

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: P832224

Luminaire Tested: S123RDIP-S560D365U830-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P832224  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S560D365U830-4F0-1E-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: -

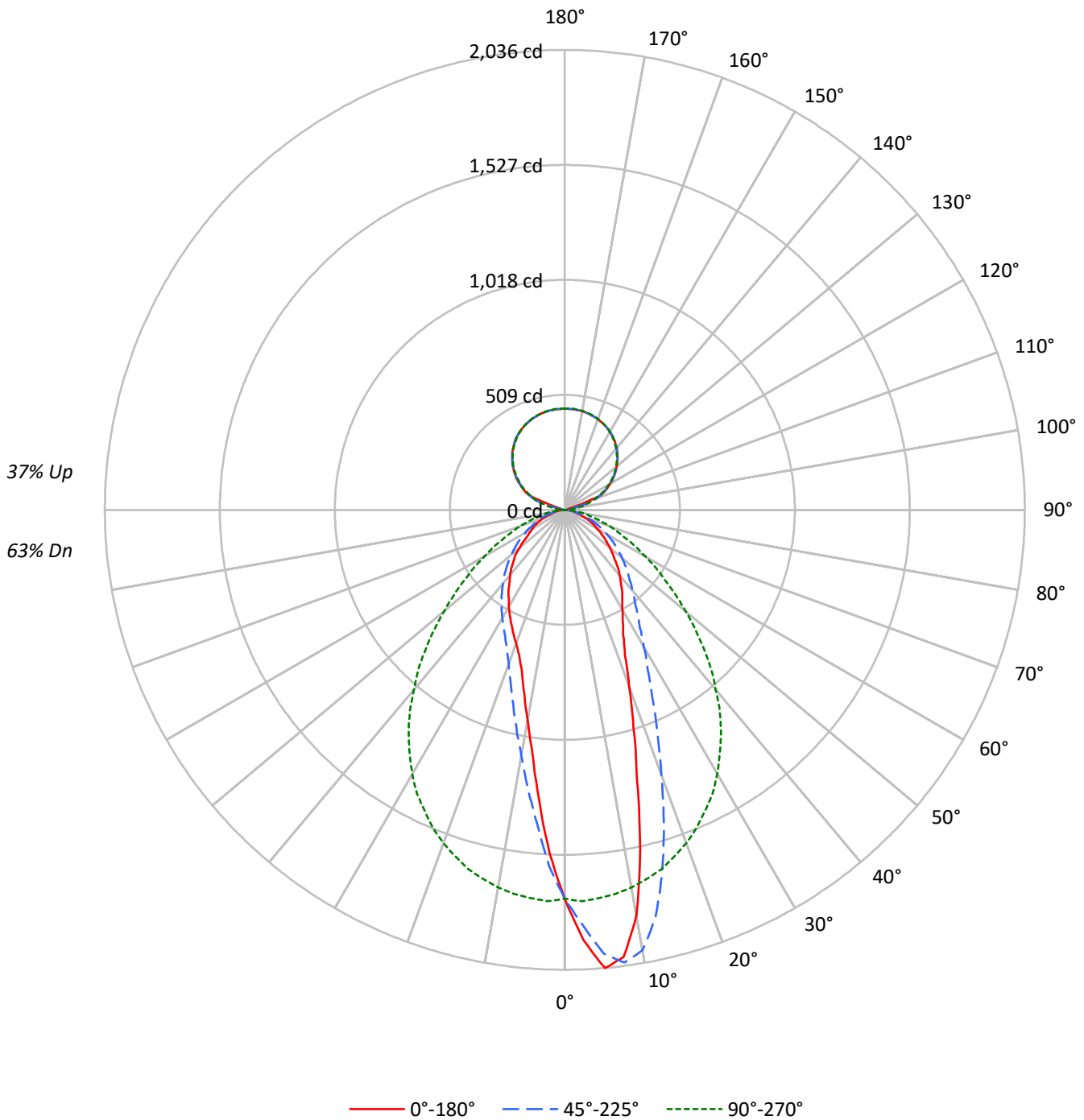
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3649.9 lumens  
Efficiency: N/A  
Efficacy: 123.3 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				
RC	80					70					50					30				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	110	110	110	110	103	103	103	103	90	90	90	78	78	78	68	68	68	63		
1	102	98	94	91	95	92	89	86	81	78	76	71	69	67	61	60	59	55		
2	93	86	81	76	87	81	76	72	72	68	65	63	60	58	55	53	51	47		
3	86	77	70	65	80	73	67	62	65	60	56	57	53	50	50	47	45	42		
4	79	69	62	56	74	65	59	53	58	53	49	52	48	44	46	42	40	37		
5	73	62	55	49	69	59	52	47	53	47	43	47	43	39	42	38	36	33		
6	68	57	49	43	64	54	47	42	48	43	38	43	39	35	38	35	32	30		
7	63	52	44	39	60	49	42	37	44	39	35	40	35	32	36	32	29	27		
8	59	47	40	35	56	45	38	34	41	35	31	37	32	29	33	29	27	25		
9	56	44	37	32	52	42	35	31	38	32	29	34	30	27	31	27	25	23		
10	52	41	34	29	49	39	32	28	35	30	26	32	28	24	29	25	23	21		

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

	0°	45°	90°	135°	180°
0°	18529	18529	18529	18529	18529
5°	22001	21300	18646	15073	13994
10°	19934	21635	18553	12077	10361
15°	13724	18550	18357	9871	8195
20°	9548	14282	17988	8323	7204
25°	7276	10885	17453	7398	6639
30°	6334	8702	16782	6868	6150
35°	5815	7340	15831	6423	5704
40°	5306	6555	14588	5984	5296
45°	4792	5995	13247	5571	4888
50°	4349	5531	11665	5164	4384
55°	3933	5080	10145	4769	3761
60°	3524	4620	8813	4331	3556
65°	3252	4098	7585	3892	3362
70°	2644	3544	6618	3522	2732
75°	2321	2820	5606	2920	2408
80°	2101	2386	4593	2448	2275
85°	1914	2087	3483	2223	2087

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 13977 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.9	4.3
10°-20°	363.1	9.9
20°-30°	416.6	11.4
30°-40°	410.6	11.2
40°-50°	362.1	9.9
50°-60°	278.6	7.6
60°-70°	183.1	5.0
70°-80°	88.9	2.4
80°-90°	23.3	0.6
90°-100°	15.8	0.4
100°-110°	76.4	2.1
110°-120°	187.3	5.1
120°-130°	237.8	6.5
130°-140°	254.0	7.0
140°-150°	237.5	6.5
150°-160°	191.6	5.2
160°-170°	123.6	3.4
170°-180°	42.6	1.2
0°-30°	936.6	25.7
0°-40°	1347.2	36.9
0°-60°	1987.8	54.5
0°-90°	2283.2	62.6
90°-120°	279.5	7.7
90°-150°	1008.8	27.6
90°-180°	1367.0	37.5
0°-180°	3649.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1721	1721	1721	1721	1721	
5°	2036	1971	1726	1395	1295	186
15°	1232	1665	1647	886	735	348
25°	613	916	1470	623	559	289
35°	442	559	1205	489	434	276
45°	315	394	870	366	321	244
55°	210	271	541	254	200	188
65°	128	161	298	153	132	125
75°	56	68	135	70	58	60
85°	16	17	28	18	17	17
90°	10	8	0	8	10	5
95°	13	10	20	10	13	11
105°	15	73	99	73	15	31
115°	196	191	186	191	196	184
125°	268	266	262	266	268	239
135°	330	330	327	330	330	255
145°	381	380	377	380	381	238
155°	415	415	415	415	415	191
165°	437	437	438	437	437	123
175°	447	447	448	447	447	43
180°	448	448	448	448	448	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4
2.5°	1907.8	1901.8	1895.8	1894.0	1892.2	1886.6	1880.9	1868.2	1855.5	1842.5	1829.4
5°	2036.2	2036.9	2037.6	2035.9	2034.1	2026.7	2019.3	2003.7	1988.2	1971.3	1954.3
7.5°	1996.7	2008.0	2019.3	2021.4	2023.5	2029.2	2034.8	2031.3	2027.7	2021.4	2015.0
10°	1823.8	1823.1	1822.4	1835.1	1847.8	1885.5	1923.3	1942.7	1962.1	1979.4	1996.7
12.5°	1541.4	1542.5	1543.6	1585.2	1626.9	1662.5	1698.1	1747.5	1796.9	1850.2	1903.5
15°	1231.6	1248.9	1266.2	1303.2	1340.3	1393.9	1447.6	1513.9	1580.3	1664.6	1749.0
17.5°	1011.4	1018.8	1026.2	1061.9	1097.5	1148.3	1199.1	1274.3	1349.5	1458.2	1566.9
20°	833.5	840.2	847.0	872.7	898.5	947.2	995.9	1067.5	1139.1	1246.8	1354.4
22.5°	695.9	709.0	722.0	739.3	756.6	791.9	827.2	900.2	973.3	1071.4	1169.5
25°	612.6	618.6	624.6	639.4	654.3	688.1	722.0	770.4	818.7	916.5	1014.2
27.5°	556.2	557.9	559.7	570.6	581.6	603.5	625.3	670.1	715.0	795.4	875.9
30°	509.6	512.8	515.9	524.4	532.9	548.8	564.6	596.4	628.2	700.1	772.1
32.5°	473.6	475.4	477.1	484.2	491.2	502.9	514.5	539.6	564.6	619.7	674.7
35°	442.5	442.9	443.2	448.5	453.8	465.1	476.4	497.2	518.1	558.6	599.2
37.5°	407.2	409.7	412.2	416.1	419.9	429.8	439.7	456.6	473.6	507.1	540.6
40°	377.6	379.7	381.8	386.4	391.0	398.8	406.5	422.1	437.6	466.5	495.5
42.5°	348.0	349.4	350.8	355.4	360.0	369.5	379.0	391.4	403.7	427.7	451.7
45°	314.8	318.3	321.8	326.8	331.7	339.8	348.0	360.7	373.4	393.8	414.3
47.5°	287.3	289.0	290.8	295.0	299.3	309.1	319.0	330.3	341.6	360.7	379.7
50°	259.7	260.4	261.1	265.0	268.9	277.7	286.6	299.6	312.7	330.3	348.0
52.5°	233.6	235.4	237.1	241.0	244.9	250.9	256.9	270.3	283.7	301.0	318.3
55°	209.6	210.7	211.7	214.6	217.4	224.4	231.5	243.1	254.8	270.7	286.6
57.5°	187.0	188.4	189.9	192.0	194.1	200.4	206.8	217.0	227.3	243.1	259.0
60°	163.7	165.5	167.3	169.7	172.2	177.2	182.1	191.3	200.4	214.6	228.7
62.5°	146.8	147.2	147.5	149.6	151.7	155.3	158.8	166.2	173.6	187.7	201.9
65°	127.7	128.8	129.9	130.9	132.0	134.8	137.6	144.0	150.3	160.9	171.5
67.5°	108.0	109.0	110.1	111.9	113.6	116.1	118.6	122.8	127.0	136.9	146.8
70°	84.0	84.0	84.0	86.8	89.6	93.9	98.1	101.3	104.5	112.6	120.7
72.5°	68.5	68.8	69.2	69.5	69.9	72.3	74.8	80.1	85.4	90.3	95.3
75°	55.8	56.1	56.5	56.8	57.2	57.9	58.6	60.3	62.1	67.8	73.4
77.5°	44.5	44.8	45.2	45.5	45.9	46.6	47.3	48.0	48.7	50.8	52.9
80°	33.9	34.2	34.6	34.9	35.3	35.6	36.0	36.7	37.4	38.5	39.5
82.5°	24.7	24.7	24.7	24.7	24.7	25.4	26.1	26.1	26.1	26.8	27.5
85°	15.5	15.5	15.5	15.9	16.2	16.2	16.2	16.6	16.9	16.9	16.9
87.5°	7.1	6.7	6.4	6.7	7.1	7.1	7.1	7.4	7.8	7.8	7.8
90°	10.0	9.8	9.7	9.5	9.4	9.2	8.9	8.6	8.3	8.0	7.0
92.5°	11.3	11.3	11.2	11.1	11.0	10.7	10.2	9.7	9.2	8.7	8.0
95°	12.7	12.7	12.7	12.7	12.7	12.4	11.9	11.4	10.8	10.3	9.5
97.5°	13.7	13.6	13.5	13.4	13.4	13.0	12.4	11.8	11.3	10.7	14.4
100°	14.0	13.9	13.8	13.8	13.7	13.4	12.8	12.2	11.6	11.0	22.5
102.5°	14.3	14.2	14.0	13.9	13.7	14.9	17.3	19.8	22.2	24.6	37.5
105°	14.7	14.5	14.4	14.2	14.1	20.5	33.6	46.7	59.8	72.9	79.6
107.5°	34.6	44.3	54.0	63.7	73.4	84.0	95.4	106.8	118.2	129.6	128.5
110°	91.6	102.2	112.8	123.3	133.9	140.4	142.9	145.3	147.8	150.2	149.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	173.5	173.7	173.8	174.0	174.1	173.9	173.2	172.5	171.9	171.2	170.4
115°	195.8	195.5	195.3	195.0	194.7	194.1	193.4	192.7	191.9	191.2	190.5
117.5°	213.8	213.8	213.7	213.6	213.5	213.2	212.6	212.0	211.4	210.8	210.5
120°	232.5	232.5	232.5	232.5	232.5	232.2	231.6	231.0	230.4	229.8	229.6
122.5°	250.8	250.7	250.7	250.6	250.5	250.3	249.9	249.5	249.2	248.8	248.5
125°	267.8	267.6	267.5	267.3	267.2	267.0	266.9	266.7	266.6	266.5	266.2
127.5°	284.4	284.6	284.7	284.9	285.0	285.0	284.8	284.5	284.3	284.1	283.7
130°	300.4	300.6	300.7	300.9	301.0	300.9	300.6	300.4	300.1	299.8	299.5
132.5°	315.1	315.3	315.5	315.7	316.0	315.9	315.6	315.3	315.0	314.7	314.5
135°	330.1	330.3	330.5	330.7	331.0	331.0	330.7	330.5	330.3	330.1	329.8
137.5°	344.4	344.5	344.7	344.8	345.0	344.9	344.5	344.1	343.8	343.4	343.2
140°	357.0	357.2	357.3	357.5	357.6	357.6	357.3	357.0	356.7	356.4	356.2
142.5°	368.7	368.9	369.1	369.4	369.6	369.6	369.4	369.1	368.9	368.7	368.5
145°	380.7	380.7	380.7	380.7	380.7	380.6	380.5	380.3	380.2	380.0	379.9
147.5°	389.4	389.7	390.1	390.5	390.8	390.9	390.8	390.6	390.5	390.4	390.2
150°	399.3	399.6	399.8	400.0	400.2	400.3	400.1	400.0	399.8	399.7	399.5
152.5°	407.3	407.7	408.1	408.4	408.8	408.9	408.6	408.3	408.0	407.7	407.6
155°	414.7	415.1	415.6	416.0	416.4	416.5	416.1	415.7	415.4	415.0	414.9
157.5°	421.0	421.6	422.2	422.8	423.4	423.4	423.0	422.5	422.1	421.7	421.7
160°	427.0	427.5	428.0	428.5	429.1	429.1	428.7	428.2	427.8	427.3	427.4
162.5°	432.7	433.1	433.5	434.0	434.4	434.4	433.9	433.4	432.8	432.3	432.4
165°	437.0	437.5	438.0	438.5	439.1	439.0	438.4	437.8	437.2	436.6	436.7
167.5°	440.3	440.9	441.5	442.1	442.7	442.7	442.1	441.5	440.9	440.3	440.3
170°	443.3	443.9	444.5	445.1	445.7	445.7	445.1	444.5	443.9	443.3	443.3
172.5°	445.0	445.6	446.3	447.0	447.6	447.7	447.1	446.5	445.9	445.3	445.2
175°	446.6	447.2	447.8	448.4	449.0	449.0	448.5	448.0	447.5	447.0	446.9
177.5°	447.0	447.7	448.5	449.2	449.9	450.0	449.4	448.8	448.2	447.6	447.6
180°	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4
2.5°	1827.6	1825.9	1808.9	1792.0	1775.4	1758.8	1746.5	1734.1	1713.3	1692.5	1679.4
5°	1940.9	1927.5	1900.7	1873.9	1833.6	1793.4	1759.5	1725.7	1682.6	1639.6	1603.6
7.5°	2004.1	1993.2	1960.7	1928.2	1874.9	1821.6	1768.7	1715.8	1652.3	1588.7	1534.4
10°	2005.9	2015.0	1988.2	1961.4	1901.4	1841.4	1769.4	1697.4	1612.0	1526.6	1456.4
12.5°	1943.0	1982.6	1976.9	1971.3	1910.2	1849.2	1761.7	1674.1	1569.3	1464.5	1376.6
15°	1825.5	1902.1	1924.7	1947.3	1896.8	1846.4	1746.8	1647.3	1524.2	1401.0	1300.1
17.5°	1674.1	1781.4	1841.1	1900.7	1864.0	1827.3	1718.3	1609.2	1470.5	1331.8	1222.1
20°	1494.9	1635.3	1728.8	1822.4	1808.9	1795.5	1683.0	1570.4	1420.8	1271.1	1152.2
22.5°	1317.7	1465.9	1595.1	1724.2	1738.0	1751.8	1638.1	1524.5	1360.8	1197.0	1076.0
25°	1164.9	1315.6	1469.5	1623.3	1654.4	1685.4	1577.4	1469.5	1299.7	1130.0	1009.6
27.5°	1019.2	1162.4	1331.8	1501.2	1557.7	1614.1	1515.3	1416.5	1239.7	1062.9	942.9
30°	900.2	1028.3	1201.3	1374.2	1452.9	1531.6	1440.9	1350.2	1174.8	999.4	881.9
32.5°	789.4	904.1	1077.7	1251.4	1342.8	1434.2	1355.8	1277.5	1108.8	940.1	824.0
35°	701.9	804.6	966.6	1128.6	1230.9	1333.2	1269.0	1204.8	1040.0	875.2	765.4
37.5°	626.7	712.8	864.9	1017.0	1125.7	1234.4	1180.8	1127.1	972.2	817.3	713.6
40°	564.6	633.8	775.3	916.8	1023.4	1130.0	1084.1	1038.2	899.5	760.8	663.8
42.5°	511.3	571.0	698.0	825.1	922.8	1020.6	990.2	959.9	834.2	708.6	618.6
45°	464.4	514.5	626.4	738.3	828.2	918.2	894.2	870.2	761.9	653.6	571.0
47.5°	422.8	465.8	565.7	665.6	746.4	827.2	805.0	782.7	693.1	603.5	528.3
50°	384.7	421.4	504.6	587.9	660.6	733.3	715.0	696.6	622.5	548.4	483.5
52.5°	348.7	379.0	453.8	528.6	587.2	645.8	631.7	617.6	560.4	503.2	444.3
55°	314.4	342.3	405.5	468.6	518.8	568.9	554.8	540.6	496.2	451.7	399.8
57.5°	283.4	307.7	358.9	410.1	449.9	489.8	483.1	476.4	439.4	402.3	359.6
60°	250.6	272.4	316.5	360.7	392.8	424.9	417.1	409.4	382.9	356.4	319.7
62.5°	221.3	240.7	276.0	311.3	337.4	363.5	357.8	352.2	332.1	312.0	281.6
65°	190.6	209.6	238.2	266.8	287.3	307.7	302.8	297.8	282.7	267.5	243.1
67.5°	162.7	178.6	203.3	228.0	241.7	255.5	252.7	249.9	238.2	226.6	207.5
70°	134.5	148.2	168.7	189.2	198.7	208.2	209.3	210.3	199.7	189.2	175.0
72.5°	106.2	117.2	136.2	155.3	162.7	170.1	169.7	169.4	163.0	156.7	144.0
75°	81.5	89.6	104.5	119.3	125.6	132.0	133.4	134.8	128.8	122.8	115.7
77.5°	58.6	64.2	75.5	86.8	93.9	100.9	101.6	102.3	99.5	96.7	90.0
80°	41.3	43.1	50.1	57.2	64.6	72.0	73.0	74.1	71.3	68.5	64.2
82.5°	28.6	29.6	32.1	34.6	40.6	46.6	48.0	49.4	48.0	46.6	42.0
85°	17.3	17.6	18.7	19.8	22.6	25.4	26.8	28.2	27.5	26.8	24.3
87.5°	7.8	7.8	8.1	8.5	9.2	9.9	11.6	13.4	12.4	11.3	10.2
90°	6.1	5.1	4.1	3.3	2.6	1.8	1.1	0.3	1.1	1.8	2.6
92.5°	7.3	6.7	6.0	5.9	6.3	6.8	7.2	7.7	7.2	6.8	6.3
95°	8.7	7.9	7.1	8.2	11.2	14.2	17.3	20.3	17.3	14.2	11.2
97.5°	18.2	22.0	25.8	28.7	30.8	32.8	34.9	37.0	34.9	32.8	30.8
100°	34.1	45.6	57.2	62.2	60.7	59.2	57.8	56.3	57.8	59.2	60.7
102.5°	50.4	63.3	76.2	82.1	81.2	80.2	79.2	78.3	79.2	80.2	81.2
105°	86.3	92.9	99.6	102.5	101.7	100.9	100.1	99.3	100.1	100.9	101.7
107.5°	127.3	126.2	125.1	124.2	123.6	122.9	122.2	121.6	122.2	122.9	123.6
110°	148.6	147.8	147.0	146.3	145.7	145.1	144.5	143.9	144.5	145.1	145.7





TEST NUMBER: P832224

CATALOG NUMBER: S123RDIP-S560D365U830-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	169.6	168.8	167.9	167.3	166.8	166.2	165.7	165.2	165.7	166.2	166.8
115°	189.8	189.2	188.5	188.0	187.5	187.1	186.6	186.2	186.6	187.1	187.5
117.5°	210.1	209.7	209.4	208.9	208.4	207.9	207.4	206.8	207.4	207.9	208.4
120°	229.4	229.1	228.9	228.5	227.8	227.2	226.5	225.8	226.5	227.2	227.8
122.5°	248.2	247.9	247.6	247.2	246.7	246.2	245.7	245.1	245.7	246.2	246.7
125°	265.9	265.6	265.3	264.8	264.2	263.6	263.0	262.5	263.0	263.6	264.2
127.5°	283.4	283.0	282.6	282.1	281.6	281.0	280.4	279.8	280.4	281.0	281.6
130°	299.2	298.9	298.6	298.1	297.5	296.9	296.4	295.8	296.4	296.9	297.5
132.5°	314.3	314.1	313.9	313.5	312.9	312.3	311.7	311.1	311.7	312.3	312.9
135°	329.5	329.2	328.9	328.5	328.1	327.6	327.2	326.7	327.2	327.6	328.1
137.5°	343.1	342.9	342.8	342.4	341.8	341.2	340.7	340.1	340.7	341.2	341.8
140°	355.9	355.7	355.5	355.2	354.7	354.3	353.8	353.4	353.8	354.3	354.7
142.5°	368.3	368.0	367.8	367.5	367.0	366.6	366.2	365.7	366.2	366.6	367.0
145°	379.7	379.6	379.4	379.1	378.6	378.1	377.5	377.0	377.5	378.1	378.6
147.5°	390.1	389.9	389.8	389.5	389.1	388.8	388.4	388.0	388.4	388.8	389.1
150°	399.4	399.2	399.1	398.9	398.7	398.5	398.2	398.0	398.2	398.5	398.7
152.5°	407.5	407.5	407.4	407.3	407.2	407.2	407.1	407.0	407.1	407.2	407.2
155°	414.9	414.8	414.7	414.7	414.9	415.0	415.2	415.3	415.2	415.0	414.9
157.5°	421.8	421.9	422.0	422.0	422.0	422.0	422.0	422.0	422.0	422.0	422.0
160°	427.5	427.5	427.6	427.7	427.8	427.8	427.9	428.0	427.9	427.8	427.8
162.5°	432.5	432.5	432.6	432.8	433.0	433.2	433.4	433.7	433.4	433.2	433.0
165°	436.8	436.9	436.9	437.1	437.3	437.5	437.8	438.0	437.8	437.5	437.3
167.5°	440.3	440.3	440.3	440.5	440.8	441.1	441.3	441.6	441.3	441.1	440.8
170°	443.3	443.3	443.3	443.5	443.8	444.1	444.3	444.6	444.3	444.1	443.8
172.5°	445.2	445.1	445.0	445.2	445.5	445.9	446.3	446.6	446.3	445.9	445.5
175°	446.8	446.8	446.7	446.8	447.2	447.6	447.9	448.3	447.9	447.6	447.2
177.5°	447.5	447.4	447.3	447.5	447.9	448.2	448.6	449.0	448.6	448.2	447.9
180°	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3



TEST NUMBER: P832224

CATALOG NUMBER: S123RDIP-S560D365U830-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4	1721.4
2.5°	1666.4	1646.3	1626.1	1611.7	1597.2	1579.2	1561.2	1560.5	1559.8	1546.4	1533.0
5°	1567.6	1532.6	1497.7	1463.5	1429.2	1395.0	1360.8	1353.0	1345.2	1333.6	1321.9
7.5°	1480.0	1424.3	1368.5	1324.8	1281.0	1246.8	1212.6	1189.3	1166.0	1148.0	1130.0
10°	1386.2	1317.0	1247.8	1194.9	1142.0	1104.9	1067.9	1041.0	1014.2	1001.5	988.8
12.5°	1288.8	1213.6	1138.4	1086.6	1034.7	990.2	945.8	921.4	897.1	879.4	861.8
15°	1199.1	1118.3	1037.5	982.5	927.4	885.8	844.1	819.8	795.4	777.8	760.1
17.5°	1112.3	1030.8	949.3	893.5	837.8	800.0	762.3	738.6	715.0	704.0	693.1
20°	1033.3	951.1	868.8	816.2	763.7	726.6	689.6	676.9	664.2	653.9	643.7
22.5°	954.9	875.9	796.8	746.4	695.9	669.1	642.3	632.0	621.8	614.0	606.3
25°	889.3	810.6	731.9	687.8	643.7	622.9	602.0	595.3	588.6	580.9	573.1
27.5°	823.0	748.1	673.3	638.0	602.7	585.8	568.9	560.4	551.9	545.6	539.2
30°	764.4	695.2	626.0	596.7	567.5	552.6	537.8	528.6	519.5	513.5	507.5
32.5°	707.9	646.5	585.1	560.0	535.0	520.5	506.1	497.2	488.4	481.4	474.3
35°	655.7	602.4	549.1	526.2	503.2	488.8	474.3	465.5	456.6	449.6	442.5
37.5°	609.8	561.5	513.1	491.6	470.1	457.4	444.6	435.5	426.3	418.9	411.5
40°	566.8	524.1	481.4	460.5	439.7	425.9	412.2	404.1	395.9	389.2	382.5
42.5°	528.6	489.5	450.3	429.8	409.4	396.3	383.2	373.7	364.2	360.3	356.4
45°	488.4	453.8	419.2	399.5	379.7	366.0	352.2	344.1	336.0	332.4	328.9
47.5°	453.1	421.0	388.9	369.5	350.1	337.7	325.4	319.0	312.7	307.7	302.8
50°	418.5	387.5	356.4	337.7	319.0	308.4	297.8	290.1	282.3	278.8	275.3
52.5°	385.4	357.1	328.9	309.8	290.8	280.6	270.3	263.6	256.9	249.5	242.1
55°	348.0	323.3	298.6	281.6	264.7	254.1	243.5	235.7	228.0	220.2	212.4
57.5°	316.9	292.6	268.2	253.0	237.9	227.6	217.4	208.9	200.4	194.1	187.7
60°	283.0	261.8	240.7	225.9	211.0	201.2	191.3	183.2	175.0	171.9	168.7
62.5°	251.3	231.5	211.7	198.7	185.6	176.1	166.6	161.3	156.0	153.9	151.7
65°	218.8	201.9	184.9	172.9	160.9	152.8	144.7	142.2	139.7	138.0	136.2
67.5°	188.4	174.0	159.5	148.9	138.3	132.7	127.0	124.2	121.4	119.3	117.2
70°	160.9	148.2	135.5	126.3	117.2	111.9	106.6	104.1	101.6	97.8	93.9
72.5°	131.3	121.4	111.5	104.5	97.4	92.8	88.2	83.3	78.3	74.8	71.3
75°	108.7	98.8	88.9	82.2	75.5	70.2	64.9	63.2	61.4	60.3	59.3
77.5°	83.3	74.8	66.3	61.1	55.8	53.3	50.8	49.8	48.7	48.3	48.0
80°	60.0	52.9	45.9	43.1	40.2	39.5	38.8	38.1	37.4	37.1	36.7
82.5°	37.4	33.9	30.3	29.6	28.9	28.6	28.2	27.9	27.5	27.2	26.8
85°	21.9	20.5	19.1	18.7	18.4	18.0	17.6	17.6	17.6	17.6	17.6
87.5°	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	8.8	8.5
90°	3.3	4.1	5.1	6.1	7.0	8.0	8.3	8.6	8.9	9.2	9.4
92.5°	5.9	6.0	6.7	7.3	8.0	8.7	9.2	9.7	10.2	10.7	11.0
95°	8.2	7.1	7.9	8.7	9.5	10.3	10.8	11.4	11.9	12.4	12.7
97.5°	28.7	25.8	22.0	18.2	14.4	10.7	11.3	11.8	12.4	13.0	13.4
100°	62.2	57.2	45.6	34.1	22.5	11.0	11.6	12.2	12.8	13.4	13.7
102.5°	82.1	76.2	63.3	50.4	37.5	24.6	22.2	19.8	17.3	14.9	13.7
105°	102.5	99.6	92.9	86.3	79.6	72.9	59.8	46.7	33.6	20.5	14.1
107.5°	124.2	125.1	126.2	127.3	128.5	129.6	118.2	106.8	95.4	84.0	73.4
110°	146.3	147.0	147.8	148.6	149.4	150.2	147.8	145.3	142.9	140.4	133.9



TEST NUMBER: P832224

CATALOG NUMBER: S123RDIP-S560D365U830-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	167.3	167.9	168.8	169.6	170.4	171.2	171.9	172.5	173.2	173.9	174.1
115°	188.0	188.5	189.2	189.8	190.5	191.2	191.9	192.7	193.4	194.1	194.7
117.5°	208.9	209.4	209.7	210.1	210.5	210.8	211.4	212.0	212.6	213.2	213.5
120°	228.5	228.9	229.1	229.4	229.6	229.8	230.4	231.0	231.6	232.2	232.5
122.5°	247.2	247.6	247.9	248.2	248.5	248.8	249.2	249.5	249.9	250.3	250.5
125°	264.8	265.3	265.6	265.9	266.2	266.5	266.6	266.7	266.9	267.0	267.2
127.5°	282.1	282.6	283.0	283.4	283.7	284.1	284.3	284.5	284.8	285.0	285.0
130°	298.1	298.6	298.9	299.2	299.5	299.8	300.1	300.4	300.6	300.9	301.0
132.5°	313.5	313.9	314.1	314.3	314.5	314.7	315.0	315.3	315.6	315.9	316.0
135°	328.5	328.9	329.2	329.5	329.8	330.1	330.3	330.5	330.7	331.0	331.0
137.5°	342.4	342.8	342.9	343.1	343.2	343.4	343.8	344.1	344.5	344.9	345.0
140°	355.2	355.5	355.7	355.9	356.2	356.4	356.7	357.0	357.3	357.6	357.6
142.5°	367.5	367.8	368.0	368.3	368.5	368.7	368.9	369.1	369.4	369.6	369.6
145°	379.1	379.4	379.6	379.7	379.9	380.0	380.2	380.3	380.5	380.6	380.7
147.5°	389.5	389.8	389.9	390.1	390.2	390.4	390.5	390.6	390.8	390.9	390.8
150°	398.9	399.1	399.2	399.4	399.5	399.7	399.8	400.0	400.1	400.3	400.2
152.5°	407.3	407.4	407.5	407.5	407.6	407.7	408.0	408.3	408.6	408.9	408.8
155°	414.7	414.7	414.8	414.9	414.9	415.0	415.4	415.7	416.1	416.5	416.4
157.5°	422.0	422.0	421.9	421.8	421.7	421.7	422.1	422.5	423.0	423.4	423.4
160°	427.7	427.6	427.5	427.5	427.4	427.3	427.8	428.2	428.7	429.1	429.1
162.5°	432.8	432.6	432.5	432.5	432.4	432.3	432.8	433.4	433.9	434.4	434.4
165°	437.1	436.9	436.9	436.8	436.7	436.6	437.2	437.8	438.4	439.0	439.1
167.5°	440.5	440.3	440.3	440.3	440.3	440.3	440.9	441.5	442.1	442.7	442.7
170°	443.5	443.3	443.3	443.3	443.3	443.3	443.9	444.5	445.1	445.7	445.7
172.5°	445.2	445.0	445.1	445.2	445.2	445.3	445.9	446.5	447.1	447.7	447.6
175°	446.8	446.7	446.8	446.8	446.9	447.0	447.5	448.0	448.5	449.0	449.0
177.5°	447.5	447.3	447.4	447.5	447.6	447.6	448.2	448.8	449.4	450.0	449.9
180°	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3



TEST NUMBER: P832224

CATALOG NUMBER: S123RDIP-S560D365U830-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1721.4	1721.4	1721.4	1721.4
2.5°	1529.5	1525.9	1524.5	1523.1
5°	1311.0	1300.1	1297.6	1295.1
7.5°	1125.4	1120.8	1105.6	1090.4
10°	974.7	960.6	954.2	947.9
12.5°	848.7	835.7	833.5	831.4
15°	751.0	741.8	738.6	735.4
17.5°	686.7	680.4	676.5	672.6
20°	639.1	634.5	631.7	628.9
22.5°	602.7	599.2	597.1	595.0
25°	567.8	562.5	560.8	559.0
27.5°	534.6	530.0	528.3	526.5
30°	503.6	499.7	497.2	494.8
32.5°	469.7	465.1	463.7	462.3
35°	439.7	436.9	435.5	434.1
37.5°	407.9	404.4	402.3	400.2
40°	380.8	379.0	378.0	376.9
42.5°	353.2	350.1	349.7	349.4
45°	325.7	322.5	321.8	321.1
47.5°	300.0	297.1	296.8	296.4
50°	271.4	267.5	264.7	261.8
52.5°	238.6	235.0	232.6	230.1
55°	208.6	204.7	202.6	200.4
57.5°	186.0	184.2	183.2	182.1
60°	167.6	166.6	165.9	165.2
62.5°	150.7	149.6	149.6	149.6
65°	135.2	134.1	133.0	132.0
67.5°	115.0	112.9	112.6	112.2
70°	90.7	87.5	87.2	86.8
72.5°	70.9	70.6	69.9	69.2
75°	58.6	57.9	57.9	57.9
77.5°	47.3	46.6	46.6	46.6
80°	36.3	36.0	36.3	36.7
82.5°	26.8	26.8	26.5	26.1
85°	17.3	16.9	16.9	16.9
87.5°	8.5	8.5	8.5	8.5
90°	9.5	9.7	9.8	10.0
92.5°	11.1	11.2	11.3	11.3
95°	12.7	12.7	12.7	12.7
97.5°	13.4	13.5	13.6	13.7
100°	13.8	13.8	13.9	14.0
102.5°	13.9	14.0	14.2	14.3
105°	14.2	14.4	14.5	14.7
107.5°	63.7	54.0	44.3	34.6
110°	123.3	112.8	102.2	91.6



TEST NUMBER: P832224

CATALOG NUMBER: S123RDIP-S560D365U830-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	174.0	173.8	173.7	173.5
115°	195.0	195.3	195.5	195.8
117.5°	213.6	213.7	213.8	213.8
120°	232.5	232.5	232.5	232.5
122.5°	250.6	250.7	250.7	250.8
125°	267.3	267.5	267.6	267.8
127.5°	284.9	284.7	284.6	284.4
130°	300.9	300.7	300.6	300.4
132.5°	315.7	315.5	315.3	315.1
135°	330.7	330.5	330.3	330.1
137.5°	344.8	344.7	344.5	344.4
140°	357.5	357.3	357.2	357.0
142.5°	369.4	369.1	368.9	368.7
145°	380.7	380.7	380.7	380.7
147.5°	390.5	390.1	389.7	389.4
150°	400.0	399.8	399.6	399.3
152.5°	408.4	408.1	407.7	407.3
155°	416.0	415.6	415.1	414.7
157.5°	422.8	422.2	421.6	421.0
160°	428.5	428.0	427.5	427.0
162.5°	434.0	433.5	433.1	432.7
165°	438.5	438.0	437.5	437.0
167.5°	442.1	441.5	440.9	440.3
170°	445.1	444.5	443.9	443.3
172.5°	447.0	446.3	445.6	445.0
175°	448.4	447.8	447.2	446.6
177.5°	449.2	448.5	447.7	447.0
180°	448.3	448.3	448.3	448.3



TEST NUMBER: P832224

CATALOG NUMBER: S123RDIP-S560D365U830-4F0-1E-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	12.00	12.91	12.85	13.78	14.86	16.66	17.57	17.52	18.44	19.53
	3H	13.22	14.04	14.09	14.92	16.03	18.17	18.98	19.03	19.86	20.97
	4H	13.61	14.38	14.49	15.26	16.38	18.66	19.43	19.54	20.31	21.43
	6H	13.90	14.60	14.79	15.49	16.63	18.98	19.68	19.87	20.57	21.71
	8H	13.98	14.66	14.89	15.56	16.70	19.06	19.73	19.96	20.64	21.77
	12H	14.04	14.68	14.95	15.58	16.74	19.09	19.73	20.00	20.63	21.79
4H	2H	12.73	13.50	13.62	14.38	15.50	16.67	17.44	17.55	18.32	19.44
	3H	14.11	14.74	15.00	15.66	16.80	18.33	18.97	19.23	19.88	21.02
	4H	14.56	15.15	15.47	16.06	17.22	18.94	19.52	19.85	20.43	21.60
	6H	14.94	15.44	15.86	16.37	17.54	19.38	19.88	20.31	20.82	21.98
	8H	15.06	15.53	15.99	16.46	17.64	19.51	19.98	20.44	20.91	22.09
	12H	15.14	15.56	16.09	16.51	17.69	19.58	20.00	20.52	20.95	22.13
8H	4H	14.88	15.35	15.81	16.28	17.46	18.91	19.38	19.84	20.31	21.49
	6H	15.35	15.73	16.30	16.71	17.88	19.41	19.80	20.36	20.77	21.94
	8H	15.54	15.88	16.51	16.85	18.04	19.60	19.94	20.56	20.90	22.09
	12H	15.69	15.99	16.65	16.94	18.18	19.72	20.02	20.68	20.97	22.21
12H	4H	14.90	15.32	15.84	16.27	17.45	18.87	19.29	19.81	20.23	21.42
	6H	15.41	15.75	16.37	16.71	17.91	19.39	19.73	20.35	20.69	21.88
	8H	15.63	15.93	16.59	16.88	18.13	19.58	19.88	20.55	20.84	22.08