

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: P831526

Luminaire Tested: S123DIP-S560D365U940-4F0-1E-UDD-G1

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831526  
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-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: -

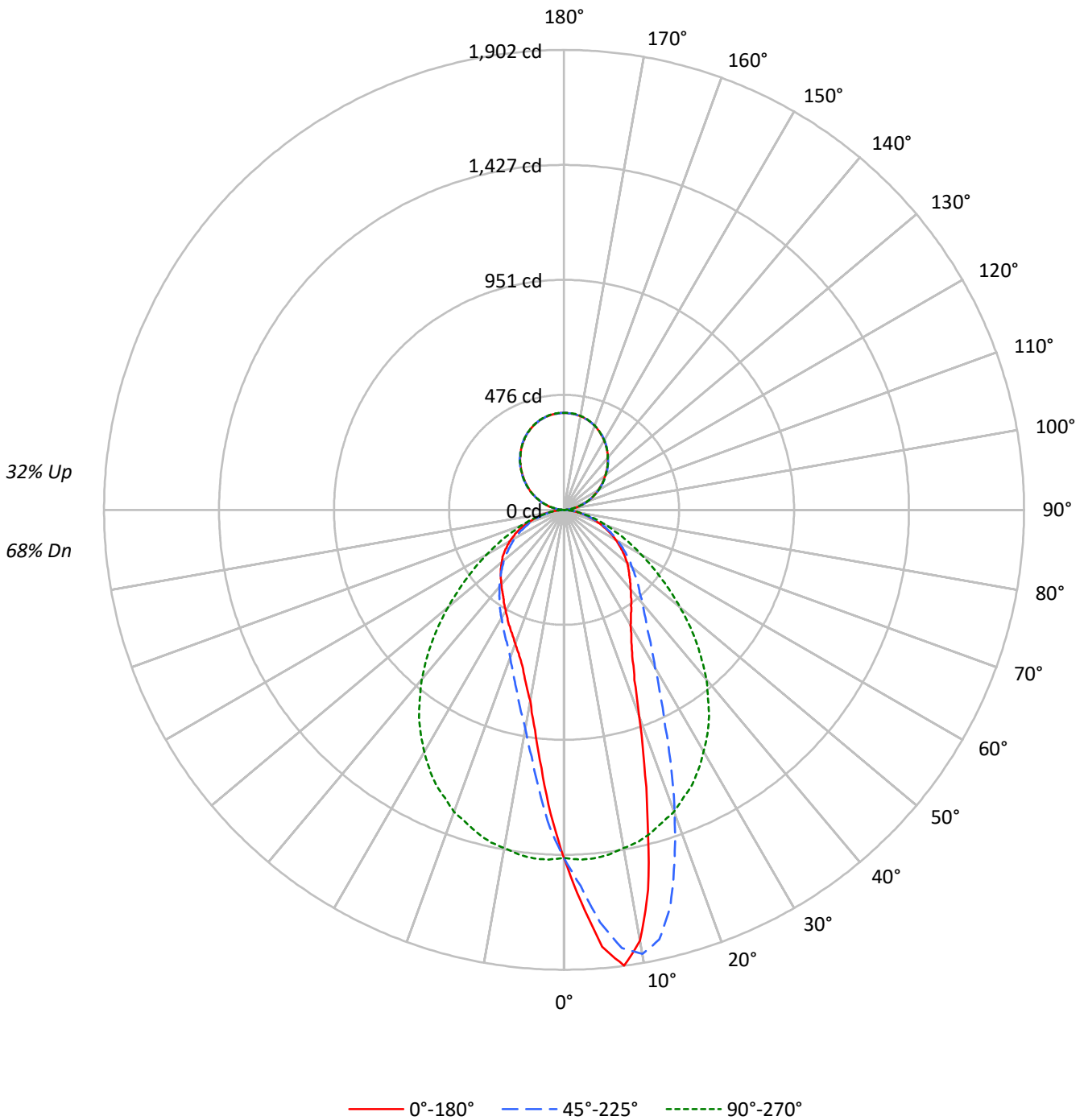
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3426.1 lumens  
Efficiency: N/A  
Efficacy: 115.7 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: 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	105	105	105	105	93	93	93	82	82	82	72	72	72	68				
1	102	98	94	91	96	93	90	87	83	80	78	73	72	70	65	64	62	58				
2	94	87	81	76	88	82	77	72	73	69	66	65	62	60	58	56	54	50				
3	86	77	70	64	81	73	67	62	66	61	56	59	55	51	52	49	47	43				
4	79	69	61	55	75	65	58	53	59	53	49	53	49	45	47	44	41	38				
5	73	62	54	48	69	59	52	46	53	48	43	48	43	40	43	39	36	34				
6	68	56	48	43	64	54	46	41	49	43	38	44	39	35	40	36	33	30				
7	63	51	43	38	60	49	42	37	45	39	34	40	36	32	37	33	30	27				
8	59	47	39	34	56	45	38	33	41	35	31	37	33	29	34	30	27	25				
9	55	43	36	31	52	41	35	30	38	32	28	35	30	26	32	28	25	23				
10	52	40	33	28	49	38	32	27	35	30	26	32	28	24	30	26	23	21				

**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	4.0
10°-20°	338.5	9.9
20°-30°	400.8	11.7
30°-40°	403.0	11.8
40°-50°	369.8	10.8
50°-60°	305.2	8.9
60°-70°	215.9	6.3
70°-80°	115.2	3.4
80°-90°	30.1	0.9
90°-100°	25.8	0.8
100°-110°	78.2	2.3
110°-120°	133.1	3.9
120°-130°	175.0	5.1
130°-140°	196.8	5.7
140°-150°	193.4	5.6
150°-160°	162.9	4.8
160°-170°	108.4	3.2
170°-180°	38.0	1.1
0°-30°	875.4	25.6
0°-40°	1278.4	37.3
0°-60°	1953.4	57.0
0°-90°	2314.6	67.6
90°-120°	237.0	6.9
90°-150°	802.3	23.4
90°-180°	1112.0	32.5
0°-180°	3426.1	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°	10	8	0	8	10	6
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°	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°	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°	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°	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: P831526

CATALOG NUMBER: S123DIP-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: P831526

CATALOG NUMBER: S123DIP-S560D365U940-4F0-1E-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°	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: P831526

CATALOG NUMBER: S123DIP-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: P831526

CATALOG NUMBER: S123DIP-S560D365U940-4F0-1E-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°	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: P831526

CATALOG NUMBER: S123DIP-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: P831526

CATALOG NUMBER: S123DIP-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	14.59	15.58	15.39	16.40	17.40	16.83	17.82	17.63	18.63	19.63
	3H	16.25	17.14	17.06	17.96	18.99	18.26	19.15	19.07	19.97	21.00
	4H	16.83	17.67	17.66	18.50	19.54	18.72	19.56	19.55	20.39	21.43
	6H	17.21	17.98	18.05	18.82	19.87	19.00	19.77	19.84	20.61	21.67
	8H	17.31	18.04	18.16	18.90	19.96	19.07	19.80	19.92	20.66	21.71
	12H	17.36	18.06	18.21	18.91	19.99	19.09	19.79	19.95	20.64	21.72
4H	2H	15.18	16.02	16.02	16.85	17.89	17.01	17.84	17.84	18.68	19.72
	3H	17.02	17.72	17.87	18.59	19.64	18.64	19.33	19.48	20.20	21.25
	4H	17.73	18.36	18.58	19.22	20.31	19.23	19.86	20.08	20.72	21.81
	6H	18.21	18.75	19.08	19.64	20.73	19.64	20.18	20.51	21.07	22.16
	8H	18.35	18.86	19.22	19.74	20.84	19.75	20.26	20.63	21.14	22.24
	12H	18.42	18.88	19.32	19.78	20.89	19.80	20.26	20.70	21.16	22.27
8H	4H	18.00	18.51	18.88	19.39	20.49	19.34	19.85	20.22	20.73	21.83
	6H	18.60	19.02	19.50	19.94	21.04	19.85	20.27	20.75	21.19	22.29
	8H	18.80	19.18	19.72	20.09	21.21	20.03	20.40	20.94	21.32	22.44
	12H	18.93	19.26	19.85	20.17	21.34	20.14	20.46	21.05	21.37	22.54
12H	4H	18.01	18.47	18.90	19.37	20.47	19.32	19.78	20.22	20.68	21.79
	6H	18.65	19.02	19.56	19.94	21.05	19.86	20.24	20.78	21.15	22.27
	8H	18.89	19.21	19.80	20.12	21.29	20.07	20.40	20.98	21.31	22.48