601.8	605.1	608.5	619.8	631.2	655.2	679.3	728.7	778.1	860.6	943.1
30°	551.0	553.4	555.7	565.7	575.7	592.1	608.5	644.2	679.9	752.7	825.5
32.5°	515.6	517.3	519.0	526.6	534.3	546.0	557.7	583.7	609.8	669.9	730.0
35°	483.6	484.6	485.6	491.2	496.9	505.6	514.3	534.0	553.7	601.1	648.5
37.5°	455.5	456.8	458.2	461.5	464.9	472.5	480.2	495.9	511.6	548.0	584.4
40°	428.1	430.5	432.8	435.1	437.5	443.8	450.2	462.2	474.2	504.3	534.3
42.5°	404.7	407.1	409.4	410.4	411.4	415.1	418.8	429.8	440.8	463.2	485.6
45°	382.0	383.0	384.0	385.0	386.0	389.1	392.1	401.7	411.4	430.8	450.2
47.5°	361.3	361.3	361.3	362.0	362.7	365.3	368.0	375.0	382.0	397.1	412.1
50°	341.3	341.3	341.3	340.3	339.3	341.0	342.6	348.0	353.3	366.7	380.0
52.5°	317.3	317.3	317.3	317.6	317.9	317.9	317.9	322.6	327.3	339.3	351.3
55°	293.2	294.5	295.9	294.9	293.9	294.5	295.2	298.2	301.2	310.9	320.6
57.5°	269.2	269.8	270.5	270.2	269.8	270.2	270.5	273.2	275.8	283.2	290.5
60°	246.5	246.5	246.5	245.8	245.1	245.8	246.5	247.8	249.1	255.8	262.5
62.5°	221.1	221.4	221.7	222.1	222.4	221.7	221.1	222.7	224.4	229.4	234.4
65°	195.7	196.0	196.4	197.4	198.4	197.7	197.0	198.7	200.4	204.0	207.7
67.5°	173.0	172.3	171.7	172.0	172.3	173.3	174.3	174.7	175.0	179.0	183.0
70°	146.3	146.9	147.6	147.3	146.9	147.3	147.6	148.6	149.6	152.6	155.6
72.5°	122.2	122.6	122.9	122.9	122.9	123.6	124.2	125.2	126.2	127.9	129.6
75°	100.2	100.2	100.2	100.9	101.5	101.9	102.2	102.2	102.2	103.5	104.9
77.5°	76.1	77.8	79.5	79.1	78.8	79.5	80.1	81.2	82.2	82.8	83.5
80°	55.4	55.4	55.4	55.8	56.1	57.1	58.1	58.8	59.4	60.8	62.1
82.5°	35.4	35.7	36.1	37.1	38.1	38.7	39.4	40.4	41.4	41.4	41.4
85°	22.0	21.4	20.7	21.4	22.0	22.7	23.4	23.7	24.0	24.7	25.4
87.5°	10.7	10.7	10.7	10.7	10.7	11.0	11.4	11.4	11.4	11.4	11.4
90°	15.3	15.0	14.8	14.6	14.4	14.0	13.6	13.1	12.7	12.2	10.7
92.5°	21.9	22.1	22.3	22.5	22.8	22.7	22.4	22.0	21.7	21.4	20.7
95°	39.7	39.7	39.7	39.7	39.7	39.4	39.0	38.5	38.1	37.6	36.7
97.5°	57.0	57.1	57.2	57.3	57.4	57.2	56.6	56.1	55.5	54.9	54.3
100°	77.3	77.1	76.9	76.6	76.4	76.1	75.8	75.4	75.1	74.8	74.2
102.5°	98.2	98.3	98.4	98.5	98.6	98.5	98.2	97.8	97.5	97.1	96.4
105°	121.1	120.8	120.6	120.4	120.1	120.0	120.0	120.0	120.0	120.0	119.0
107.5°	144.4	144.6	144.7	144.8	144.9	144.8	144.4	144.1	143.8	143.4	143.0
110°	168.4	168.6	168.8	169.0	169.3	169.1	168.7	168.2	167.8	167.3	167.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	193.8	193.8	193.8	193.8	193.8	193.5	192.9	192.4	191.8	191.2	191.2
115°	216.7	216.8	216.9	217.0	217.1	217.1	217.0	216.9	216.8	216.7	216.9
117.5°	240.1	240.4	240.7	241.1	241.4	241.6	241.6	241.6	241.6	241.6	241.8
120°	265.0	265.2	265.4	265.7	265.9	266.1	266.2	266.3	266.4	266.5	267.1
122.5°	288.9	289.2	289.6	289.9	290.3	290.6	290.9	291.3	291.6	291.9	292.2
125°	312.8	313.3	313.7	314.2	314.6	315.1	315.5	316.0	316.4	316.9	317.1
127.5°	336.7	337.2	337.6	338.1	338.5	339.1	339.8	340.4	341.1	341.8	342.0
130°	360.1	360.9	361.7	362.5	363.3	363.9	364.3	364.8	365.2	365.7	366.0
132.5°	384.5	385.1	385.6	386.2	386.8	387.3	387.9	388.5	389.0	389.6	389.8
135°	410.0	410.2	410.4	410.6	410.9	411.2	411.6	412.1	412.6	413.0	413.1
137.5°	432.3	432.7	433.0	433.3	433.7	434.1	434.7	435.3	435.8	436.4	436.1
140°	454.2	455.0	455.8	456.6	457.4	457.8	457.9	458.0	458.2	458.3	458.2
142.5°	476.6	477.1	477.7	478.3	478.8	479.2	479.3	479.4	479.5	479.6	479.4
145°	497.9	498.4	498.8	499.3	499.8	500.0	500.1	500.3	500.4	500.5	500.1
147.5°	517.3	517.9	518.6	519.3	520.0	520.3	520.3	520.3	520.3	520.3	520.0
150°	535.6	536.3	536.9	537.6	538.3	538.6	538.6	538.6	538.6	538.6	538.4
152.5°	553.4	553.9	554.5	555.1	555.6	555.8	555.6	555.4	555.1	554.9	554.8
155°	569.1	569.9	570.7	571.5	572.3	572.5	572.0	571.6	571.1	570.7	570.6
157.5°	583.9	584.6	585.3	585.9	586.6	586.7	586.3	585.8	585.4	584.9	584.8
160°	598.1	598.6	599.0	599.5	599.9	599.9	599.3	598.8	598.2	597.6	597.6
162.5°	608.8	609.6	610.4	611.2	612.0	612.1	611.5	611.0	610.4	609.8	609.7
165°	619.0	619.8	620.6	621.4	622.2	622.2	621.5	620.9	620.2	619.5	619.5
167.5°	628.1	628.8	629.5	630.2	630.9	630.9	630.2	629.5	628.8	628.1	628.0
170°	634.8	635.6	636.3	637.1	637.9	637.9	637.1	636.3	635.6	634.8	634.8
172.5°	639.8	640.6	641.4	642.2	643.0	643.1	642.4	641.7	641.0	640.4	640.4
175°	643.4	644.2	645.0	645.8	646.6	646.6	646.0	645.3	644.6	643.9	643.9
177.5°	645.4	646.2	647.0	647.8	648.6	648.7	648.0	647.3	646.6	646.0	646.0
180°	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3
2.5°	1539.5	1535.5	1520.8	1506.1	1489.4	1472.7	1460.4	1448.0	1429.6	1411.3	1396.2
5°	1668.4	1649.7	1618.7	1587.6	1545.5	1503.4	1475.1	1446.7	1408.6	1370.5	1340.1
7.5°	1770.6	1738.5	1695.1	1651.7	1596.6	1541.5	1489.4	1437.3	1379.2	1321.1	1273.7
10°	1835.7	1814.0	1763.9	1713.8	1640.0	1566.2	1493.4	1420.6	1345.8	1271.0	1208.2
12.5°	1842.1	1844.1	1798.0	1751.9	1668.4	1584.9	1496.4	1407.9	1313.8	1219.6	1146.5
15°	1786.3	1820.7	1795.3	1769.9	1685.8	1601.6	1492.8	1383.9	1275.4	1166.8	1082.3
17.5°	1682.8	1756.6	1760.3	1763.9	1679.8	1595.6	1475.1	1354.5	1231.6	1108.7	1019.9
20°	1541.5	1650.4	1687.8	1725.2	1656.7	1588.3	1458.7	1329.1	1191.5	1053.9	960.8
22.5°	1397.3	1529.5	1598.0	1666.4	1615.7	1564.9	1427.0	1289.1	1143.8	998.5	904.0
25°	1232.9	1377.2	1482.4	1587.6	1556.5	1525.5	1389.6	1253.7	1099.0	944.4	847.9
27.5°	1089.7	1236.3	1363.2	1490.1	1483.4	1476.7	1341.8	1206.9	1048.6	890.3	797.1
30°	962.1	1098.7	1240.6	1382.6	1398.9	1415.3	1285.0	1154.8	996.2	837.5	747.7
32.5°	849.2	968.5	1120.7	1273.0	1305.1	1337.1	1219.6	1102.0	945.1	788.1	701.6
35°	756.7	864.9	1017.2	1169.5	1209.6	1249.6	1147.5	1045.3	892.3	739.4	656.9
37.5°	674.9	765.4	914.0	1062.6	1111.7	1160.8	1069.3	977.8	834.5	691.3	615.5
40°	607.1	679.9	816.5	953.1	1009.9	1066.6	991.2	915.7	779.8	643.9	574.1
42.5°	550.4	615.1	739.0	862.9	917.4	971.8	908.0	844.2	723.3	602.4	538.7
45°	501.9	553.7	666.2	778.8	830.5	882.3	827.5	772.8	666.2	559.7	500.3
47.5°	456.5	500.9	597.1	693.3	739.4	785.5	742.7	700.0	609.8	519.6	465.9
50°	415.8	451.5	535.7	619.8	659.9	700.0	662.2	624.5	550.4	476.2	429.5
52.5°	380.4	409.4	479.9	550.4	584.7	619.1	586.8	554.4	495.6	436.8	396.1
55°	345.3	370.0	431.1	492.2	515.6	539.0	514.0	488.9	441.5	394.1	359.7
57.5°	312.6	334.6	384.7	434.8	452.8	470.9	448.2	425.5	389.7	354.0	325.3
60°	280.5	298.6	340.3	382.0	393.1	404.1	385.7	367.3	342.3	317.3	291.5
62.5°	250.8	267.2	298.2	329.3	336.6	344.0	329.9	315.9	296.9	277.8	257.8
65°	220.1	232.4	257.8	283.2	287.9	292.5	280.2	267.8	253.5	239.1	224.4
67.5°	191.7	200.4	221.1	241.8	242.1	242.4	232.4	222.4	214.4	206.4	194.7
70°	164.0	172.3	186.0	199.7	200.0	200.4	192.4	184.3	178.3	172.3	163.6
72.5°	135.6	141.6	151.9	162.3	161.6	161.0	156.0	150.9	146.3	141.6	135.3
75°	109.9	114.9	121.9	128.9	126.9	124.9	122.2	119.6	115.5	111.5	107.5
77.5°	86.5	89.5	93.5	97.5	96.2	94.8	92.5	90.2	87.2	84.2	82.5
80°	63.5	64.8	67.5	70.1	69.5	68.8	66.1	63.5	62.8	62.1	59.8
82.5°	43.1	44.7	45.4	46.1	45.8	45.4	43.4	41.4	40.7	40.1	39.7
85°	25.7	26.0	26.4	26.7	25.7	24.7	24.0	23.4	23.4	23.4	23.0
87.5°	11.7	12.0	12.0	12.0	11.7	11.4	10.7	10.0	10.4	10.7	10.7
90°	9.3	7.8	6.3	5.0	3.9	2.8	1.6	0.5	1.6	2.8	3.9
92.5°	20.0	19.3	18.6	18.0	17.3	16.6	15.9	15.3	15.9	16.6	17.3
95°	35.8	34.9	34.0	33.2	32.4	31.6	30.8	30.0	30.8	31.6	32.4
97.5°	53.6	52.9	52.2	51.6	51.0	50.5	49.9	49.3	49.9	50.5	51.0
100°	73.6	73.1	72.5	71.9	71.2	70.5	69.9	69.2	69.9	70.5	71.2
102.5°	95.6	94.8	94.0	93.4	93.1	92.7	92.4	92.1	92.4	92.7	93.1
105°	118.0	117.0	116.0	115.3	115.1	114.9	114.7	114.4	114.7	114.9	115.1
107.5°	142.5	142.1	141.6	141.3	141.2	141.1	141.0	140.9	141.0	141.1	141.2
110°	166.9	166.7	166.4	166.2	166.0	165.8	165.5	165.3	165.5	165.8	166.0





TEST NUMBER: P831553

CATALOG NUMBER: S123DIP-S560D585U940-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	191.2	191.2	191.2	191.2	191.1	191.0	190.8	190.7	190.8	191.0	191.1
115°	217.1	217.4	217.6	217.5	217.2	216.8	216.5	216.2	216.5	216.8	217.2
117.5°	242.0	242.3	242.5	242.6	242.4	242.3	242.2	242.1	242.2	242.3	242.4
120°	267.6	268.2	268.8	268.7	268.0	267.4	266.7	266.0	266.7	267.4	268.0
122.5°	292.4	292.6	292.9	292.7	292.3	291.8	291.4	290.9	291.4	291.8	292.3
125°	317.3	317.6	317.8	317.7	317.4	317.0	316.7	316.4	316.7	317.0	317.4
127.5°	342.2	342.5	342.7	342.5	341.8	341.1	340.4	339.8	340.4	341.1	341.8
130°	366.4	366.7	367.1	366.8	365.9	365.0	364.1	363.2	364.1	365.0	365.9
132.5°	390.1	390.3	390.5	390.2	389.3	388.4	387.5	386.6	387.5	388.4	389.3
135°	413.2	413.3	413.5	413.2	412.5	411.8	411.1	410.5	411.1	411.8	412.5
137.5°	435.7	435.4	435.0	434.6	434.0	433.5	432.9	432.3	432.9	433.5	434.0
140°	458.0	457.9	457.8	457.5	456.9	456.3	455.8	455.2	455.8	456.3	456.9
142.5°	479.2	479.0	478.7	478.3	477.8	477.2	476.6	476.1	476.6	477.2	477.8
145°	499.8	499.5	499.1	498.8	498.6	498.4	498.2	497.9	498.2	498.4	498.6
147.5°	519.6	519.3	519.0	518.6	518.1	517.7	517.2	516.8	517.2	517.7	518.1
150°	538.2	538.0	537.7	537.5	537.3	537.0	536.8	536.6	536.8	537.0	537.3
152.5°	554.7	554.6	554.5	554.2	553.9	553.6	553.2	552.9	553.2	553.6	553.9
155°	570.4	570.3	570.2	570.2	570.2	570.2	570.2	570.2	570.2	570.2	570.2
157.5°	584.7	584.6	584.5	584.5	584.6	584.7	584.8	584.9	584.8	584.7	584.6
160°	597.6	597.6	597.6	597.7	598.0	598.2	598.4	598.6	598.4	598.2	598.0
162.5°	609.6	609.5	609.4	609.5	609.8	610.2	610.5	610.9	610.5	610.2	609.8
165°	619.5	619.5	619.5	619.7	620.0	620.4	620.7	621.0	620.7	620.4	620.0
167.5°	627.9	627.8	627.7	627.9	628.3	628.8	629.2	629.7	629.2	628.8	628.3
170°	634.8	634.8	634.8	635.0	635.4	635.9	636.3	636.8	636.3	635.9	635.4
172.5°	640.4	640.4	640.4	640.6	641.0	641.5	641.9	642.4	641.9	641.5	641.0
175°	643.9	643.9	643.9	644.1	644.6	645.0	645.5	646.0	645.5	645.0	644.6
177.5°	646.0	646.0	646.0	646.2	646.6	647.1	647.5	648.0	647.5	647.1	646.6
180°	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5



TEST NUMBER: P831553

CATALOG NUMBER: S123DIP-S560D585U940-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3	1439.3
2.5°	1381.2	1368.2	1355.2	1345.2	1335.1	1318.1	1301.1	1297.1	1293.1	1287.4	1281.7
5°	1309.8	1277.7	1245.6	1216.9	1188.2	1165.8	1143.4	1128.8	1114.1	1103.4	1092.7
7.5°	1226.3	1178.2	1130.1	1096.0	1062.0	1029.6	997.2	986.8	976.5	962.4	948.4
10°	1145.5	1092.4	1039.3	994.8	950.4	918.7	887.0	874.3	861.6	843.9	826.2
12.5°	1073.3	1015.2	957.1	912.4	867.6	836.9	806.2	787.8	769.4	759.4	749.4
15°	997.8	935.7	873.6	832.2	790.8	763.1	735.4	719.3	703.3	693.6	683.9
17.5°	931.1	869.6	808.2	768.4	728.7	703.3	677.9	663.9	649.9	642.5	635.2
20°	867.6	807.5	747.4	708.6	669.9	649.2	628.5	619.5	610.5	604.5	598.4
22.5°	809.5	750.4	691.3	658.2	625.2	608.5	591.8	585.4	579.1	574.1	569.1
25°	751.4	698.6	645.9	617.8	589.8	576.1	562.4	556.0	549.7	544.7	539.7
27.5°	704.0	653.5	603.1	579.1	555.0	544.3	533.7	528.6	523.6	519.0	514.3
30°	657.9	612.8	567.7	547.0	526.3	516.6	506.9	501.9	496.9	492.6	488.2
32.5°	615.1	576.4	537.7	518.6	499.6	491.6	483.6	477.5	471.5	468.2	464.9
35°	574.4	539.7	504.9	489.2	473.5	465.5	457.5	452.5	447.5	444.8	442.2
37.5°	539.7	508.6	477.5	462.5	447.5	439.8	432.1	427.8	423.4	422.4	421.4
40°	504.3	477.5	450.8	436.1	421.4	414.8	408.1	405.4	402.7	402.1	401.4
42.5°	474.9	448.8	422.8	409.4	396.1	390.4	384.7	383.4	382.0	383.0	384.0
45°	440.8	419.1	397.4	385.0	372.7	368.0	363.3	362.3	361.3	363.3	365.3
47.5°	412.1	392.1	372.0	360.3	348.6	345.3	342.0	341.6	341.3	344.0	346.6
50°	382.7	363.3	344.0	334.6	325.3	322.3	319.3	320.3	321.3	325.6	329.9
52.5°	355.3	337.3	319.3	310.6	301.9	299.9	297.9	300.2	302.6	307.2	311.9
55°	325.3	308.9	292.5	285.9	279.2	277.2	275.2	279.9	284.5	288.9	293.2
57.5°	296.5	282.2	267.8	261.8	255.8	255.5	255.1	259.5	263.8	268.5	273.2
60°	265.8	253.8	241.8	237.1	232.4	233.1	233.8	238.8	243.8	247.5	251.1
62.5°	237.8	227.8	217.7	213.4	209.1	210.7	212.4	217.4	222.4	226.8	231.1
65°	209.7	201.4	193.0	190.0	187.0	189.4	191.7	196.0	200.4	203.4	206.4
67.5°	183.0	176.0	169.0	166.6	164.3	166.6	169.0	173.3	177.7	180.7	183.7
70°	155.0	149.3	143.6	141.9	140.3	142.9	145.6	149.3	152.9	156.0	159.0
72.5°	128.9	124.6	120.2	119.9	119.6	121.9	124.2	127.9	131.6	133.6	135.6
75°	103.5	101.2	98.8	98.5	98.2	100.5	102.9	104.9	106.9	108.5	110.2
77.5°	80.8	78.8	76.8	77.1	77.5	79.1	80.8	82.8	84.8	85.8	86.8
80°	57.4	56.8	56.1	56.8	57.4	58.8	60.1	61.4	62.8	63.5	64.1
82.5°	39.4	38.7	38.1	39.1	40.1	41.1	42.1	43.1	44.1	44.4	44.7
85°	22.7	23.7	24.7	24.7	24.7	25.0	25.4	25.7	26.0	25.7	25.4
87.5°	10.7	11.0	11.4	11.4	11.4	11.7	12.0	12.0	12.0	11.7	11.4
90°	5.0	6.3	7.8	9.3	10.7	12.2	12.7	13.1	13.6	14.0	14.4
92.5°	18.0	18.6	19.3	20.0	20.7	21.4	21.7	22.0	22.4	22.7	22.8
95°	33.2	34.0	34.9	35.8	36.7	37.6	38.1	38.5	39.0	39.4	39.7
97.5°	51.6	52.2	52.9	53.6	54.3	54.9	55.5	56.1	56.6	57.2	57.4
100°	71.9	72.5	73.1	73.6	74.2	74.8	75.1	75.4	75.8	76.1	76.4
102.5°	93.4	94.0	94.8	95.6	96.4	97.1	97.5	97.8	98.2	98.5	98.6
105°	115.3	116.0	117.0	118.0	119.0	120.0	120.0	120.0	120.0	120.0	120.1
107.5°	141.3	141.6	142.1	142.5	143.0	143.4	143.8	144.1	144.4	144.8	144.9
110°	166.2	166.4	166.7	166.9	167.1	167.3	167.8	168.2	168.7	169.1	169.3



TEST NUMBER: P831553

CATALOG NUMBER: S123DIP-S560D585U940-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	191.2	191.2	191.2	191.2	191.2	191.2	191.8	192.4	192.9	193.5	193.8
115°	217.5	217.6	217.4	217.1	216.9	216.7	216.8	216.9	217.0	217.1	217.1
117.5°	242.6	242.5	242.3	242.0	241.8	241.6	241.6	241.6	241.6	241.6	241.4
120°	268.7	268.8	268.2	267.6	267.1	266.5	266.4	266.3	266.2	266.1	265.9
122.5°	292.7	292.9	292.6	292.4	292.2	291.9	291.6	291.3	290.9	290.6	290.3
125°	317.7	317.8	317.6	317.3	317.1	316.9	316.4	316.0	315.5	315.1	314.6
127.5°	342.5	342.7	342.5	342.2	342.0	341.8	341.1	340.4	339.8	339.1	338.5
130°	366.8	367.1	366.7	366.4	366.0	365.7	365.2	364.8	364.3	363.9	363.3
132.5°	390.2	390.5	390.3	390.1	389.8	389.6	389.0	388.5	387.9	387.3	386.8
135°	413.2	413.5	413.3	413.2	413.1	413.0	412.6	412.1	411.6	411.2	410.9
137.5°	434.6	435.0	435.4	435.7	436.1	436.4	435.8	435.3	434.7	434.1	433.7
140°	457.5	457.8	457.9	458.0	458.2	458.3	458.2	458.0	457.9	457.8	457.4
142.5°	478.3	478.7	479.0	479.2	479.4	479.6	479.5	479.4	479.3	479.2	478.8
145°	498.8	499.1	499.5	499.8	500.1	500.5	500.4	500.3	500.1	500.0	499.8
147.5°	518.6	519.0	519.3	519.6	520.0	520.3	520.3	520.3	520.3	520.3	520.0
150°	537.5	537.7	538.0	538.2	538.4	538.6	538.6	538.6	538.6	538.6	538.3
152.5°	554.2	554.5	554.6	554.7	554.8	554.9	555.1	555.4	555.6	555.8	555.6
155°	570.2	570.2	570.3	570.4	570.6	570.7	571.1	571.6	572.0	572.5	572.3
157.5°	584.5	584.5	584.6	584.7	584.8	584.9	585.4	585.8	586.3	586.7	586.6
160°	597.7	597.6	597.6	597.6	597.6	597.6	598.2	598.8	599.3	599.9	599.9
162.5°	609.5	609.4	609.5	609.6	609.7	609.8	610.4	611.0	611.5	612.1	612.0
165°	619.7	619.5	619.5	619.5	619.5	619.5	620.2	620.9	621.5	622.2	622.2
167.5°	627.9	627.7	627.8	627.9	628.0	628.1	628.8	629.5	630.2	630.9	630.9
170°	635.0	634.8	634.8	634.8	634.8	634.8	635.6	636.3	637.1	637.9	637.9
172.5°	640.6	640.4	640.4	640.4	640.4	640.4	641.0	641.7	642.4	643.1	643.0
175°	644.1	643.9	643.9	643.9	643.9	643.9	644.6	645.3	646.0	646.6	646.6
177.5°	646.2	646.0	646.0	646.0	646.0	646.0	646.6	647.3	648.0	648.7	648.6
180°	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5



TEST NUMBER: P831553

CATALOG NUMBER: S123DIP-S560D585U940-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1439.3	1439.3	1439.3	1439.3
2.5°	1279.4	1277.0	1267.7	1258.3
5°	1084.7	1076.7	1074.0	1071.3
7.5°	947.8	947.1	933.1	919.0
10°	827.2	828.2	815.5	802.8
12.5°	741.0	732.7	731.7	730.7
15°	676.3	668.6	667.2	665.9
17.5°	630.5	625.8	624.5	623.2
20°	595.8	593.1	590.8	588.4
22.5°	565.7	562.4	560.4	558.4
25°	536.7	533.7	533.0	532.3
27.5°	510.6	506.9	506.9	506.9
30°	485.9	483.6	482.6	481.6
32.5°	462.9	460.9	460.9	460.9
35°	441.1	440.1	438.8	437.5
37.5°	421.4	421.4	420.8	420.1
40°	402.4	403.4	403.4	403.4
42.5°	385.0	386.0	386.0	386.0
45°	367.0	368.7	369.3	370.0
47.5°	349.3	352.0	352.7	353.3
50°	331.9	334.0	334.3	334.6
52.5°	314.2	316.6	318.3	319.9
55°	295.5	297.9	298.9	299.9
57.5°	275.5	277.8	278.2	278.5
60°	253.5	255.8	256.5	257.1
62.5°	232.4	233.8	234.4	235.1
65°	208.4	210.4	211.7	213.1
67.5°	185.3	187.0	187.0	187.0
70°	159.6	160.3	161.3	162.3
72.5°	135.9	136.3	136.3	136.3
75°	110.9	111.5	111.9	112.2
77.5°	87.2	87.5	87.5	87.5
80°	63.8	63.5	63.5	63.5
82.5°	43.7	42.7	42.7	42.7
85°	25.0	24.7	25.0	25.4
87.5°	11.4	11.4	11.4	11.4
90°	14.6	14.8	15.0	15.3
92.5°	22.5	22.3	22.1	21.9
95°	39.7	39.7	39.7	39.7
97.5°	57.3	57.2	57.1	57.0
100°	76.6	76.9	77.1	77.3
102.5°	98.5	98.4	98.3	98.2
105°	120.4	120.6	120.8	121.1
107.5°	144.8	144.7	144.6	144.4
110°	169.0	168.8	168.6	168.4



TEST NUMBER: P831553

CATALOG NUMBER: S123DIP-S560D585U940-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	193.8	193.8	193.8	193.8
115°	217.0	216.9	216.8	216.7
117.5°	241.1	240.7	240.4	240.1
120°	265.7	265.4	265.2	265.0
122.5°	289.9	289.6	289.2	288.9
125°	314.2	313.7	313.3	312.8
127.5°	338.1	337.6	337.2	336.7
130°	362.5	361.7	360.9	360.1
132.5°	386.2	385.6	385.1	384.5
135°	410.6	410.4	410.2	410.0
137.5°	433.3	433.0	432.7	432.3
140°	456.6	455.8	455.0	454.2
142.5°	478.3	477.7	477.1	476.6
145°	499.3	498.8	498.4	497.9
147.5°	519.3	518.6	517.9	517.3
150°	537.6	536.9	536.3	535.6
152.5°	555.1	554.5	553.9	553.4
155°	571.5	570.7	569.9	569.1
157.5°	585.9	585.3	584.6	583.9
160°	599.5	599.0	598.6	598.1
162.5°	611.2	610.4	609.6	608.8
165°	621.4	620.6	619.8	619.0
167.5°	630.2	629.5	628.8	628.1
170°	637.1	636.3	635.6	634.8
172.5°	642.2	641.4	640.6	639.8
175°	645.8	645.0	644.2	643.4
177.5°	647.8	647.0	646.2	645.4
180°	647.5	647.5	647.5	647.5



TEST NUMBER: P831553

CATALOG NUMBER: S123DIP-S560D585U940-4F0-1E-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	13.66	14.54	14.57	15.46	16.64	15.90	16.78	16.81	17.70	18.88
	3H	15.31	16.10	16.23	17.03	18.24	17.32	18.11	18.25	19.04	20.25
	4H	15.89	16.63	16.83	17.57	18.79	17.78	18.52	18.71	19.46	20.67
	6H	16.26	16.95	17.21	17.89	19.12	18.05	18.74	19.00	19.68	20.91
	8H	16.36	17.01	17.31	17.97	19.19	18.12	18.77	19.07	19.73	20.95
	12H	16.40	17.02	17.36	17.98	19.23	18.14	18.76	19.09	19.71	20.96
4H	2H	14.24	14.98	15.18	15.92	17.13	16.06	16.81	17.01	17.75	18.96
	3H	16.07	16.69	17.02	17.66	18.89	17.68	18.30	18.63	19.27	20.50
	4H	16.77	17.33	17.73	18.30	19.55	18.27	18.83	19.23	19.80	21.05
	6H	17.25	17.73	18.22	18.72	19.97	18.68	19.16	19.65	20.15	21.40
	8H	17.38	17.84	18.36	18.81	20.08	18.79	19.24	19.76	20.22	21.49
	12H	17.45	17.86	18.44	18.85	20.13	18.83	19.24	19.83	20.24	21.51
8H	4H	17.04	17.49	18.01	18.47	19.74	18.38	18.83	19.35	19.81	21.08
	6H	17.63	18.00	18.63	19.02	20.29	18.88	19.25	19.88	20.27	21.54
	8H	17.83	18.16	18.84	19.17	20.46	19.06	19.39	20.07	20.40	21.68
	12H	17.96	18.25	18.97	19.25	20.58	19.16	19.45	20.17	20.45	21.78
12H	4H	17.04	17.45	18.03	18.44	19.71	18.35	18.76	19.34	19.76	21.03
	6H	17.68	18.01	18.68	19.02	20.30	18.89	19.22	19.90	20.23	21.52
	8H	17.91	18.20	18.92	19.20	20.53	19.09	19.38	20.11	20.39	21.72