

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: P832277

Luminaire Tested: S123RDIP-S560D585U950-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832277
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-17)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDIP-S560D585U950-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

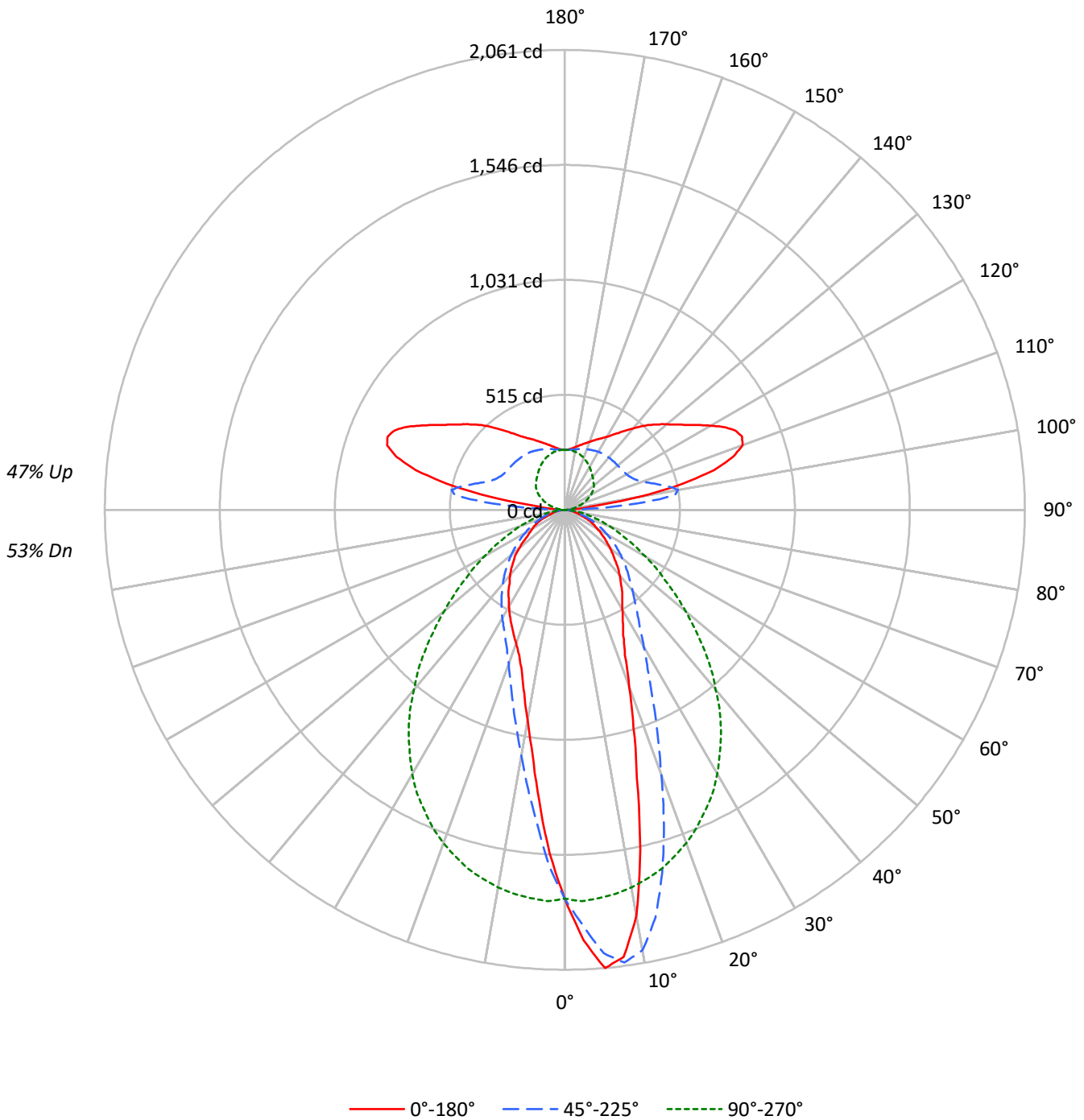
Lumens per Lamp: N/A
Luminaire Lumens: 4333.6 lumens
Efficiency: N/A
Efficacy: 124.5 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	53				
1	99	95	92	88	92	89	86	83	76	74	72	64	63	61	54	53	52	47				
2	91	84	79	74	84	79	74	69	68	64	61	58	55	53	48	46	45	40				
3	84	75	68	63	78	70	64	59	61	56	52	52	48	46	44	41	39	35				
4	77	67	60	54	72	63	56	51	54	49	46	47	43	40	40	37	35	31				
5	71	60	53	47	66	57	50	45	49	44	40	43	39	36	36	33	31	28				
6	66	55	47	41	61	51	44	39	45	40	36	39	35	32	33	30	28	25				
7	62	50	42	37	57	47	40	35	41	36	32	36	32	29	31	28	25	23				
8	57	46	38	33	53	43	36	32	38	33	29	33	29	26	29	26	23	21				
9	54	42	35	30	50	40	33	29	35	30	26	31	27	24	27	24	21	19				
10	50	39	32	27	47	37	30	26	33	28	24	29	25	22	25	22	20	18				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	18755	18755	18755	18755	18755
5°	22269	21558	18872	15257	14164
10°	20176	21898	18779	12223	10486
15°	13892	18775	18580	9990	8295
20°	9664	14455	18207	8424	7291
25°	7365	11017	17664	7487	6720
30°	6411	8809	16986	6953	6224
35°	5886	7430	16023	6501	5773
40°	5370	6635	14765	6058	5361
45°	4850	6068	13408	5638	4947
50°	4402	5598	11807	5228	4438
55°	3982	5142	10269	4827	3808
60°	3567	4676	8919	4383	3599
65°	3293	4149	7679	3940	3403
70°	2675	3585	6700	3563	2766
75°	2346	2853	5673	2957	2437
80°	2126	2411	4649	2479	2300
85°	1939	2112	3532	2248	2112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 14148 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.8	3.7
10°-20°	367.5	8.5
20°-30°	421.6	9.7
30°-40°	415.6	9.6
40°-50°	366.5	8.5
50°-60°	282.0	6.5
60°-70°	185.4	4.3
70°-80°	90.0	2.1
80°-90°	24.2	0.6
90°-100°	145.9	3.4
100°-110°	427.0	9.9
110°-120°	417.0	9.6
120°-130°	332.1	7.7
130°-140°	262.0	6.0
140°-150°	195.5	4.5
150°-160°	136.3	3.1
160°-170°	80.1	1.8
170°-180°	26.0	0.6
0°-30°	947.9	21.9
0°-40°	1363.5	31.5
0°-60°	2012.0	46.4
0°-90°	2311.6	53.3
90°-120°	989.9	22.8
90°-150°	1779.6	41.1
90°-180°	2022.0	46.7
0°-180°	4333.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1742	1742	1742	1742	1742	
5°	2061	1995	1747	1412	1311	188
15°	1247	1685	1667	896	744	352
25°	620	928	1487	630	566	293
35°	448	565	1219	495	439	279
45°	319	399	881	370	325	247
55°	212	274	547	257	203	190
65°	129	163	302	155	134	127
75°	56	69	136	71	59	61
85°	16	17	29	18	17	17
90°	16	14	1	14	16	9
95°	63	323	18	323	63	103
105°	692	438	63	438	692	691
115°	842	335	112	335	842	821
125°	664	312	155	312	664	601
135°	538	308	182	308	538	417
145°	421	304	207	304	421	267
155°	349	294	236	294	349	163
165°	304	282	257	282	304	87
175°	274	270	268	270	274	27
180°	269	269	269	269	269	



TEST NUMBER: P832277

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4
2.5°	1930.9	1924.9	1918.8	1917.0	1915.2	1909.5	1903.8	1890.9	1878.1	1864.9	1851.7
5°	2061.0	2061.7	2062.4	2060.6	2058.8	2051.3	2043.8	2028.1	2012.4	1995.2	1978.1
7.5°	2021.0	2032.4	2043.8	2046.0	2048.1	2053.8	2059.5	2056.0	2052.4	2046.0	2039.5
10°	1845.9	1845.2	1844.5	1857.4	1870.2	1908.4	1946.7	1966.3	1986.0	2003.5	2021.0
12.5°	1560.2	1561.3	1562.3	1604.5	1646.6	1682.7	1718.8	1768.8	1818.8	1872.7	1926.7
15°	1246.6	1264.1	1281.6	1319.1	1356.6	1410.9	1465.2	1532.3	1599.5	1684.8	1770.2
17.5°	1023.7	1031.2	1038.7	1074.8	1110.8	1162.3	1213.7	1289.8	1365.9	1475.9	1585.9
20°	843.7	850.5	857.2	883.3	909.4	958.7	1008.0	1080.5	1153.0	1261.9	1370.9
22.5°	704.4	717.6	730.8	748.3	765.8	801.5	837.2	911.2	985.1	1084.4	1183.7
25°	620.1	626.1	632.2	647.2	662.2	696.5	730.8	779.7	828.7	927.6	1026.6
27.5°	562.9	564.7	566.5	577.6	588.6	610.8	632.9	678.3	723.7	805.1	886.5
30°	515.8	519.0	522.2	530.8	539.4	555.4	571.5	603.6	635.8	708.7	781.5
32.5°	479.3	481.1	482.9	490.1	497.2	509.0	520.8	546.1	571.5	627.2	682.9
35°	447.9	448.3	448.6	454.0	459.3	470.8	482.2	503.3	524.3	565.4	606.5
37.5°	412.2	414.7	417.2	421.1	425.1	435.1	445.1	462.2	479.3	513.3	547.2
40°	382.2	384.3	386.5	391.1	395.8	403.6	411.5	427.2	442.9	472.2	501.5
42.5°	352.2	353.6	355.0	359.7	364.3	374.0	383.6	396.1	408.6	432.9	457.2
45°	318.6	322.2	325.8	330.8	335.8	344.0	352.2	365.0	377.9	398.6	419.3
47.5°	290.7	292.5	294.3	298.6	302.9	312.9	322.9	334.3	345.8	365.0	384.3
50°	262.9	263.6	264.3	268.2	272.2	281.1	290.0	303.3	316.5	334.3	352.2
52.5°	236.5	238.2	240.0	244.0	247.9	254.0	260.0	273.6	287.2	304.7	322.2
55°	212.2	213.2	214.3	217.2	220.0	227.2	234.3	246.1	257.9	274.0	290.0
57.5°	189.3	190.7	192.2	194.3	196.5	202.9	209.3	219.7	230.0	246.1	262.2
60°	165.7	167.5	169.3	171.8	174.3	179.3	184.3	193.6	202.9	217.2	231.5
62.5°	148.6	148.9	149.3	151.4	153.6	157.2	160.7	168.2	175.7	190.0	204.3
65°	129.3	130.4	131.4	132.5	133.6	136.4	139.3	145.7	152.2	162.9	173.6
67.5°	109.3	110.4	111.4	113.2	115.0	117.5	120.0	124.3	128.6	138.6	148.6
70°	85.0	85.0	85.0	87.9	90.7	95.0	99.3	102.5	105.7	113.9	122.2
72.5°	69.3	69.7	70.0	70.4	70.7	73.2	75.7	81.1	86.4	91.4	96.4
75°	56.4	56.8	57.1	57.5	57.9	58.6	59.3	61.1	62.9	68.6	74.3
77.5°	45.0	45.4	45.7	46.1	46.4	47.1	47.9	48.6	49.3	51.4	53.6
80°	34.3	34.6	35.0	35.4	35.7	36.1	36.4	37.1	37.9	38.9	40.0
82.5°	25.0	25.0	25.0	25.0	25.0	25.7	26.4	26.4	26.4	27.1	27.9
85°	15.7	15.7	15.7	16.1	16.4	16.4	16.4	16.8	17.1	17.1	17.1
87.5°	7.1	6.8	6.4	6.8	7.1	7.1	7.1	7.5	7.9	7.9	7.9
90°	15.8	16.3	15.8	15.2	15.8	14.7	14.1	13.6	13.1	13.6	12.0
92.5°	28.8	29.9	29.4	31.6	32.6	36.5	41.9	53.9	75.6	101.2	112.1
95°	63.1	65.3	69.1	74.0	84.3	103.9	132.8	195.9	261.7	322.7	287.3
97.5°	129.5	135.5	148.5	169.2	205.7	267.7	339.5	450.0	513.1	496.3	370.6
100°	341.2	340.6	361.9	401.6	456.5	533.8	597.5	641.5	622.5	515.3	348.2
102.5°	540.3	556.1	573.0	602.4	642.1	684.0	714.5	705.2	627.9	479.9	315.6
105°	692.1	694.9	712.3	733.0	758.0	772.1	761.8	707.4	593.7	437.5	290.0
107.5°	791.2	797.2	804.2	814.0	817.3	802.6	760.2	674.7	544.7	399.9	271.5
110°	847.8	848.9	849.9	845.6	830.4	792.3	723.7	623.6	499.0	368.9	261.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	859.2	858.6	853.2	837.4	806.4	754.7	675.8	573.0	459.3	348.2	256.3
115°	841.8	839.1	828.2	804.2	763.4	704.1	624.1	529.4	428.8	334.6	255.7
117.5°	803.7	799.9	783.6	756.9	714.5	653.0	579.5	495.7	408.6	325.4	256.3
120°	753.6	750.4	737.3	706.8	663.8	608.9	543.6	470.1	393.4	319.4	258.5
122.5°	706.8	702.5	687.8	661.1	624.1	574.1	514.8	450.0	380.9	315.6	262.3
125°	663.8	660.0	646.4	622.5	587.7	544.1	491.9	432.6	370.6	312.3	266.1
127.5°	626.8	623.6	611.1	590.4	558.8	518.6	470.7	416.8	360.8	310.7	270.4
130°	596.4	592.0	580.6	561.0	532.2	495.2	451.1	402.1	353.1	309.1	274.8
132.5°	566.4	563.7	553.9	534.3	507.7	472.9	432.6	388.5	346.1	308.5	278.1
135°	538.2	534.3	524.5	508.2	481.6	450.5	415.2	376.5	340.1	308.0	281.3
137.5°	508.2	505.0	496.8	479.9	457.1	429.3	397.8	365.1	334.6	306.9	283.5
140°	476.7	477.2	468.5	453.3	432.6	409.2	383.1	355.3	329.7	306.3	285.7
142.5°	447.3	447.8	440.2	427.1	410.3	390.7	368.9	346.1	325.4	305.3	287.3
145°	420.6	419.5	415.2	403.7	390.1	374.4	357.0	339.0	321.6	304.2	287.8
147.5°	397.8	397.2	392.9	384.7	373.8	362.4	347.7	333.0	317.8	302.5	287.8
150°	378.2	378.2	374.9	368.9	360.8	350.4	339.0	326.5	314.0	300.4	287.8
152.5°	361.9	361.9	360.2	354.8	348.8	340.6	330.8	320.5	309.6	297.6	286.2
155°	348.8	348.2	347.2	342.8	337.9	331.4	323.2	314.5	305.3	294.4	285.1
157.5°	336.3	336.3	335.2	331.9	327.6	322.1	315.6	308.0	300.4	291.7	283.5
160°	324.3	324.8	324.8	321.6	317.8	314.0	308.5	302.5	295.5	288.4	282.4
162.5°	313.4	314.0	314.0	311.2	309.1	305.8	300.9	296.0	290.6	285.1	280.2
165°	304.2	304.2	304.7	302.5	300.4	297.6	293.8	290.6	286.2	281.9	278.1
167.5°	294.9	294.9	295.5	293.8	292.7	290.6	288.4	285.7	281.9	278.6	275.9
170°	286.8	286.8	287.3	286.2	285.7	284.6	282.4	280.8	278.1	275.3	273.7
172.5°	279.1	279.7	280.8	279.7	279.7	279.1	277.5	276.4	274.2	272.6	272.1
175°	273.7	274.2	274.8	274.2	274.2	274.2	273.2	272.6	271.5	270.4	270.4
177.5°	269.9	269.9	271.0	270.4	271.0	271.0	270.4	269.9	269.3	268.8	269.3
180°	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4
2.5°	1849.9	1848.1	1830.9	1813.8	1797.0	1780.2	1767.7	1755.2	1734.1	1713.1	1699.8
5°	1964.5	1950.9	1923.8	1896.7	1855.9	1815.2	1780.9	1746.6	1703.1	1659.5	1623.1
7.5°	2028.5	2017.4	1984.5	1951.7	1897.7	1843.8	1790.2	1736.6	1672.3	1608.1	1553.0
10°	2030.2	2039.5	2012.4	1985.2	1924.5	1863.8	1790.9	1718.1	1631.6	1545.2	1474.1
12.5°	1966.7	2006.7	2001.0	1995.2	1933.4	1871.7	1783.1	1694.5	1588.4	1482.3	1393.4
15°	1847.7	1925.2	1948.1	1971.0	1919.9	1868.8	1768.1	1667.3	1542.7	1418.0	1315.9
17.5°	1694.5	1803.1	1863.4	1923.8	1886.7	1849.5	1739.1	1628.8	1488.4	1348.0	1236.9
20°	1513.0	1655.2	1749.9	1844.5	1830.9	1817.4	1703.4	1589.5	1438.0	1286.6	1166.2
22.5°	1333.7	1483.8	1614.5	1745.2	1759.1	1773.1	1658.1	1543.0	1377.3	1211.6	1089.1
25°	1179.1	1331.6	1487.3	1643.1	1674.5	1705.9	1596.6	1487.3	1315.5	1143.7	1021.9
27.5°	1031.6	1176.6	1348.0	1519.5	1576.6	1633.8	1533.8	1433.7	1254.8	1075.8	954.4
30°	911.2	1040.8	1215.9	1390.9	1470.5	1550.2	1458.4	1366.6	1189.1	1011.6	892.6
32.5°	799.0	915.1	1090.8	1266.6	1359.1	1451.6	1372.3	1293.0	1122.3	951.5	834.0
35°	710.4	814.4	978.3	1142.3	1245.9	1349.4	1284.4	1219.4	1052.6	885.8	774.7
37.5°	634.4	721.5	875.5	1029.4	1139.4	1249.4	1195.1	1140.9	984.0	827.2	722.2
40°	571.5	641.5	784.7	928.0	1035.8	1143.7	1097.3	1050.8	910.5	770.1	671.9
42.5°	517.6	577.9	706.5	835.1	934.0	1033.0	1002.3	971.5	844.4	717.2	626.1
45°	470.1	520.8	634.0	747.2	838.3	929.4	905.1	880.8	771.2	661.5	577.9
47.5°	427.9	471.5	572.6	673.7	755.4	837.2	814.7	792.2	701.5	610.8	534.7
50°	389.3	426.5	510.8	595.1	668.7	742.2	723.7	705.1	630.1	555.1	489.3
52.5°	352.9	383.6	459.3	535.1	594.4	653.7	639.4	625.1	567.2	509.3	449.7
55°	318.3	346.5	410.4	474.3	525.1	575.8	561.5	547.2	502.2	457.2	404.7
57.5°	286.8	311.5	363.3	415.1	455.4	495.8	489.0	482.2	444.7	407.2	364.0
60°	253.6	275.7	320.4	365.0	397.5	430.1	422.2	414.3	387.5	360.8	323.6
62.5°	224.0	243.6	279.3	315.0	341.5	367.9	362.2	356.5	336.1	315.8	285.0
65°	192.9	212.2	241.1	270.0	290.7	311.5	306.5	301.5	286.1	270.7	246.1
67.5°	164.7	180.7	205.7	230.7	244.7	258.6	255.7	252.9	241.1	229.3	210.0
70°	136.1	150.0	170.7	191.5	201.1	210.7	211.8	212.9	202.2	191.5	177.2
72.5°	107.5	118.6	137.9	157.2	164.7	172.2	171.8	171.4	165.0	158.6	145.7
75°	82.5	90.7	105.7	120.7	127.2	133.6	135.0	136.4	130.4	124.3	117.2
77.5°	59.3	65.0	76.4	87.9	95.0	102.2	102.9	103.6	100.7	97.9	91.1
80°	41.8	43.6	50.7	57.9	65.4	72.9	73.9	75.0	72.2	69.3	65.0
82.5°	28.9	30.0	32.5	35.0	41.1	47.1	48.6	50.0	48.6	47.1	42.5
85°	17.5	17.9	18.9	20.0	22.9	25.7	27.1	28.6	27.9	27.1	24.6
87.5°	7.9	7.9	8.2	8.6	9.3	10.0	11.8	13.6	12.5	11.4	10.4
90°	10.3	8.7	7.1	6.0	4.9	3.3	2.2	1.1	2.2	3.3	4.9
92.5°	83.8	55.0	37.5	27.8	22.3	17.4	12.0	8.2	12.0	17.4	22.3
95°	198.1	117.0	70.7	49.5	35.4	26.1	20.1	18.5	20.1	26.1	35.4
97.5°	220.4	126.2	80.5	57.1	43.0	34.8	29.9	29.4	29.9	34.8	43.0
100°	205.1	124.6	86.5	65.3	52.2	44.6	40.8	40.3	40.8	44.6	52.2
102.5°	192.1	126.8	93.6	74.5	63.1	56.0	52.8	51.7	52.8	56.0	63.1
105°	187.2	131.1	101.8	84.9	74.5	68.0	64.8	63.1	64.8	68.0	74.5
107.5°	186.1	138.2	112.1	96.3	86.5	80.0	76.7	75.1	76.7	80.0	86.5
110°	188.8	147.5	123.0	107.7	98.5	92.5	89.8	88.2	89.8	92.5	98.5



TEST NUMBER: P832277

CATALOG NUMBER: S123RDIP-S560D585U950-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	194.3	156.7	134.4	119.7	110.5	104.5	101.8	100.1	101.8	104.5	110.5
115°	200.2	167.1	146.4	131.7	122.4	117.0	113.7	111.5	113.7	117.0	122.4
117.5°	207.9	177.9	157.3	143.7	133.3	128.4	125.7	123.0	125.7	128.4	133.3
120°	216.6	188.3	168.7	155.1	144.7	139.3	136.6	134.9	136.6	139.3	144.7
122.5°	224.7	199.2	180.1	165.4	155.6	149.6	146.9	145.3	146.9	149.6	155.6
125°	233.4	209.5	190.4	175.8	165.4	159.4	156.2	155.1	156.2	159.4	165.4
127.5°	240.5	218.7	200.2	185.6	174.1	168.1	164.3	162.7	164.3	168.1	174.1
130°	247.6	226.9	208.9	194.3	182.8	176.3	171.4	169.8	171.4	176.3	182.8
132.5°	254.1	234.0	216.6	202.4	191.0	182.8	177.4	175.2	177.4	182.8	191.0
135°	259.6	241.1	224.2	209.5	198.1	189.9	183.9	181.7	183.9	189.9	198.1
137.5°	263.9	245.9	229.6	216.0	204.6	195.9	189.9	187.7	189.9	195.9	204.6
140°	267.2	250.8	235.1	221.5	210.6	201.9	196.4	193.7	196.4	201.9	210.6
142.5°	270.4	254.7	239.4	226.9	216.0	208.4	202.4	200.2	202.4	208.4	216.0
145°	272.6	257.9	243.8	231.3	222.0	213.8	208.9	207.3	208.9	213.8	222.0
147.5°	274.2	260.6	247.6	236.7	227.4	220.4	215.5	214.4	215.5	220.4	227.4
150°	274.8	263.4	250.8	241.1	233.4	226.4	222.0	221.5	222.0	226.4	233.4
152.5°	275.9	265.0	254.7	245.4	238.9	232.9	228.5	228.5	228.5	232.9	238.9
155°	275.9	267.2	257.9	250.3	244.3	238.9	235.6	235.6	235.6	238.9	244.3
157.5°	276.4	268.3	260.6	254.7	249.2	244.3	241.6	241.1	241.6	244.3	249.2
160°	276.4	269.9	263.4	257.9	254.1	249.8	247.6	247.6	247.6	249.8	254.1
162.5°	275.9	270.4	265.0	260.6	257.4	254.1	252.5	252.5	252.5	254.1	257.4
165°	274.8	271.0	266.6	262.8	260.6	257.9	256.8	257.4	256.8	257.9	260.6
167.5°	274.2	271.0	267.7	265.0	263.4	261.2	260.6	261.2	260.6	261.2	263.4
170°	272.6	270.4	267.7	266.6	265.5	263.9	263.4	264.5	263.4	263.9	265.5
172.5°	272.1	270.4	268.3	267.7	267.2	266.1	266.1	266.6	266.1	266.1	267.2
175°	271.0	269.9	268.8	268.3	268.3	267.2	267.7	268.3	267.7	267.2	268.3
177.5°	270.4	269.3	268.8	268.8	268.8	268.3	268.8	269.3	268.8	268.3	268.8
180°	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8



TEST NUMBER: P832277

CATALOG NUMBER: S123RDIP-S560D585U950-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4	1742.4
2.5°	1686.6	1666.3	1645.9	1631.3	1616.6	1598.4	1580.2	1579.5	1578.8	1565.2	1551.6
5°	1586.6	1551.3	1515.9	1481.2	1446.6	1412.0	1377.3	1369.5	1361.6	1349.8	1338.0
7.5°	1498.0	1441.6	1385.2	1340.9	1296.6	1261.9	1227.3	1203.7	1180.1	1161.9	1143.7
10°	1403.0	1333.0	1263.0	1209.4	1155.9	1118.3	1080.8	1053.7	1026.6	1013.7	1000.8
12.5°	1304.4	1228.4	1152.3	1099.8	1047.3	1002.3	957.3	932.6	908.0	890.1	872.2
15°	1213.7	1131.9	1050.1	994.4	938.7	896.5	854.4	829.7	805.1	787.2	769.4
17.5°	1125.8	1043.3	960.8	904.4	848.0	809.7	771.5	747.6	723.7	712.6	701.5
20°	1045.8	962.6	879.4	826.2	773.0	735.4	697.9	685.1	672.2	661.9	651.5
22.5°	966.5	886.5	806.5	755.4	704.4	677.2	650.1	639.7	629.4	621.5	613.6
25°	900.1	820.5	740.8	696.2	651.5	630.4	609.4	602.6	595.8	587.9	580.1
27.5°	833.0	757.2	681.5	645.8	610.1	592.9	575.8	567.2	558.6	552.2	545.8
30°	773.7	703.7	633.6	604.0	574.4	559.4	544.4	535.1	525.8	519.7	513.6
32.5°	716.5	654.4	592.2	566.9	541.5	526.8	512.2	503.3	494.3	487.2	480.1
35°	663.7	609.7	555.8	532.6	509.3	494.7	480.1	471.1	462.2	455.1	447.9
37.5°	617.2	568.3	519.3	497.6	475.8	462.9	450.1	440.8	431.5	424.0	416.5
40°	573.6	530.4	487.2	466.1	445.1	431.1	417.2	409.0	400.8	394.0	387.2
42.5°	535.1	495.4	455.8	435.1	414.3	401.1	387.9	378.3	368.6	364.7	360.8
45°	494.3	459.3	424.3	404.3	384.3	370.4	356.5	348.3	340.0	336.5	332.9
47.5°	458.6	426.1	393.6	374.0	354.3	341.8	329.3	322.9	316.5	311.5	306.5
50°	423.6	392.2	360.8	341.8	322.9	312.2	301.5	293.6	285.7	282.2	278.6
52.5°	390.0	361.5	332.9	313.6	294.3	284.0	273.6	266.8	260.0	252.5	245.0
55°	352.2	327.2	302.2	285.0	267.9	257.2	246.5	238.6	230.7	222.9	215.0
57.5°	320.8	296.1	271.5	256.1	240.7	230.4	220.0	211.5	202.9	196.5	190.0
60°	286.5	265.0	243.6	228.6	213.6	203.6	193.6	185.4	177.2	173.9	170.7
62.5°	254.3	234.3	214.3	201.1	187.9	178.2	168.6	163.2	157.9	155.7	153.6
65°	221.5	204.3	187.2	175.0	162.9	154.7	146.4	143.9	141.4	139.7	137.9
67.5°	190.7	176.1	161.4	150.7	140.0	134.3	128.6	125.7	122.9	120.7	118.6
70°	162.9	150.0	137.2	127.9	118.6	113.2	107.9	105.4	102.9	98.9	95.0
72.5°	132.9	122.9	112.9	105.7	98.6	93.9	89.3	84.3	79.3	75.7	72.2
75°	110.0	100.0	90.0	83.2	76.4	71.1	65.7	63.9	62.2	61.1	60.0
77.5°	84.3	75.7	67.2	61.8	56.4	53.9	51.4	50.4	49.3	48.9	48.6
80°	60.7	53.6	46.4	43.6	40.7	40.0	39.3	38.6	37.9	37.5	37.1
82.5°	37.9	34.3	30.7	30.0	29.3	28.9	28.6	28.2	27.9	27.5	27.1
85°	22.1	20.7	19.3	18.9	18.6	18.2	17.9	17.9	17.9	17.9	17.9
87.5°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	8.9	8.6
90°	6.0	7.1	8.7	10.3	12.0	13.6	13.1	13.6	14.1	14.7	15.8
92.5°	27.8	37.5	55.0	83.8	112.1	101.2	75.6	53.9	41.9	36.5	32.6
95°	49.5	70.7	117.0	198.1	287.3	322.7	261.7	195.9	132.8	103.9	84.3
97.5°	57.1	80.5	126.2	220.4	370.6	496.3	513.1	450.0	339.5	267.7	205.7
100°	65.3	86.5	124.6	205.1	348.2	515.3	622.5	641.5	597.5	533.8	456.5
102.5°	74.5	93.6	126.8	192.1	315.6	479.9	627.9	705.2	714.5	684.0	642.1
105°	84.9	101.8	131.1	187.2	290.0	437.5	593.7	707.4	761.8	772.1	758.0
107.5°	96.3	112.1	138.2	186.1	271.5	399.9	544.7	674.7	760.2	802.6	817.3
110°	107.7	123.0	147.5	188.8	261.7	368.9	499.0	623.6	723.7	792.3	830.4



TEST NUMBER: P832277

CATALOG NUMBER: S123RDIP-S560D585U950-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	119.7	134.4	156.7	194.3	256.3	348.2	459.3	573.0	675.8	754.7	806.4
115°	131.7	146.4	167.1	200.2	255.7	334.6	428.8	529.4	624.1	704.1	763.4
117.5°	143.7	157.3	177.9	207.9	256.3	325.4	408.6	495.7	579.5	653.0	714.5
120°	155.1	168.7	188.3	216.6	258.5	319.4	393.4	470.1	543.6	608.9	663.8
122.5°	165.4	180.1	199.2	224.7	262.3	315.6	380.9	450.0	514.8	574.1	624.1
125°	175.8	190.4	209.5	233.4	266.1	312.3	370.6	432.6	491.9	544.1	587.7
127.5°	185.6	200.2	218.7	240.5	270.4	310.7	360.8	416.8	470.7	518.6	558.8
130°	194.3	208.9	226.9	247.6	274.8	309.1	353.1	402.1	451.1	495.2	532.2
132.5°	202.4	216.6	234.0	254.1	278.1	308.5	346.1	388.5	432.6	472.9	507.7
135°	209.5	224.2	241.1	259.6	281.3	308.0	340.1	376.5	415.2	450.5	481.6
137.5°	216.0	229.6	245.9	263.9	283.5	306.9	334.6	365.1	397.8	429.3	457.1
140°	221.5	235.1	250.8	267.2	285.7	306.3	329.7	355.3	383.1	409.2	432.6
142.5°	226.9	239.4	254.7	270.4	287.3	305.3	325.4	346.1	368.9	390.7	410.3
145°	231.3	243.8	257.9	272.6	287.8	304.2	321.6	339.0	357.0	374.4	390.1
147.5°	236.7	247.6	260.6	274.2	287.8	302.5	317.8	333.0	347.7	362.4	373.8
150°	241.1	250.8	263.4	274.8	287.8	300.4	314.0	326.5	339.0	350.4	360.8
152.5°	245.4	254.7	265.0	275.9	286.2	297.6	309.6	320.5	330.8	340.6	348.8
155°	250.3	257.9	267.2	275.9	285.1	294.4	305.3	314.5	323.2	331.4	337.9
157.5°	254.7	260.6	268.3	276.4	283.5	291.7	300.4	308.0	315.6	322.1	327.6
160°	257.9	263.4	269.9	276.4	282.4	288.4	295.5	302.5	308.5	314.0	317.8
162.5°	260.6	265.0	270.4	275.9	280.2	285.1	290.6	296.0	300.9	305.8	309.1
165°	262.8	266.6	271.0	274.8	278.1	281.9	286.2	290.6	293.8	297.6	300.4
167.5°	265.0	267.7	271.0	274.2	275.9	278.6	281.9	285.7	288.4	290.6	292.7
170°	266.6	267.7	270.4	272.6	273.7	275.3	278.1	280.8	282.4	284.6	285.7
172.5°	267.7	268.3	270.4	272.1	272.1	272.6	274.2	276.4	277.5	279.1	279.7
175°	268.3	268.8	269.9	271.0	270.4	270.4	271.5	272.6	273.2	274.2	274.2
177.5°	268.8	268.8	269.3	270.4	269.3	268.8	269.3	269.9	270.4	271.0	271.0
180°	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8	268.8



TEST NUMBER: P832277

CATALOG NUMBER: S123RDIP-S560D585U950-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1742.4	1742.4	1742.4	1742.4
2.5°	1548.0	1544.5	1543.0	1541.6
5°	1326.9	1315.9	1313.4	1310.9
7.5°	1139.1	1134.4	1119.1	1103.7
10°	986.5	972.3	965.8	959.4
12.5°	859.0	845.8	843.7	841.5
15°	760.1	750.8	747.6	744.4
17.5°	695.1	688.7	684.7	680.8
20°	646.9	642.2	639.4	636.5
22.5°	610.1	606.5	604.4	602.2
25°	574.7	569.4	567.6	565.8
27.5°	541.1	536.5	534.7	532.9
30°	509.7	505.8	503.3	500.8
32.5°	475.4	470.8	469.3	467.9
35°	445.1	442.2	440.8	439.3
37.5°	412.9	409.3	407.2	405.0
40°	385.4	383.6	382.5	381.5
42.5°	357.5	354.3	354.0	353.6
45°	329.7	326.5	325.8	325.0
47.5°	303.6	300.8	300.4	300.0
50°	274.7	270.7	267.9	265.0
52.5°	241.5	237.9	235.4	232.9
55°	211.1	207.2	205.0	202.9
57.5°	188.2	186.5	185.4	184.3
60°	169.7	168.6	167.9	167.2
62.5°	152.5	151.4	151.4	151.4
65°	136.8	135.7	134.7	133.6
67.5°	116.4	114.3	113.9	113.6
70°	91.8	88.6	88.2	87.9
72.5°	71.8	71.4	70.7	70.0
75°	59.3	58.6	58.6	58.6
77.5°	47.9	47.1	47.1	47.1
80°	36.8	36.4	36.8	37.1
82.5°	27.1	27.1	26.8	26.4
85°	17.5	17.1	17.1	17.1
87.5°	8.6	8.6	8.6	8.6
90°	15.2	15.8	16.3	15.8
92.5°	31.6	29.4	29.9	28.8
95°	74.0	69.1	65.3	63.1
97.5°	169.2	148.5	135.5	129.5
100°	401.6	361.9	340.6	341.2
102.5°	602.4	573.0	556.1	540.3
105°	733.0	712.3	694.9	692.1
107.5°	814.0	804.2	797.2	791.2
110°	845.6	849.9	848.9	847.8



TEST NUMBER: P832277

CATALOG NUMBER: S123RDIP-S560D585U950-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	837.4	853.2	858.6	859.2
115°	804.2	828.2	839.1	841.8
117.5°	756.9	783.6	799.9	803.7
120°	706.8	737.3	750.4	753.6
122.5°	661.1	687.8	702.5	706.8
125°	622.5	646.4	660.0	663.8
127.5°	590.4	611.1	623.6	626.8
130°	561.0	580.6	592.0	596.4
132.5°	534.3	553.9	563.7	566.4
135°	508.2	524.5	534.3	538.2
137.5°	479.9	496.8	505.0	508.2
140°	453.3	468.5	477.2	476.7
142.5°	427.1	440.2	447.8	447.3
145°	403.7	415.2	419.5	420.6
147.5°	384.7	392.9	397.2	397.8
150°	368.9	374.9	378.2	378.2
152.5°	354.8	360.2	361.9	361.9
155°	342.8	347.2	348.2	348.8
157.5°	331.9	335.2	336.3	336.3
160°	321.6	324.8	324.8	324.3
162.5°	311.2	314.0	314.0	313.4
165°	302.5	304.7	304.2	304.2
167.5°	293.8	295.5	294.9	294.9
170°	286.2	287.3	286.8	286.8
172.5°	279.7	280.8	279.7	279.1
175°	274.2	274.8	274.2	273.7
177.5°	270.4	271.0	269.9	269.9
180°	268.8	268.8	268.8	268.8



TEST NUMBER: P832277

CATALOG NUMBER: S123RDIP-S560D585U950-4F0-1E-UDD-G4

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	11.24	12.07	12.18	13.02	14.25	15.90	16.74	16.84	17.69	18.91
	3H	12.46	13.21	13.41	14.16	15.42	17.40	18.15	18.36	19.11	20.36
	4H	12.84	13.55	13.81	14.51	15.77	17.89	18.60	18.86	19.56	20.82
	6H	13.13	13.77	14.10	14.74	16.01	18.21	18.85	19.18	19.82	21.09
	8H	13.21	13.83	14.20	14.81	16.08	18.28	18.90	19.27	19.88	21.15
	12H	13.26	13.85	14.25	14.83	16.12	18.32	18.90	19.30	19.88	21.17
4H	2H	11.96	12.67	12.94	13.63	14.89	15.90	16.60	16.87	17.56	18.83
	3H	13.33	13.92	14.31	14.91	16.18	17.56	18.14	18.54	19.13	20.41
	4H	13.79	14.32	14.78	15.31	16.61	18.16	18.70	19.15	19.68	20.98
	6H	14.16	14.61	15.16	15.62	16.92	18.60	19.06	19.60	20.07	21.37
	8H	14.28	14.71	15.28	15.71	17.02	18.73	19.16	19.74	20.16	21.47
	12H	14.36	14.74	15.38	15.76	17.08	18.80	19.18	19.82	20.20	21.51
8H	4H	14.10	14.53	15.10	15.53	16.84	18.13	18.56	19.13	19.56	20.87
	6H	14.57	14.92	15.59	15.96	17.27	18.63	18.98	19.65	20.02	21.33
	8H	14.76	15.07	15.79	16.10	17.43	18.81	19.12	19.85	20.15	21.48
	12H	14.90	15.17	15.94	16.20	17.57	18.93	19.20	19.97	20.23	21.60
12H	4H	14.11	14.50	15.13	15.52	16.83	18.08	18.47	19.10	19.49	20.80
	6H	14.63	14.94	15.66	15.97	17.29	18.60	18.91	19.64	19.94	21.27
	8H	14.84	15.12	15.88	16.14	17.51	18.80	19.07	19.83	20.09	21.46