

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: P831789

Luminaire Tested: S123RDIP-S1000D1025U950-4F0-1E-UDD-G

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831789
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-S1000D1025U950-4F0-1E-UDD-G
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: -

Summary

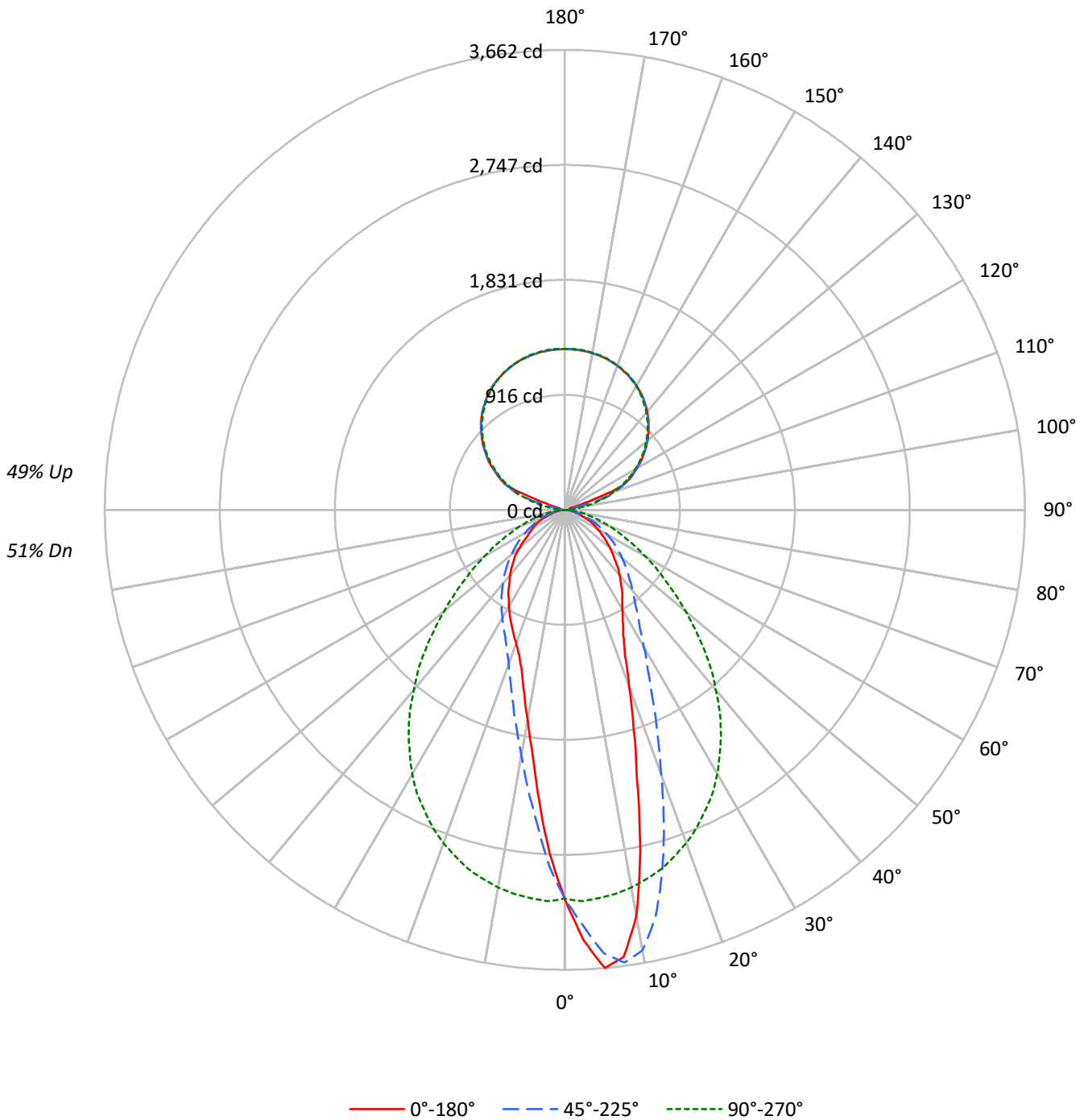
Lumens per Lamp: N/A
Luminaire Lumens: 8014.3 lumens
Efficiency: N/A
Efficacy: 131.4 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 61
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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51				
1	99	95	91	88	91	88	85	82	75	73	71	63	61	60	52	51	50	45				
2	91	84	78	73	84	78	73	69	67	63	60	56	54	51	47	45	43	39				
3	83	75	68	62	77	69	63	59	60	55	51	51	47	45	42	40	38	34				
4	77	67	59	54	71	62	56	51	54	49	45	46	42	39	38	36	34	30				
5	71	60	52	47	66	56	49	44	49	43	39	42	38	35	35	32	30	27				
6	66	54	47	41	61	51	44	39	44	39	35	38	34	31	32	29	27	24				
7	61	49	42	37	57	46	40	35	41	35	31	35	31	28	30	27	25	22				
8	57	45	38	33	53	42	36	31	37	32	28	32	28	25	28	25	22	20				
9	53	42	34	30	49	39	33	28	34	29	26	30	26	23	26	23	21	19				
10	50	38	32	27	46	36	30	26	32	27	24	28	24	21	24	21	19	17				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	33322	33322	33322	33322	33322
5°	39566	38305	33532	27107	25166
10°	35848	38907	33365	21718	18631
15°	24682	33360	33013	17751	14739
20°	17171	25684	32349	14968	12954
25°	13085	19574	31385	13303	11940
30°	11390	15649	30179	12352	11059
35°	10457	13201	28470	11550	10257
40°	9542	11789	26235	10763	9524
45°	8617	10782	23823	10018	8791
50°	7822	9947	20979	9289	7886
55°	7075	9135	18246	8574	6765
60°	6340	8308	15849	7787	6394
65°	5850	7371	13642	6999	6046
70°	4752	6370	11903	6332	4913
75°	4171	5065	10081	5253	4329
80°	3775	4289	8263	4407	4091
85°	3446	3767	6274	4001	3767

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 25137 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	282.2	3.5
10°-20°	652.9	8.1
20°-30°	749.2	9.3
30°-40°	738.4	9.2
40°-50°	651.2	8.1
50°-60°	501.0	6.3
60°-70°	329.4	4.1
70°-80°	160.0	2.0
80°-90°	42.9	0.5
90°-100°	45.2	0.6
100°-110°	218.5	2.7
110°-120°	535.5	6.7
120°-130°	679.8	8.5
130°-140°	726.2	9.1
140°-150°	679.1	8.5
150°-160°	547.7	6.8
160°-170°	353.5	4.4
170°-180°	121.8	1.5
0°-30°	1684.3	21.0
0°-40°	2422.7	30.2
0°-60°	3574.9	44.6
0°-90°	4107.1	51.2
90°-120°	799.1	10.0
90°-150°	2884.2	36.0
90°-180°	3907.0	48.8
0°-180°	8014.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3096	3096	3096	3096	3096	
5°	3662	3545	3103	2509	2329	335
15°	2215	2994	2962	1593	1323	625
25°	1102	1648	2643	1120	1005	520
35°	796	1005	2167	879	781	496
45°	566	708	1565	658	578	439
55°	377	487	972	457	360	338
65°	230	289	536	275	237	225
75°	100	122	242	126	104	108
85°	28	30	51	32	30	30
90°	29	23	1	23	29	14
95°	36	30	58	30	36	30
105°	42	208	284	208	42	87
115°	560	547	532	547	560	527
125°	766	762	750	762	766	684
135°	944	944	934	944	944	728
145°	1088	1086	1078	1086	1088	680
155°	1186	1186	1187	1186	1186	547
165°	1249	1248	1252	1248	1249	353
175°	1277	1278	1282	1278	1277	122
180°	1282	1282	1282	1282	1282	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7
2.5°	3430.8	3420.0	3409.3	3406.1	3402.9	3392.8	3382.6	3359.8	3336.9	3313.4	3289.9
5°	3661.8	3663.1	3664.4	3661.2	3658.0	3644.7	3631.4	3603.5	3575.5	3545.1	3514.6
7.5°	3590.8	3611.1	3631.4	3635.2	3639.0	3649.2	3659.3	3653.0	3646.6	3635.2	3623.8
10°	3279.8	3278.5	3277.3	3300.1	3322.9	3390.9	3458.8	3493.7	3528.6	3559.7	3590.8
12.5°	2772.1	2774.0	2775.9	2850.8	2925.7	2989.8	3053.9	3142.7	3231.6	3327.4	3423.2
15°	2214.9	2246.0	2277.1	2343.7	2410.3	2506.8	2603.3	2722.6	2841.9	2993.6	3145.3
17.5°	1818.9	1832.2	1845.5	1909.6	1973.7	2065.1	2156.5	2291.7	2426.8	2622.3	2817.8
20°	1499.0	1511.1	1523.1	1569.5	1615.8	1703.4	1790.9	1919.8	2048.6	2242.2	2435.7
22.5°	1251.5	1275.0	1298.5	1329.6	1360.7	1424.1	1487.6	1619.0	1750.3	1926.8	2103.2
25°	1101.7	1112.5	1123.3	1150.0	1176.6	1237.5	1298.5	1385.4	1472.4	1648.1	1823.9
27.5°	1000.2	1003.4	1006.5	1026.2	1045.9	1085.2	1124.6	1205.2	1285.8	1430.5	1575.2
30°	916.4	922.1	927.8	943.1	958.3	986.9	1015.4	1072.5	1129.7	1259.1	1388.6
32.5°	851.7	854.9	858.0	870.7	883.4	904.4	925.3	970.4	1015.4	1114.4	1213.4
35°	795.8	796.5	797.1	806.6	816.1	836.4	856.8	894.2	931.6	1004.6	1077.6
37.5°	732.4	736.8	741.3	748.2	755.2	773.0	790.8	821.2	851.7	912.0	972.3
40°	679.1	682.9	686.7	694.9	703.2	717.1	731.1	759.0	786.9	839.0	891.0
42.5°	625.8	628.3	630.8	639.1	647.3	664.5	681.6	703.8	726.0	769.2	812.3
45°	566.1	572.4	578.8	587.7	596.6	611.2	625.8	648.6	671.4	708.3	745.1
47.5°	516.6	519.8	522.9	530.6	538.2	555.9	573.7	594.0	614.3	648.6	682.9
50°	467.1	468.4	469.6	476.6	483.6	499.5	515.3	538.8	562.3	594.0	625.8
52.5°	420.1	423.3	426.5	433.5	440.4	451.2	462.0	486.1	510.2	541.3	572.4
55°	377.0	378.9	380.8	385.9	390.9	403.6	416.3	437.3	458.2	486.8	515.3
57.5°	336.4	338.9	341.4	345.2	349.0	360.5	371.9	390.3	408.7	437.3	465.8
60°	294.5	297.6	300.8	305.3	309.7	318.6	327.5	344.0	360.5	385.9	411.2
62.5°	264.0	264.6	265.3	269.1	272.9	279.2	285.6	298.9	312.2	337.6	363.0
65°	229.7	231.6	233.5	235.4	237.4	242.4	247.5	258.9	270.4	289.4	308.4
67.5°	194.2	196.1	198.0	201.2	204.4	208.8	213.2	220.9	228.5	246.2	264.0
70°	151.0	151.0	151.0	156.1	161.2	168.8	176.4	182.1	187.9	202.4	217.0
72.5°	123.1	123.8	124.4	125.0	125.7	130.1	134.5	144.1	153.6	162.5	171.4
75°	100.3	100.9	101.5	102.2	102.8	104.1	105.3	108.5	111.7	121.8	132.0
77.5°	80.0	80.6	81.2	81.9	82.5	83.8	85.0	86.3	87.6	91.4	95.2
80°	60.9	61.6	62.2	62.8	63.5	64.1	64.7	66.0	67.3	69.2	71.1
82.5°	44.4	44.4	44.4	44.4	44.4	45.7	47.0	47.0	47.0	48.2	49.5
85°	27.9	27.9	27.9	28.6	29.2	29.2	29.2	29.8	30.5	30.5	30.5
87.5°	12.7	12.1	11.4	12.1	12.7	12.7	12.7	13.3	14.0	14.0	14.0
90°	28.6	28.1	27.7	27.3	26.9	26.2	25.4	24.5	23.7	22.9	20.1
92.5°	32.4	32.2	32.0	31.7	31.5	30.7	29.2	27.7	26.2	24.8	22.9
95°	36.2	36.2	36.2	36.2	36.2	35.4	34.0	32.5	31.0	29.5	27.2
97.5°	39.0	38.8	38.6	38.4	38.2	37.2	35.5	33.9	32.2	30.5	41.3
100°	40.0	39.8	39.6	39.4	39.1	38.2	36.5	34.8	33.1	31.4	64.4
102.5°	40.9	40.5	40.1	39.7	39.3	42.5	49.5	56.5	63.5	70.5	107.3
105°	41.9	41.5	41.1	40.6	40.2	58.7	96.2	133.6	171.1	208.5	227.6
107.5°	99.0	126.8	154.5	182.2	209.9	240.1	272.7	305.2	337.8	370.4	367.2
110°	261.9	292.1	322.4	352.6	382.9	401.5	408.5	415.5	422.5	429.5	427.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	496.1	496.5	497.0	497.4	497.8	497.1	495.2	493.3	491.4	489.4	487.1
115°	559.9	559.1	558.2	557.4	556.5	555.0	552.9	550.8	548.7	546.6	544.7
117.5°	611.3	611.1	610.9	610.7	610.5	609.5	607.8	606.1	604.5	602.8	601.7
120°	664.7	664.7	664.7	664.7	664.7	663.8	662.1	660.4	658.7	657.0	656.4
122.5°	717.0	716.8	716.6	716.4	716.2	715.5	714.5	713.4	712.4	711.3	710.5
125°	765.6	765.2	764.7	764.3	763.9	763.5	763.1	762.6	762.2	761.8	760.9
127.5°	813.2	813.6	814.1	814.5	814.9	814.8	814.2	813.5	812.9	812.3	811.2
130°	858.9	859.3	859.8	860.2	860.6	860.4	859.5	858.7	857.9	857.0	856.2
132.5°	900.8	901.4	902.1	902.7	903.4	903.2	902.4	901.6	900.7	899.9	899.2
135°	943.7	944.3	944.9	945.6	946.2	946.2	945.6	944.9	944.3	943.7	942.8
137.5°	984.6	985.0	985.5	985.9	986.3	986.0	984.9	983.9	982.8	981.8	981.3
140°	1020.8	1021.2	1021.6	1022.1	1022.5	1022.3	1021.4	1020.6	1019.7	1018.9	1018.3
142.5°	1054.1	1054.8	1055.4	1056.0	1056.7	1056.7	1056.0	1055.4	1054.8	1054.1	1053.5
145°	1088.4	1088.4	1088.4	1088.4	1088.4	1088.2	1087.8	1087.3	1086.9	1086.5	1086.1
147.5°	1113.2	1114.2	1115.3	1116.3	1117.4	1117.7	1117.3	1116.9	1116.4	1116.0	1115.6
150°	1141.7	1142.4	1143.0	1143.6	1144.3	1144.4	1143.9	1143.5	1143.1	1142.7	1142.3
152.5°	1164.6	1165.6	1166.7	1167.8	1168.8	1168.9	1168.1	1167.2	1166.4	1165.5	1165.3
155°	1185.5	1186.8	1188.1	1189.3	1190.6	1190.7	1189.7	1188.6	1187.5	1186.5	1186.3
157.5°	1203.6	1205.3	1207.0	1208.7	1210.4	1210.6	1209.3	1208.1	1206.8	1205.5	1205.7
160°	1220.8	1222.2	1223.7	1225.2	1226.7	1226.8	1225.5	1224.3	1223.0	1221.7	1221.9
162.5°	1236.9	1238.2	1239.5	1240.8	1242.0	1241.9	1240.4	1239.0	1237.5	1236.0	1236.2
165°	1249.3	1250.8	1252.3	1253.8	1255.3	1255.1	1253.5	1251.8	1250.1	1248.4	1248.6
167.5°	1258.9	1260.5	1262.2	1263.9	1265.6	1265.6	1263.9	1262.2	1260.5	1258.9	1258.9
170°	1267.4	1269.1	1270.8	1272.5	1274.2	1274.2	1272.5	1270.8	1269.1	1267.4	1267.4
172.5°	1272.2	1274.1	1276.0	1277.9	1279.8	1279.9	1278.2	1276.5	1274.8	1273.1	1272.9
175°	1276.9	1278.6	1280.3	1282.0	1283.7	1283.8	1282.3	1280.9	1279.4	1277.9	1277.7
177.5°	1277.9	1280.0	1282.1	1284.2	1286.4	1286.6	1284.9	1283.2	1281.5	1279.8	1279.6
180°	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7
2.5°	3286.8	3283.6	3253.1	3222.7	3192.8	3163.0	3140.8	3118.6	3081.2	3043.7	3020.2
5°	3490.5	3466.4	3418.1	3369.9	3297.6	3225.2	3164.3	3103.4	3025.9	2948.5	2883.8
7.5°	3604.1	3584.4	3526.0	3467.6	3371.8	3276.0	3180.8	3085.6	2971.4	2857.1	2759.4
10°	3607.3	3623.8	3575.5	3527.3	3419.4	3311.5	3182.1	3052.6	2899.0	2745.4	2619.1
12.5°	3494.3	3565.4	3555.2	3545.1	3435.3	3325.5	3168.1	3010.7	2822.2	2633.7	2475.7
15°	3283.0	3420.7	3461.3	3501.9	3411.2	3320.4	3141.4	2962.5	2741.0	2519.5	2338.0
17.5°	3010.7	3203.6	3310.9	3418.1	3352.1	3286.1	3090.0	2893.9	2644.5	2395.1	2197.7
20°	2688.3	2940.9	3109.1	3277.3	3253.1	3229.0	3026.6	2824.1	2555.0	2286.0	2072.1
22.5°	2369.7	2636.3	2868.6	3100.8	3125.6	3150.3	2946.0	2741.6	2447.2	2152.7	1935.0
25°	2094.9	2365.9	2642.6	2919.3	2975.2	3031.0	2836.8	2642.6	2337.4	2032.1	1815.7
27.5°	1832.8	2090.5	2395.1	2699.7	2801.3	2902.8	2725.1	2547.4	2229.5	1911.5	1695.7
30°	1619.0	1849.3	2160.3	2471.3	2612.8	2754.3	2591.2	2428.1	2112.7	1797.3	1586.0
32.5°	1419.7	1625.9	1938.2	2250.4	2414.8	2579.2	2438.3	2297.4	1994.0	1690.7	1481.9
35°	1262.3	1447.0	1738.3	2029.6	2213.6	2397.7	2282.1	2166.6	1870.3	1573.9	1376.5
37.5°	1127.1	1282.0	1555.5	1829.0	2024.5	2220.0	2123.5	2027.0	1748.4	1469.8	1283.2
40°	1015.4	1139.8	1394.3	1648.8	1840.4	2032.1	1949.6	1867.1	1617.7	1368.3	1193.7
42.5°	919.6	1026.8	1255.3	1483.8	1659.6	1835.4	1780.8	1726.2	1500.3	1274.3	1112.5
45°	835.2	925.3	1126.5	1327.7	1489.5	1651.3	1608.2	1565.0	1370.2	1175.3	1026.8
47.5°	760.3	837.7	1017.3	1196.9	1342.3	1487.6	1447.6	1407.6	1246.4	1085.2	950.0
50°	691.8	757.8	907.5	1057.3	1188.0	1318.8	1285.8	1252.8	1119.5	986.2	869.4
52.5°	627.0	681.6	816.1	950.7	1056.0	1161.4	1136.0	1110.6	1007.8	905.0	799.0
55°	565.5	615.6	729.2	842.8	932.9	1023.0	997.6	972.3	892.3	812.3	719.0
57.5°	509.6	553.4	645.4	737.4	809.2	880.9	868.8	856.8	790.1	723.5	646.7
60°	450.6	489.9	569.3	648.6	706.3	764.1	750.1	736.2	688.6	641.0	575.0
62.5°	397.9	432.8	496.3	559.7	606.7	653.7	643.5	633.4	597.2	561.0	506.4
65°	342.7	377.0	428.4	479.8	516.6	553.4	544.5	535.6	508.3	481.1	437.3
67.5°	292.6	321.1	365.5	410.0	434.7	459.5	454.4	449.3	428.4	407.4	373.2
70°	241.8	266.5	303.4	340.2	357.3	374.4	376.3	378.2	359.2	340.2	314.8
72.5°	191.0	210.7	245.0	279.2	292.6	305.9	305.3	304.6	293.2	281.8	258.9
75°	146.6	161.2	187.9	214.5	225.9	237.4	239.9	242.4	231.6	220.9	208.2
77.5°	105.3	115.5	135.8	156.1	168.8	181.5	182.8	184.0	179.0	173.9	161.8
80°	74.3	77.4	90.1	102.8	116.1	129.5	131.4	133.3	128.2	123.1	115.5
82.5°	51.4	53.3	57.8	62.2	73.0	83.8	86.3	88.8	86.3	83.8	75.5
85°	31.1	31.7	33.6	35.5	40.6	45.7	48.2	50.8	49.5	48.2	43.8
87.5°	14.0	14.0	14.6	15.2	16.5	17.8	20.9	24.1	22.2	20.3	18.4
90°	17.4	14.6	11.8	9.4	7.3	5.2	3.1	1.0	3.1	5.2	7.3
92.5°	20.9	19.0	17.1	16.8	18.1	19.4	20.6	21.9	20.6	19.4	18.1
95°	24.9	22.5	20.2	23.4	32.1	40.7	49.4	58.1	49.4	40.7	32.1
97.5°	52.1	62.8	73.6	82.0	87.9	93.8	99.8	105.7	99.8	93.8	87.9
100°	97.4	130.5	163.5	177.9	173.6	169.4	165.2	160.9	165.2	169.4	173.6
102.5°	144.1	180.9	217.7	234.8	232.0	229.3	226.5	223.8	226.5	229.3	232.0
105°	246.6	265.7	284.7	293.1	290.7	288.4	286.1	283.8	286.1	288.4	290.7
107.5°	364.1	360.9	357.7	355.2	353.3	351.4	349.5	347.6	349.5	351.4	353.3
110°	424.8	422.5	420.1	418.1	416.4	414.7	413.1	411.4	413.1	414.7	416.4



TEST NUMBER: P831789

CATALOG NUMBER: S123RDIP-S1000D1025U950-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	484.8	482.5	480.1	478.2	476.8	475.3	473.8	472.3	473.8	475.3	476.8
115°	542.8	540.9	539.0	537.4	536.1	534.8	533.6	532.3	533.6	534.8	536.1
117.5°	600.6	599.6	598.5	597.3	595.8	594.3	592.8	591.3	592.8	594.3	595.8
120°	655.8	655.1	654.5	653.2	651.3	649.4	647.5	645.6	647.5	649.4	651.3
122.5°	709.6	708.8	707.9	706.8	705.3	703.8	702.3	700.8	702.3	703.8	705.3
125°	760.1	759.2	758.4	757.1	755.4	753.7	752.1	750.4	752.1	753.7	755.4
127.5°	810.1	809.1	808.0	806.6	805.0	803.3	801.6	799.9	801.6	803.3	805.0
130°	855.3	854.5	853.6	852.4	850.7	849.0	847.3	845.6	847.3	849.0	850.7
132.5°	898.6	898.0	897.3	896.2	894.5	892.8	891.1	889.4	891.1	892.8	894.5
135°	942.0	941.1	940.3	939.2	937.9	936.7	935.4	934.1	935.4	936.7	937.9
137.5°	980.9	980.5	980.1	979.0	977.3	975.6	973.9	972.2	973.9	975.6	977.3
140°	1017.6	1017.0	1016.3	1015.4	1014.1	1012.9	1011.6	1010.3	1011.6	1012.9	1014.1
142.5°	1052.9	1052.2	1051.6	1050.6	1049.4	1048.1	1046.8	1045.6	1046.8	1048.1	1049.4
145°	1085.7	1085.2	1084.8	1083.9	1082.4	1080.9	1079.4	1077.9	1079.4	1080.9	1082.4
147.5°	1115.2	1114.7	1114.3	1113.6	1112.5	1111.5	1110.4	1109.4	1110.4	1111.5	1112.5
150°	1141.8	1141.4	1141.0	1140.5	1139.8	1139.2	1138.6	1137.9	1138.6	1139.2	1139.8
152.5°	1165.1	1164.9	1164.7	1164.5	1164.3	1164.1	1163.8	1163.6	1163.8	1164.1	1164.3
155°	1186.1	1185.8	1185.6	1185.7	1186.2	1186.6	1187.0	1187.4	1187.0	1186.6	1186.2
157.5°	1205.9	1206.2	1206.4	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5
160°	1222.1	1222.3	1222.6	1222.8	1223.0	1223.2	1223.4	1223.6	1223.4	1223.2	1223.0
162.5°	1236.4	1236.6	1236.8	1237.3	1237.9	1238.5	1239.2	1239.8	1239.2	1238.5	1237.9
165°	1248.8	1249.0	1249.2	1249.6	1250.3	1250.9	1251.6	1252.2	1251.6	1250.9	1250.3
167.5°	1258.9	1258.9	1258.9	1259.3	1260.1	1261.0	1261.8	1262.7	1261.8	1261.0	1260.1
170°	1267.4	1267.4	1267.4	1267.8	1268.7	1269.5	1270.4	1271.2	1270.4	1269.5	1268.7
172.5°	1272.7	1272.5	1272.3	1272.7	1273.8	1274.8	1275.9	1276.9	1275.9	1274.8	1273.8
175°	1277.5	1277.3	1277.0	1277.5	1278.5	1279.6	1280.6	1281.7	1280.6	1279.6	1278.5
177.5°	1279.4	1279.2	1279.0	1279.4	1280.4	1281.5	1282.6	1283.6	1282.6	1281.5	1280.4
180°	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7



TEST NUMBER: P831789

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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7	3095.7
2.5°	2996.7	2960.6	2924.4	2898.4	2872.4	2840.0	2807.6	2806.4	2805.1	2781.0	2756.9
5°	2819.0	2756.2	2693.4	2631.8	2570.3	2508.7	2447.2	2433.2	2419.2	2398.3	2377.3
7.5°	2661.7	2561.4	2461.1	2382.4	2303.7	2242.2	2180.6	2138.7	2096.8	2064.5	2032.1
10°	2492.8	2368.5	2244.1	2148.9	2053.7	1987.0	1920.4	1872.2	1823.9	1801.1	1778.2
12.5°	2317.7	2182.5	2047.3	1954.0	1860.7	1780.8	1700.8	1657.0	1613.2	1581.5	1549.8
15°	2156.5	2011.2	1865.8	1766.8	1667.8	1592.9	1518.0	1474.3	1430.5	1398.7	1367.0
17.5°	2000.4	1853.8	1707.2	1606.9	1506.6	1438.7	1370.8	1328.3	1285.8	1266.1	1246.4
20°	1858.2	1710.3	1562.5	1467.9	1373.4	1306.7	1240.1	1217.2	1194.4	1176.0	1157.6
22.5°	1717.3	1575.2	1433.0	1342.3	1251.5	1203.3	1155.0	1136.6	1118.2	1104.3	1090.3
25°	1599.3	1457.8	1316.2	1236.9	1157.6	1120.1	1082.7	1070.6	1058.6	1044.6	1030.6
27.5°	1480.0	1345.4	1210.9	1147.4	1084.0	1053.5	1023.0	1007.8	992.6	981.1	969.7
30°	1374.6	1250.2	1125.8	1073.2	1020.5	993.8	967.2	950.7	934.2	923.4	912.6
32.5°	1273.1	1162.7	1052.2	1007.2	962.1	936.1	910.1	894.2	878.3	865.6	852.9
35°	1179.2	1083.3	987.5	946.2	905.0	879.0	852.9	837.1	821.2	808.5	795.8
37.5°	1096.6	1009.7	922.8	884.0	845.3	822.5	799.6	783.1	766.6	753.3	740.0
40°	1019.2	942.4	865.6	828.2	790.8	766.0	741.3	726.7	712.1	700.0	687.9
42.5°	950.7	880.2	809.8	773.0	736.2	712.7	689.2	672.1	654.9	648.0	641.0
45°	878.3	816.1	753.9	718.4	682.9	658.1	633.4	618.8	604.2	597.8	591.5
47.5°	814.9	757.1	699.4	664.5	629.6	607.3	585.1	573.7	562.3	553.4	544.5
50°	752.7	696.8	641.0	607.3	573.7	554.7	535.6	521.7	507.7	501.4	495.0
52.5°	693.0	642.3	591.5	557.2	522.9	504.5	486.1	474.1	462.0	448.7	435.4
55°	625.8	581.3	536.9	506.4	476.0	456.9	437.9	423.9	410.0	396.0	382.1
57.5°	569.9	526.1	482.3	455.0	427.7	409.3	390.9	375.7	360.5	349.0	337.6
60°	509.0	470.9	432.8	406.2	379.5	361.7	344.0	329.4	314.8	309.1	303.4
62.5°	451.9	416.3	380.8	357.3	333.8	316.7	299.5	290.0	280.5	276.7	272.9
65°	393.5	363.0	332.5	311.0	289.4	274.8	260.2	255.8	251.3	248.1	245.0
67.5°	338.9	312.9	286.9	267.8	248.8	238.6	228.5	223.4	218.3	214.5	210.7
70°	289.4	266.5	243.7	227.2	210.7	201.2	191.7	187.2	182.8	175.8	168.8
72.5°	236.1	218.3	200.5	187.9	175.2	166.9	158.7	149.8	140.9	134.5	128.2
75°	195.5	177.7	159.9	147.9	135.8	126.3	116.8	113.6	110.4	108.5	106.6
77.5°	149.8	134.5	119.3	109.8	100.3	95.8	91.4	89.5	87.6	86.9	86.3
80°	107.9	95.2	82.5	77.4	72.3	71.1	69.8	68.5	67.3	66.6	66.0
82.5°	67.3	60.9	54.6	53.3	52.0	51.4	50.8	50.1	49.5	48.9	48.2
85°	39.3	36.8	34.3	33.6	33.0	32.4	31.7	31.7	31.7	31.7	31.7
87.5°	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	15.9	15.2
90°	9.4	11.8	14.6	17.4	20.1	22.9	23.7	24.5	25.4	26.2	26.9
92.5°	16.8	17.1	19.0	20.9	22.9	24.8	26.2	27.7	29.2	30.7	31.5
95°	23.4	20.2	22.5	24.9	27.2	29.5	31.0	32.5	34.0	35.4	36.2
97.5°	82.0	73.6	62.8	52.1	41.3	30.5	32.2	33.9	35.5	37.2	38.2
100°	177.9	163.5	130.5	97.4	64.4	31.4	33.1	34.8	36.5	38.2	39.1
102.5°	234.8	217.7	180.9	144.1	107.3	70.5	63.5	56.5	49.5	42.5	39.3
105°	293.1	284.7	265.7	246.6	227.6	208.5	171.1	133.6	96.2	58.7	40.2
107.5°	355.2	357.7	360.9	364.1	367.2	370.4	337.8	305.2	272.7	240.1	209.9
110°	418.1	420.1	422.5	424.8	427.1	429.5	422.5	415.5	408.5	401.5	382.9



TEST NUMBER: P831789

CATALOG NUMBER: S123RDIP-S1000D1025U950-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	478.2	480.1	482.5	484.8	487.1	489.4	491.4	493.3	495.2	497.1	497.8
115°	537.4	539.0	540.9	542.8	544.7	546.6	548.7	550.8	552.9	555.0	556.5
117.5°	597.3	598.5	599.6	600.6	601.7	602.8	604.5	606.1	607.8	609.5	610.5
120°	653.2	654.5	655.1	655.8	656.4	657.0	658.7	660.4	662.1	663.8	664.7
122.5°	706.8	707.9	708.8	709.6	710.5	711.3	712.4	713.4	714.5	715.5	716.2
125°	757.1	758.4	759.2	760.1	760.9	761.8	762.2	762.6	763.1	763.5	763.9
127.5°	806.6	808.0	809.1	810.1	811.2	812.3	812.9	813.5	814.2	814.8	814.9
130°	852.4	853.6	854.5	855.3	856.2	857.0	857.9	858.7	859.5	860.4	860.6
132.5°	896.2	897.3	898.0	898.6	899.2	899.9	900.7	901.6	902.4	903.2	903.4
135°	939.2	940.3	941.1	942.0	942.8	943.7	944.3	944.9	945.6	946.2	946.2
137.5°	979.0	980.1	980.5	980.9	981.3	981.8	982.8	983.9	984.9	986.0	986.3
140°	1015.4	1016.3	1017.0	1017.6	1018.3	1018.9	1019.7	1020.6	1021.4	1022.3	1022.5
142.5°	1050.6	1051.6	1052.2	1052.9	1053.5	1054.1	1054.8	1055.4	1056.0	1056.7	1056.7
145°	1083.9	1084.8	1085.2	1085.7	1086.1	1086.5	1086.9	1087.3	1087.8	1088.2	1088.4
147.5°	1113.6	1114.3	1114.7	1115.2	1115.6	1116.0	1116.4	1116.9	1117.3	1117.7	1117.4
150°	1140.5	1141.0	1141.4	1141.8	1142.3	1142.7	1143.1	1143.5	1143.9	1144.4	1144.3
152.5°	1164.5	1164.7	1164.9	1165.1	1165.3	1165.5	1166.4	1167.2	1168.1	1168.9	1168.8
155°	1185.7	1185.6	1185.8	1186.1	1186.3	1186.5	1187.5	1188.6	1189.7	1190.7	1190.6
157.5°	1206.5	1206.4	1206.2	1205.9	1205.7	1205.5	1206.8	1208.1	1209.3	1210.6	1210.4
160°	1222.8	1222.6	1222.3	1222.1	1221.9	1221.7	1223.0	1224.3	1225.5	1226.8	1226.7
162.5°	1237.3	1236.8	1236.6	1236.4	1236.2	1236.0	1237.5	1239.0	1240.4	1241.9	1242.0
165°	1249.6	1249.2	1249.0	1248.8	1248.6	1248.4	1250.1	1251.8	1253.5	1255.1	1255.3
167.5°	1259.3	1258.9	1258.9	1258.9	1258.9	1258.9	1260.5	1262.2	1263.9	1265.6	1265.6
170°	1267.8	1267.4	1267.4	1267.4	1267.4	1267.4	1269.1	1270.8	1272.5	1274.2	1274.2
172.5°	1272.7	1272.3	1272.5	1272.7	1272.9	1273.1	1274.8	1276.5	1278.2	1279.9	1279.8
175°	1277.5	1277.0	1277.3	1277.5	1277.7	1277.9	1279.4	1280.9	1282.3	1283.8	1283.7
177.5°	1279.4	1279.0	1279.2	1279.4	1279.6	1279.8	1281.5	1283.2	1284.9	1286.6	1286.4
180°	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7



TEST NUMBER: P831789

CATALOG NUMBER: S123RDIP-S1000D1025U950-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	3095.7	3095.7	3095.7	3095.7
2.5°	2750.5	2744.2	2741.6	2739.1
5°	2357.7	2338.0	2333.6	2329.1
7.5°	2023.9	2015.6	1988.3	1961.0
10°	1752.9	1727.5	1716.1	1704.6
12.5°	1526.3	1502.8	1499.0	1495.2
15°	1350.5	1334.0	1328.3	1322.6
17.5°	1235.0	1223.6	1216.6	1209.6
20°	1149.3	1141.1	1136.0	1130.9
22.5°	1084.0	1077.6	1073.8	1070.0
25°	1021.1	1011.6	1008.4	1005.3
27.5°	961.5	953.2	950.0	946.9
30°	905.6	898.6	894.2	889.8
32.5°	844.7	836.4	833.9	831.4
35°	790.8	785.7	783.1	780.6
37.5°	733.6	727.3	723.5	719.7
40°	684.8	681.6	679.7	677.8
42.5°	635.3	629.6	628.9	628.3
45°	585.8	580.1	578.8	577.5
47.5°	539.4	534.4	533.7	533.1
50°	488.0	481.1	476.0	470.9
52.5°	429.0	422.7	418.2	413.8
55°	375.1	368.1	364.3	360.5
57.5°	334.5	331.3	329.4	327.5
60°	301.5	299.5	298.3	297.0
62.5°	271.0	269.1	269.1	269.1
65°	243.1	241.2	239.3	237.4
67.5°	206.9	203.1	202.4	201.8
70°	163.1	157.4	156.8	156.1
72.5°	127.6	126.9	125.7	124.4
75°	105.3	104.1	104.1	104.1
77.5°	85.0	83.8	83.8	83.8
80°	65.4	64.7	65.4	66.0
82.5°	48.2	48.2	47.6	47.0
85°	31.1	30.5	30.5	30.5
87.5°	15.2	15.2	15.2	15.2
90°	27.3	27.7	28.1	28.6
92.5°	31.7	32.0	32.2	32.4
95°	36.2	36.2	36.2	36.2
97.5°	38.4	38.6	38.8	39.0
100°	39.4	39.6	39.8	40.0
102.5°	39.7	40.1	40.5	40.9
105°	40.6	41.1	41.5	41.9
107.5°	182.2	154.5	126.8	99.0
110°	352.6	322.4	292.1	261.9



TEST NUMBER: P831789

CATALOG NUMBER: S123RDIP-S1000D1025U950-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	497.4	497.0	496.5	496.1
115°	557.4	558.2	559.1	559.9
117.5°	610.7	610.9	611.1	611.3
120°	664.7	664.7	664.7	664.7
122.5°	716.4	716.6	716.8	717.0
125°	764.3	764.7	765.2	765.6
127.5°	814.5	814.1	813.6	813.2
130°	860.2	859.8	859.3	858.9
132.5°	902.7	902.1	901.4	900.8
135°	945.6	944.9	944.3	943.7
137.5°	985.9	985.5	985.0	984.6
140°	1022.1	1021.6	1021.2	1020.8
142.5°	1056.0	1055.4	1054.8	1054.1
145°	1088.4	1088.4	1088.4	1088.4
147.5°	1116.3	1115.3	1114.2	1113.2
150°	1143.6	1143.0	1142.4	1141.7
152.5°	1167.8	1166.7	1165.6	1164.6
155°	1189.3	1188.1	1186.8	1185.5
157.5°	1208.7	1207.0	1205.3	1203.6
160°	1225.2	1223.7	1222.2	1220.8
162.5°	1240.8	1239.5	1238.2	1236.9
165°	1253.8	1252.3	1250.8	1249.3
167.5°	1263.9	1262.2	1260.5	1258.9
170°	1272.5	1270.8	1269.1	1267.4
172.5°	1277.9	1276.0	1274.1	1272.2
175°	1282.0	1280.3	1278.6	1276.9
177.5°	1284.2	1282.1	1280.0	1277.9
180°	1281.7	1281.7	1281.7	1281.7

TEST NUMBER: P831789

CATALOG NUMBER: S123RDIP-S1000D1025U950-4F0-1E-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	13.04	13.86	14.00	14.83	16.09	17.71	18.53	18.67	19.49	20.75
	3H	14.26	14.99	15.23	15.97	17.25	19.21	19.94	20.18	20.91	22.19
	4H	14.65	15.34	15.63	16.31	17.60	19.70	20.39	20.68	21.36	22.65
	6H	14.93	15.56	15.92	16.55	17.85	20.01	20.64	21.00	21.63	22.93
	8H	15.01	15.62	16.01	16.62	17.92	20.09	20.69	21.09	21.69	22.99
	12H	15.06	15.64	16.07	16.63	17.95	20.12	20.69	21.12	21.68	23.01
4H	2H	13.77	14.46	14.76	15.43	16.72	17.70	18.39	18.69	19.37	20.66
	3H	15.13	15.71	16.13	16.71	18.02	19.36	19.93	20.36	20.94	22.24
	4H	15.59	16.11	16.59	17.11	18.44	19.97	20.49	20.97	21.49	22.82
	6H	15.96	16.40	16.97	17.43	18.75	20.40	20.85	21.42	21.88	23.20
	8H	16.08	16.50	17.10	17.52	18.86	20.53	20.95	21.55	21.97	23.31
	12H	16.16	16.53	17.19	17.57	18.91	20.59	20.97	21.63	22.00	23.35
8H	4H	15.90	16.32	16.92	17.34	18.68	19.93	20.35	20.95	21.37	22.71
	6H	16.37	16.71	17.41	17.77	19.11	20.43	20.77	21.47	21.83	23.17
	8H	16.56	16.86	17.61	17.91	19.26	20.61	20.92	21.66	21.96	23.32
	12H	16.70	16.96	17.75	18.00	19.40	20.73	21.00	21.78	22.03	23.43
12H	4H	15.91	16.29	16.95	17.32	18.67	19.88	20.26	20.92	21.29	22.63
	6H	16.42	16.73	17.47	17.77	19.13	20.40	20.71	21.45	21.75	23.11
	8H	16.64	16.91	17.69	17.95	19.35	20.59	20.86	21.65	21.90	23.30