

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: P831528

Luminaire Tested: S123DIP-S560D365U950-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831528  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S560D365U950-4F0-1E-UDD-G  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 365 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: -

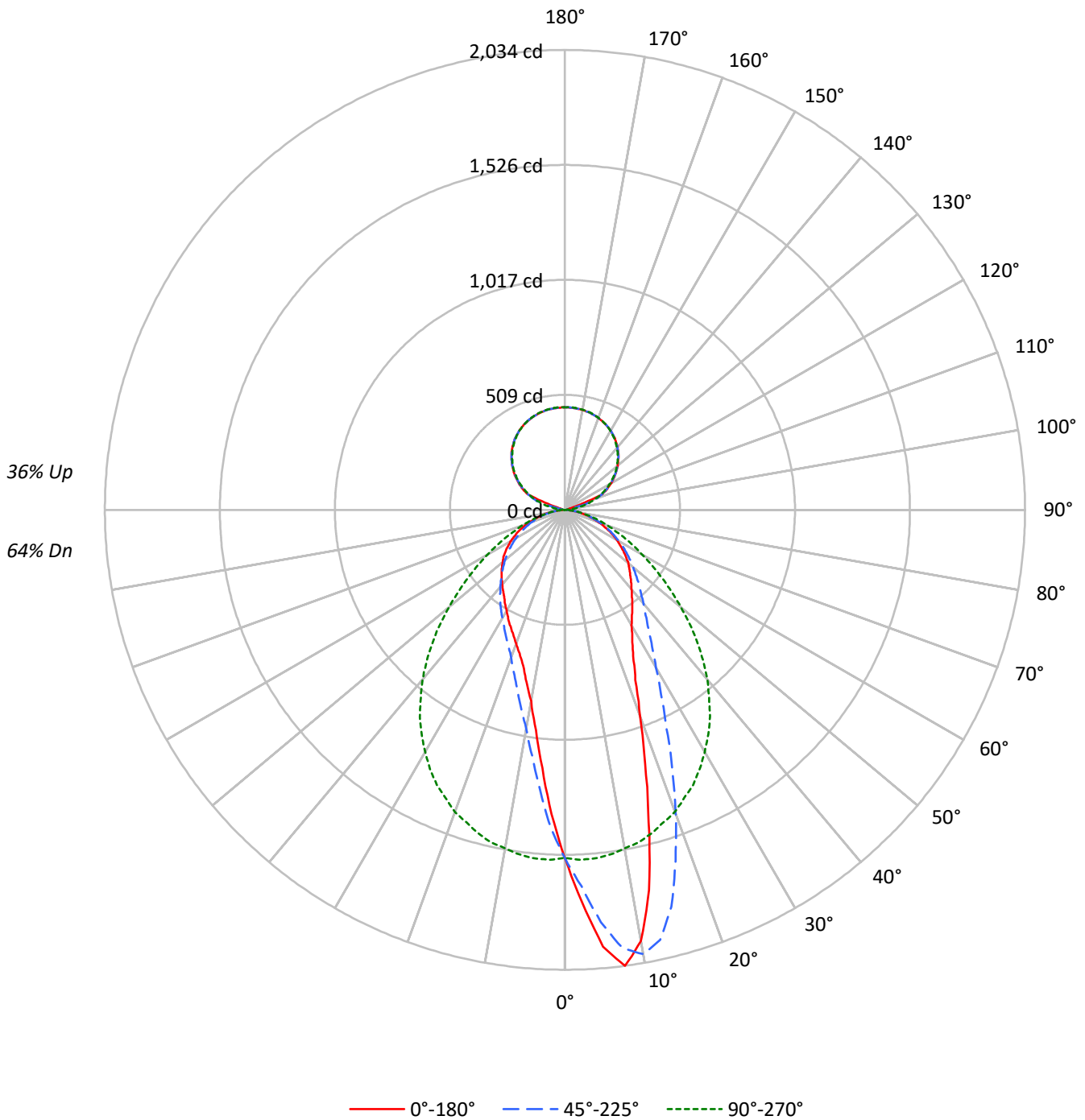
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3859.5 lumens  
Efficiency: N/A  
Efficacy: 130.4 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	104	104	104	104	91	91	91	80	80	80	69	69	69	64				
1	102	97	94	90	95	92	88	86	81	79	76	71	69	68	62	61	60	55				
2	93	86	80	75	87	81	76	71	72	68	64	63	60	58	56	53	51	48				
3	86	76	69	64	80	72	66	61	64	59	55	57	53	50	50	47	45	41				
4	79	68	60	55	74	65	58	52	58	52	48	51	47	44	45	42	39	36				
5	73	61	53	48	68	58	51	46	52	46	42	47	42	38	41	38	35	32				
6	67	56	48	42	63	53	46	40	47	42	37	43	38	34	38	34	31	29				
7	63	51	43	37	59	48	41	36	43	38	33	39	34	31	35	31	28	26				
8	58	46	39	34	55	44	37	32	40	34	30	36	31	28	32	29	26	24				
9	55	43	35	30	52	41	34	29	37	31	27	34	29	26	30	26	24	22				
10	51	40	32	28	49	38	31	27	34	29	25	31	27	23	28	24	22	20				

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

	0°	45°	90°	135°	180°
0°	16575	16575	16575	16575	16575
5°	20962	19785	16723	13477	12384
10°	21166	21805	16612	10743	9388
15°	15941	20246	16499	9098	7939
20°	11108	16383	16289	7955	7211
25°	8469	12599	15929	7320	6764
30°	7327	10009	15356	6870	6403
35°	6797	8451	14695	6544	6150
40°	6435	7581	13766	6235	6065
45°	6221	7016	12584	5993	6027
50°	6114	6569	11188	5774	5995
55°	5887	6242	9817	5564	6020
60°	5677	5892	8460	5369	5922
65°	5333	5560	7297	5160	5805
70°	4925	5139	6206	4812	5463
75°	4458	4608	5319	4471	4991
80°	3676	4029	4209	3899	4209
85°	2915	3260	3088	3310	3359

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 14368 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.6	3.8
10°-20°	362.2	9.4
20°-30°	428.8	11.1
30°-40°	431.2	11.2
40°-50°	395.6	10.2
50°-60°	326.5	8.5
60°-70°	231.0	6.0
70°-80°	123.3	3.2
80°-90°	32.2	0.8
90°-100°	16.0	0.4
100°-110°	77.3	2.0
110°-120°	189.6	4.9
120°-130°	240.7	6.2
130°-140°	257.1	6.7
140°-150°	240.4	6.2
150°-160°	193.9	5.0
160°-170°	125.1	3.2
170°-180°	43.1	1.1
0°-30°	936.6	24.3
0°-40°	1367.7	35.4
0°-60°	2089.8	54.1
0°-90°	2476.3	64.2
90°-120°	282.9	7.3
90°-150°	1021.1	26.5
90°-180°	1383.0	35.8
0°-180°	3859.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1540	1540	1540	1540	1540	
5°	1940	1831	1548	1247	1146	185
15°	1430	1817	1481	816	712	395
25°	713	1061	1341	616	570	337
35°	517	643	1118	498	468	325
45°	409	461	827	394	396	317
55°	314	333	523	296	321	281
65°	209	218	286	203	228	208
75°	107	111	128	108	120	113
85°	24	26	25	27	27	26
90°	10	8	0	8	10	6
95°	13	10	21	10	13	11
105°	15	74	100	74	15	31
115°	198	194	188	194	198	186
125°	271	270	266	270	271	242
135°	334	334	331	334	334	258
145°	385	385	382	385	385	241
155°	420	420	420	420	420	194
165°	442	442	443	442	442	125
175°	452	452	454	452	452	43
180°	454	454	454	454	454	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9
2.5°	1735.7	1733.9	1732.1	1723.2	1714.2	1709.9	1705.6	1692.8	1679.9	1665.6	1651.3
5°	1940.0	1945.0	1950.0	1944.3	1938.6	1921.1	1903.6	1880.4	1857.1	1831.1	1805.0
7.5°	2034.3	2037.2	2040.1	2036.5	2032.9	2028.3	2023.6	2002.9	1982.2	1955.4	1928.6
10°	1936.5	1942.9	1949.3	1963.2	1977.2	1992.9	2008.6	2005.8	2002.9	1995.0	1987.2
12.5°	1721.4	1729.2	1737.1	1765.0	1792.8	1828.6	1864.3	1895.0	1925.7	1947.2	1968.6
15°	1430.5	1452.3	1474.1	1499.5	1524.9	1577.4	1629.9	1694.6	1759.2	1816.8	1874.3
17.5°	1178.3	1186.5	1194.7	1221.9	1249.0	1315.1	1381.2	1455.9	1530.6	1626.0	1721.4
20°	969.7	977.2	984.7	1020.4	1056.1	1107.9	1159.7	1243.7	1327.6	1430.2	1532.7
22.5°	814.6	826.4	838.2	858.2	878.2	927.9	977.5	1052.2	1126.9	1240.1	1353.4
25°	713.1	721.7	730.3	742.4	754.6	794.2	833.9	895.3	956.8	1060.8	1164.7
27.5°	643.8	647.4	651.0	663.1	675.3	701.0	726.7	779.6	832.5	920.7	1009.0
30°	589.5	592.0	594.5	605.2	615.9	633.5	651.0	689.2	727.4	805.3	883.2
32.5°	551.6	553.4	555.2	563.4	571.6	584.2	596.7	624.5	652.4	716.7	781.0
35°	517.3	518.4	519.5	525.6	531.6	540.9	550.2	571.3	592.4	643.1	693.8
37.5°	487.3	488.8	490.2	493.8	497.3	505.5	513.8	530.6	547.4	586.3	625.2
40°	458.0	460.5	463.0	465.5	468.0	474.8	481.6	494.5	507.3	539.5	571.6
42.5°	433.0	435.5	438.0	439.1	440.2	444.1	448.0	459.8	471.6	495.5	519.5
45°	408.7	409.8	410.9	411.9	413.0	416.2	419.4	429.8	440.2	460.9	481.6
47.5°	386.6	386.6	386.6	387.3	388.0	390.9	393.7	401.2	408.7	424.8	440.9
50°	365.1	365.1	365.1	364.1	363.0	364.8	366.6	372.3	378.0	392.3	406.6
52.5°	339.4	339.4	339.4	339.8	340.1	340.1	340.1	345.1	350.1	363.0	375.9
55°	313.7	315.1	316.5	315.5	314.4	315.1	315.8	319.0	322.3	332.6	343.0
57.5°	288.0	288.7	289.4	289.0	288.7	289.0	289.4	292.3	295.1	303.0	310.8
60°	263.7	263.7	263.7	263.0	262.2	263.0	263.7	265.1	266.5	273.7	280.8
62.5°	236.5	236.9	237.2	237.6	237.9	237.2	236.5	238.3	240.1	245.5	250.8
65°	209.4	209.7	210.1	211.2	212.2	211.5	210.8	212.6	214.4	218.3	222.2
67.5°	185.1	184.4	183.6	184.0	184.4	185.4	186.5	186.9	187.2	191.5	195.8
70°	156.5	157.2	157.9	157.6	157.2	157.6	157.9	159.0	160.1	163.3	166.5
72.5°	130.8	131.1	131.5	131.5	131.5	132.2	132.9	134.0	135.1	136.8	138.6
75°	107.2	107.2	107.2	107.9	108.6	109.0	109.3	109.3	109.3	110.8	112.2
77.5°	81.5	83.2	85.0	84.7	84.3	85.0	85.7	86.8	87.9	88.6	89.3
80°	59.3	59.3	59.3	59.7	60.0	61.1	62.2	62.9	63.6	65.0	66.5
82.5°	37.9	38.2	38.6	39.7	40.7	41.4	42.2	43.2	44.3	44.3	44.3
85°	23.6	22.9	22.2	22.9	23.6	24.3	25.0	25.4	25.7	26.4	27.2
87.5°	11.4	11.4	11.4	11.4	11.4	11.8	12.1	12.1	12.1	12.1	12.1
90°	10.1	10.0	9.8	9.7	9.5	9.3	9.0	8.7	8.4	8.1	7.1
92.5°	11.5	11.4	11.3	11.2	11.2	10.9	10.3	9.8	9.3	8.8	8.1
95°	12.8	12.8	12.8	12.8	12.8	12.5	12.0	11.5	11.0	10.5	9.6
97.5°	13.8	13.7	13.7	13.6	13.5	13.2	12.6	12.0	11.4	10.8	14.6
100°	14.2	14.1	14.0	13.9	13.9	13.5	12.9	12.3	11.7	11.1	22.8
102.5°	14.5	14.3	14.2	14.0	13.9	15.1	17.5	20.0	22.5	24.9	38.0
105°	14.8	14.7	14.5	14.4	14.2	20.8	34.0	47.3	60.6	73.8	80.6
107.5°	35.1	44.9	54.7	64.5	74.3	85.0	96.5	108.1	119.6	131.1	130.0
110°	92.7	103.4	114.1	124.8	135.6	142.1	144.6	147.1	149.6	152.0	151.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	175.6	175.8	175.9	176.1	176.2	176.0	175.3	174.6	174.0	173.3	172.5
115°	198.2	197.9	197.6	197.3	197.0	196.5	195.8	195.0	194.3	193.5	192.8
117.5°	216.4	216.4	216.3	216.2	216.1	215.8	215.2	214.6	214.0	213.4	213.0
120°	235.3	235.3	235.3	235.3	235.3	235.0	234.4	233.8	233.2	232.6	232.4
122.5°	253.8	253.8	253.7	253.6	253.5	253.3	252.9	252.6	252.2	251.8	251.5
125°	271.0	270.9	270.7	270.6	270.4	270.3	270.1	270.0	269.8	269.7	269.4
127.5°	287.9	288.0	288.2	288.3	288.5	288.5	288.2	288.0	287.8	287.6	287.2
130°	304.1	304.2	304.4	304.5	304.7	304.6	304.3	304.0	303.7	303.4	303.1
132.5°	318.9	319.1	319.4	319.6	319.8	319.8	319.5	319.2	318.9	318.6	318.3
135°	334.1	334.3	334.5	334.8	335.0	335.0	334.8	334.5	334.3	334.1	333.8
137.5°	348.6	348.7	348.9	349.0	349.2	349.1	348.7	348.3	347.9	347.6	347.4
140°	361.4	361.5	361.7	361.8	362.0	361.9	361.6	361.3	361.0	360.7	360.5
142.5°	373.2	373.4	373.6	373.9	374.1	374.1	373.9	373.6	373.4	373.2	373.0
145°	385.3	385.3	385.3	385.3	385.3	385.2	385.1	384.9	384.8	384.6	384.5
147.5°	394.1	394.5	394.8	395.2	395.6	395.7	395.5	395.4	395.2	395.1	394.9
150°	404.2	404.4	404.6	404.9	405.1	405.1	405.0	404.8	404.7	404.5	404.4
152.5°	412.3	412.7	413.0	413.4	413.8	413.8	413.5	413.2	412.9	412.6	412.6
155°	419.7	420.2	420.6	421.1	421.5	421.5	421.2	420.8	420.4	420.0	420.0
157.5°	426.1	426.7	427.3	427.9	428.5	428.6	428.1	427.7	427.2	426.8	426.9
160°	432.2	432.7	433.2	433.8	434.3	434.3	433.9	433.4	433.0	432.5	432.6
162.5°	437.9	438.4	438.8	439.3	439.7	439.7	439.1	438.6	438.1	437.6	437.6
165°	442.3	442.8	443.3	443.9	444.4	444.4	443.8	443.2	442.6	442.0	442.0
167.5°	445.7	446.3	446.9	447.5	448.1	448.1	447.5	446.9	446.3	445.7	445.7
170°	448.7	449.3	449.9	450.5	451.1	451.1	450.5	449.9	449.3	448.7	448.7
172.5°	450.4	451.1	451.7	452.4	453.1	453.1	452.5	451.9	451.3	450.7	450.6
175°	452.1	452.7	453.3	453.9	454.5	454.5	454.0	453.5	452.9	452.4	452.3
177.5°	452.4	453.2	453.9	454.7	455.4	455.5	454.9	454.3	453.7	453.1	453.0
180°	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9
2.5°	1647.1	1642.8	1627.0	1611.3	1593.5	1575.6	1562.4	1549.2	1529.5	1509.9	1493.8
5°	1785.0	1765.0	1731.7	1698.5	1653.5	1608.5	1578.1	1547.7	1507.0	1466.3	1433.8
7.5°	1894.3	1860.0	1813.5	1767.1	1708.1	1649.2	1593.5	1537.7	1475.6	1413.4	1362.7
10°	1964.0	1940.7	1887.1	1833.6	1754.6	1675.6	1597.8	1519.9	1439.8	1359.8	1292.6
12.5°	1970.7	1972.9	1923.6	1874.3	1785.0	1695.6	1601.0	1506.3	1405.5	1304.8	1226.5
15°	1911.1	1947.9	1920.7	1893.6	1803.5	1713.5	1597.0	1480.6	1364.4	1248.3	1157.9
17.5°	1800.3	1879.3	1883.2	1887.1	1797.1	1707.1	1578.1	1449.1	1317.6	1186.2	1091.1
20°	1649.2	1765.7	1805.7	1845.7	1772.5	1699.2	1560.6	1422.0	1274.8	1127.6	1027.9
22.5°	1494.9	1636.3	1709.6	1782.8	1728.5	1674.2	1526.7	1379.1	1223.7	1068.3	967.2
25°	1319.1	1473.4	1586.0	1698.5	1665.3	1632.0	1486.6	1341.2	1175.8	1010.4	907.1
27.5°	1165.8	1322.6	1458.4	1594.2	1587.0	1579.9	1435.5	1291.2	1121.9	952.5	852.8
30°	1029.3	1175.4	1327.3	1479.1	1496.6	1514.1	1374.8	1235.5	1065.8	896.1	799.9
32.5°	908.6	1036.1	1199.0	1361.9	1396.2	1430.5	1304.8	1179.0	1011.1	843.2	750.6
35°	809.6	925.4	1088.3	1251.2	1294.1	1336.9	1227.6	1118.3	954.6	791.0	702.8
37.5°	722.1	818.9	977.9	1136.9	1189.4	1241.9	1144.0	1046.1	892.8	739.6	658.5
40°	649.5	727.4	873.5	1019.7	1080.4	1141.1	1060.4	979.7	834.2	688.8	614.2
42.5°	588.8	658.1	790.7	923.2	981.4	1039.7	971.4	903.2	773.9	644.5	576.3
45°	537.0	592.4	712.8	833.2	888.6	943.9	885.3	826.7	712.8	598.8	535.2
47.5°	488.4	535.9	638.8	741.7	791.0	840.3	794.6	748.9	652.4	555.9	498.4
50°	444.8	483.0	573.1	663.1	706.0	748.9	708.5	668.1	588.8	509.5	459.5
52.5°	406.9	438.0	513.4	588.8	625.6	662.4	627.7	593.1	530.2	467.3	423.7
55°	369.4	395.9	461.2	526.6	551.6	576.6	549.9	523.1	472.3	421.6	384.8
57.5°	334.4	358.0	411.6	465.2	484.5	503.8	479.5	455.2	416.9	378.7	348.0
60°	300.1	319.4	364.1	408.7	420.5	432.3	412.7	393.0	366.2	339.4	311.9
62.5°	268.3	285.8	319.0	352.3	360.1	368.0	353.0	338.0	317.6	297.3	275.8
65°	235.4	248.7	275.8	303.0	308.0	313.0	299.8	286.5	271.2	255.8	240.1
67.5°	205.1	214.4	236.5	258.7	259.0	259.4	248.7	237.9	229.4	220.8	208.3
70°	175.4	184.4	199.0	213.7	214.0	214.4	205.8	197.2	190.8	184.4	175.1
72.5°	145.1	151.5	162.6	173.6	172.9	172.2	166.8	161.5	156.5	151.5	144.7
75°	117.5	122.9	130.4	137.9	135.8	133.6	130.8	127.9	123.6	119.3	115.0
77.5°	92.5	95.8	100.0	104.3	102.9	101.5	99.0	96.5	93.2	90.0	88.2
80°	67.9	69.3	72.2	75.0	74.3	73.6	70.7	67.9	67.2	66.5	64.0
82.5°	46.1	47.9	48.6	49.3	48.9	48.6	46.4	44.3	43.6	42.9	42.5
85°	27.5	27.9	28.2	28.6	27.5	26.4	25.7	25.0	25.0	25.0	24.7
87.5°	12.5	12.9	12.9	12.9	12.5	12.1	11.4	10.7	11.1	11.4	11.4
90°	6.1	5.2	4.2	3.3	2.6	1.8	1.1	0.3	1.1	1.8	2.6
92.5°	7.4	6.7	6.1	6.0	6.4	6.9	7.3	7.8	7.3	6.9	6.4
95°	8.8	8.0	7.2	8.3	11.3	14.4	17.5	20.6	17.5	14.4	11.3
97.5°	18.4	22.2	26.1	29.0	31.1	33.2	35.3	37.4	35.3	33.2	31.1
100°	34.5	46.2	57.9	63.0	61.5	60.0	58.5	57.0	58.5	60.0	61.5
102.5°	51.0	64.1	77.1	83.1	82.1	81.2	80.2	79.2	80.2	81.2	82.1
105°	87.3	94.1	100.8	103.8	102.9	102.1	101.3	100.5	101.3	102.1	102.9
107.5°	128.9	127.8	126.6	125.7	125.1	124.4	123.7	123.0	123.7	124.4	125.1
110°	150.4	149.6	148.7	148.0	147.4	146.8	146.2	145.6	146.2	146.8	147.4





TEST NUMBER: P831528

CATALOG NUMBER: S123DIP-S560D365U950-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	171.6	170.8	170.0	169.3	168.8	168.3	167.7	167.2	167.7	168.3	168.8
115°	192.2	191.5	190.8	190.2	189.8	189.3	188.9	188.4	188.9	189.3	189.8
117.5°	212.6	212.3	211.9	211.4	210.9	210.4	209.9	209.3	209.9	210.4	210.9
120°	232.2	231.9	231.7	231.3	230.6	229.9	229.2	228.6	229.2	229.9	230.6
122.5°	251.2	250.9	250.6	250.2	249.7	249.2	248.6	248.1	248.6	249.2	249.7
125°	269.1	268.8	268.5	268.0	267.4	266.8	266.2	265.6	266.2	266.8	267.4
127.5°	286.8	286.4	286.1	285.6	285.0	284.4	283.8	283.2	283.8	284.4	285.0
130°	302.8	302.5	302.2	301.8	301.2	300.6	300.0	299.4	300.0	300.6	301.2
132.5°	318.1	317.9	317.7	317.3	316.7	316.1	315.5	314.9	315.5	316.1	316.7
135°	333.5	333.2	332.9	332.5	332.1	331.6	331.2	330.7	331.2	331.6	332.1
137.5°	347.3	347.1	347.0	346.6	346.0	345.4	344.8	344.2	344.8	345.4	346.0
140°	360.3	360.0	359.8	359.5	359.0	358.6	358.1	357.7	358.1	358.6	359.0
142.5°	372.7	372.5	372.3	371.9	371.5	371.1	370.6	370.2	370.6	371.1	371.5
145°	384.3	384.2	384.0	383.7	383.2	382.7	382.1	381.6	382.1	382.7	383.2
147.5°	394.8	394.6	394.5	394.2	393.9	393.5	393.1	392.7	393.1	393.5	393.9
150°	404.2	404.1	403.9	403.8	403.5	403.3	403.1	402.9	403.1	403.3	403.5
152.5°	412.5	412.4	412.3	412.3	412.2	412.1	412.0	412.0	412.0	412.1	412.2
155°	419.9	419.8	419.7	419.8	419.9	420.1	420.2	420.4	420.2	420.1	419.9
157.5°	426.9	427.0	427.1	427.1	427.1	427.1	427.1	427.1	427.1	427.1	427.1
160°	432.7	432.7	432.8	432.9	433.0	433.0	433.1	433.2	433.1	433.0	433.0
162.5°	437.7	437.8	437.9	438.0	438.2	438.5	438.7	438.9	438.7	438.5	438.2
165°	442.1	442.2	442.3	442.4	442.6	442.9	443.1	443.3	443.1	442.9	442.6
167.5°	445.7	445.7	445.7	445.8	446.1	446.4	446.7	447.0	446.7	446.4	446.1
170°	448.7	448.7	448.7	448.8	449.1	449.4	449.7	450.0	449.7	449.4	449.1
172.5°	450.6	450.5	450.4	450.6	450.9	451.3	451.7	452.1	451.7	451.3	450.9
175°	452.3	452.2	452.1	452.3	452.6	453.0	453.4	453.8	453.4	453.0	452.6
177.5°	452.9	452.9	452.8	452.9	453.3	453.7	454.1	454.4	454.1	453.7	453.3
180°	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8



TEST NUMBER: P831528

CATALOG NUMBER: S123DIP-S560D365U950-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9	1539.9
2.5°	1477.7	1463.8	1449.8	1439.1	1428.4	1410.2	1392.0	1387.7	1383.4	1377.3	1371.2
5°	1401.2	1366.9	1332.6	1301.9	1271.2	1247.3	1223.3	1207.6	1191.9	1180.4	1169.0
7.5°	1311.9	1260.5	1209.0	1172.6	1136.1	1101.5	1066.8	1055.8	1044.7	1029.7	1014.7
10°	1225.5	1168.7	1111.9	1064.3	1016.8	982.9	948.9	935.4	921.8	902.8	883.9
12.5°	1148.3	1086.1	1024.0	976.1	928.2	895.3	862.5	842.8	823.2	812.5	801.7
15°	1067.5	1001.1	934.6	890.3	846.0	816.4	786.7	769.6	752.4	742.1	731.7
17.5°	996.1	930.4	864.6	822.1	779.6	752.4	725.3	710.3	695.3	687.4	679.5
20°	928.2	863.9	799.6	758.1	716.7	694.5	672.4	662.8	653.1	646.7	640.2
22.5°	866.0	802.8	739.6	704.2	668.8	651.0	633.1	626.3	619.5	614.2	608.8
25°	803.9	747.4	691.0	661.0	631.0	616.3	601.7	594.9	588.1	582.7	577.4
27.5°	753.1	699.2	645.2	619.5	593.8	582.4	570.9	565.6	560.2	555.2	550.2
30°	703.8	655.6	607.4	585.2	563.1	552.7	542.3	537.0	531.6	527.0	522.3
32.5°	658.1	616.7	575.2	554.9	534.5	525.9	517.3	510.9	504.5	500.9	497.3
35°	614.5	577.4	540.2	523.4	506.6	498.0	489.5	484.1	478.8	475.9	473.0
37.5°	577.4	544.1	510.9	494.8	478.8	470.5	462.3	457.7	453.0	452.0	450.9
40°	539.5	510.9	482.3	466.6	450.9	443.7	436.6	433.7	430.9	430.2	429.4
42.5°	508.1	480.2	452.3	438.0	423.7	417.7	411.6	410.2	408.7	409.8	410.9
45°	471.6	448.4	425.2	411.9	398.7	393.7	388.7	387.6	386.6	388.7	390.9
47.5°	440.9	419.4	398.0	385.5	373.0	369.4	365.9	365.5	365.1	368.0	370.9
50°	409.4	388.7	368.0	358.0	348.0	344.8	341.6	342.6	343.7	348.3	353.0
52.5°	380.1	360.9	341.6	332.3	323.0	320.8	318.7	321.2	323.7	328.7	333.7
55°	348.0	330.5	313.0	305.8	298.7	296.5	294.4	299.4	304.4	309.0	313.7
57.5°	317.3	301.9	286.5	280.1	273.7	273.3	273.0	277.6	282.3	287.3	292.3
60°	284.4	271.5	258.7	253.7	248.7	249.4	250.1	255.5	260.8	264.7	268.7
62.5°	254.4	243.7	232.9	228.3	223.7	225.4	227.2	232.6	237.9	242.6	247.2
65°	224.4	215.4	206.5	203.3	200.1	202.6	205.1	209.7	214.4	217.6	220.8
67.5°	195.8	188.3	180.8	178.3	175.8	178.3	180.8	185.4	190.1	193.3	196.5
70°	165.8	159.7	153.6	151.8	150.1	152.9	155.8	159.7	163.6	166.8	170.1
72.5°	137.9	133.3	128.6	128.3	127.9	130.4	132.9	136.8	140.8	142.9	145.1
75°	110.8	108.3	105.8	105.4	105.0	107.5	110.0	112.2	114.3	116.1	117.9
77.5°	86.5	84.3	82.2	82.5	82.9	84.7	86.5	88.6	90.7	91.8	92.9
80°	61.5	60.7	60.0	60.7	61.5	62.9	64.3	65.7	67.2	67.9	68.6
82.5°	42.2	41.4	40.7	41.8	42.9	43.9	45.0	46.1	47.2	47.5	47.9
85°	24.3	25.4	26.4	26.4	26.4	26.8	27.2	27.5	27.9	27.5	27.2
87.5°	11.4	11.8	12.1	12.1	12.1	12.5	12.9	12.9	12.9	12.5	12.1
90°	3.3	4.2	5.2	6.1	7.1	8.1	8.4	8.7	9.0	9.3	9.5
92.5°	6.0	6.1	6.7	7.4	8.1	8.8	9.3	9.8	10.3	10.9	11.2
95°	8.3	7.2	8.0	8.8	9.6	10.5	11.0	11.5	12.0	12.5	12.8
97.5°	29.0	26.1	22.2	18.4	14.6	10.8	11.4	12.0	12.6	13.2	13.5
100°	63.0	57.9	46.2	34.5	22.8	11.1	11.7	12.3	12.9	13.5	13.9
102.5°	83.1	77.1	64.1	51.0	38.0	24.9	22.5	20.0	17.5	15.1	13.9
105°	103.8	100.8	94.1	87.3	80.6	73.8	60.6	47.3	34.0	20.8	14.2
107.5°	125.7	126.6	127.8	128.9	130.0	131.1	119.6	108.1	96.5	85.0	74.3
110°	148.0	148.7	149.6	150.4	151.2	152.0	149.6	147.1	144.6	142.1	135.6

TEST NUMBER: P831528

CATALOG NUMBER: S123DIP-S560D365U950-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	169.3	170.0	170.8	171.6	172.5	173.3	174.0	174.6	175.3	176.0	176.2
115°	190.2	190.8	191.5	192.2	192.8	193.5	194.3	195.0	195.8	196.5	197.0
117.5°	211.4	211.9	212.3	212.6	213.0	213.4	214.0	214.6	215.2	215.8	216.1
120°	231.3	231.7	231.9	232.2	232.4	232.6	233.2	233.8	234.4	235.0	235.3
122.5°	250.2	250.6	250.9	251.2	251.5	251.8	252.2	252.6	252.9	253.3	253.5
125°	268.0	268.5	268.8	269.1	269.4	269.7	269.8	270.0	270.1	270.3	270.4
127.5°	285.6	286.1	286.4	286.8	287.2	287.6	287.8	288.0	288.2	288.5	288.5
130°	301.8	302.2	302.5	302.8	303.1	303.4	303.7	304.0	304.3	304.6	304.7
132.5°	317.3	317.7	317.9	318.1	318.3	318.6	318.9	319.2	319.5	319.8	319.8
135°	332.5	332.9	333.2	333.5	333.8	334.1	334.3	334.5	334.8	335.0	335.0
137.5°	346.6	347.0	347.1	347.3	347.4	347.6	347.9	348.3	348.7	349.1	349.2
140°	359.5	359.8	360.0	360.3	360.5	360.7	361.0	361.3	361.6	361.9	362.0
142.5°	371.9	372.3	372.5	372.7	373.0	373.2	373.4	373.6	373.9	374.1	374.1
145°	383.7	384.0	384.2	384.3	384.5	384.6	384.8	384.9	385.1	385.2	385.3
147.5°	394.2	394.5	394.6	394.8	394.9	395.1	395.2	395.4	395.5	395.7	395.6
150°	403.8	403.9	404.1	404.2	404.4	404.5	404.7	404.8	405.0	405.1	405.1
152.5°	412.3	412.3	412.4	412.5	412.6	412.6	412.9	413.2	413.5	413.8	413.8
155°	419.8	419.7	419.8	419.9	420.0	420.0	420.4	420.8	421.2	421.5	421.5
157.5°	427.1	427.1	427.0	426.9	426.9	426.8	427.2	427.7	428.1	428.6	428.5
160°	432.9	432.8	432.7	432.7	432.6	432.5	433.0	433.4	433.9	434.3	434.3
162.5°	438.0	437.9	437.8	437.7	437.6	437.6	438.1	438.6	439.1	439.7	439.7
165°	442.4	442.3	442.2	442.1	442.0	442.0	442.6	443.2	443.8	444.4	444.4
167.5°	445.8	445.7	445.7	445.7	445.7	445.7	446.3	446.9	447.5	448.1	448.1
170°	448.8	448.7	448.7	448.7	448.7	448.7	449.3	449.9	450.5	451.1	451.1
172.5°	450.6	450.4	450.5	450.6	450.6	450.7	451.3	451.9	452.5	453.1	453.1
175°	452.3	452.1	452.2	452.3	452.3	452.4	452.9	453.5	454.0	454.5	454.5
177.5°	452.9	452.8	452.9	452.9	453.0	453.1	453.7	454.3	454.9	455.5	455.4
180°	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8	453.8



TEST NUMBER: P831528

CATALOG NUMBER: S123DIP-S560D365U950-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1539.9	1539.9	1539.9	1539.9
2.5°	1368.7	1366.2	1356.2	1346.2
5°	1160.4	1151.9	1149.0	1146.1
7.5°	1014.0	1013.2	998.2	983.2
10°	885.0	886.1	872.5	858.9
12.5°	792.8	783.9	782.8	781.7
15°	723.5	715.3	713.8	712.4
17.5°	674.5	669.5	668.1	666.7
20°	637.4	634.5	632.0	629.5
22.5°	605.2	601.7	599.5	597.4
25°	574.1	570.9	570.2	569.5
27.5°	546.3	542.3	542.3	542.3
30°	519.8	517.3	516.3	515.2
32.5°	495.2	493.0	493.0	493.0
35°	472.0	470.9	469.5	468.0
37.5°	450.9	450.9	450.2	449.5
40°	430.5	431.6	431.6	431.6
42.5°	411.9	413.0	413.0	413.0
45°	392.6	394.4	395.2	395.9
47.5°	373.7	376.6	377.3	378.0
50°	355.1	357.3	357.6	358.0
52.5°	336.2	338.7	340.5	342.3
55°	316.2	318.7	319.8	320.8
57.5°	294.8	297.3	297.6	298.0
60°	271.2	273.7	274.4	275.1
62.5°	248.7	250.1	250.8	251.5
65°	222.9	225.1	226.5	227.9
67.5°	198.3	200.1	200.1	200.1
70°	170.8	171.5	172.6	173.6
72.5°	145.4	145.8	145.8	145.8
75°	118.6	119.3	119.7	120.0
77.5°	93.2	93.6	93.6	93.6
80°	68.2	67.9	67.9	67.9
82.5°	46.8	45.7	45.7	45.7
85°	26.8	26.4	26.8	27.2
87.5°	12.1	12.1	12.1	12.1
90°	9.7	9.8	10.0	10.1
92.5°	11.2	11.3	11.4	11.5
95°	12.8	12.8	12.8	12.8
97.5°	13.6	13.7	13.7	13.8
100°	13.9	14.0	14.1	14.2
102.5°	14.0	14.2	14.3	14.5
105°	14.4	14.5	14.7	14.8
107.5°	64.5	54.7	44.9	35.1
110°	124.8	114.1	103.4	92.7



TEST NUMBER: P831528

CATALOG NUMBER: S123DIP-S560D365U950-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	176.1	175.9	175.8	175.6
115°	197.3	197.6	197.9	198.2
117.5°	216.2	216.3	216.4	216.4
120°	235.3	235.3	235.3	235.3
122.5°	253.6	253.7	253.8	253.8
125°	270.6	270.7	270.9	271.0
127.5°	288.3	288.2	288.0	287.9
130°	304.5	304.4	304.2	304.1
132.5°	319.6	319.4	319.1	318.9
135°	334.8	334.5	334.3	334.1
137.5°	349.0	348.9	348.7	348.6
140°	361.8	361.7	361.5	361.4
142.5°	373.9	373.6	373.4	373.2
145°	385.3	385.3	385.3	385.3
147.5°	395.2	394.8	394.5	394.1
150°	404.9	404.6	404.4	404.2
152.5°	413.4	413.0	412.7	412.3
155°	421.1	420.6	420.2	419.7
157.5°	427.9	427.3	426.7	426.1
160°	433.8	433.2	432.7	432.2
162.5°	439.3	438.8	438.4	437.9
165°	443.9	443.3	442.8	442.3
167.5°	447.5	446.9	446.3	445.7
170°	450.5	449.9	449.3	448.7
172.5°	452.4	451.7	451.1	450.4
175°	453.9	453.3	452.7	452.1
177.5°	454.7	453.9	453.2	452.4
180°	453.8	453.8	453.8	453.8



TEST NUMBER: P831528

CATALOG NUMBER: S123DIP-S560D365U950-4F0-1E-UDD-G

**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	14.55	15.51	15.39	16.36	17.42	16.79	17.75	17.62	18.59	19.65
	3H	16.21	17.06	17.06	17.92	19.01	18.22	19.08	19.07	19.94	21.02
	4H	16.79	17.60	17.65	18.46	19.56	18.68	19.48	19.54	20.35	21.45
	6H	17.17	17.91	18.04	18.78	19.89	18.96	19.70	19.83	20.57	21.68
	8H	17.27	17.97	18.15	18.86	19.97	19.02	19.73	19.91	20.62	21.73
	12H	17.31	17.99	18.20	18.87	20.00	19.04	19.72	19.93	20.60	21.74
4H	2H	15.14	15.95	16.01	16.81	17.91	16.97	17.77	17.83	18.64	19.73
	3H	16.98	17.65	17.86	18.55	19.66	18.59	19.26	19.47	20.16	21.27
	4H	17.68	18.29	18.57	19.19	20.32	19.18	19.79	20.07	20.69	21.82
	6H	18.16	18.69	19.06	19.61	20.75	19.59	20.12	20.49	21.04	22.18
	8H	18.30	18.79	19.21	19.70	20.86	19.70	20.20	20.61	21.11	22.26
	12H	18.37	18.81	19.30	19.74	20.90	19.75	20.19	20.68	21.13	22.28
8H	4H	17.95	18.44	18.86	19.36	20.51	19.29	19.78	20.20	20.70	21.85
	6H	18.55	18.95	19.48	19.91	21.06	19.80	20.20	20.73	21.16	22.31
	8H	18.75	19.11	19.70	20.06	21.23	19.98	20.34	20.92	21.28	22.45
	12H	18.88	19.20	19.83	20.14	21.36	20.08	20.40	21.03	21.34	22.56
12H	4H	17.96	18.40	18.88	19.33	20.49	19.27	19.71	20.20	20.65	21.80
	6H	18.60	18.96	19.54	19.90	21.07	19.81	20.17	20.76	21.12	22.29
	8H	18.83	19.15	19.78	20.09	21.31	20.02	20.33	20.96	21.27	22.49