

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: P831491

Luminaire Tested: S123DIP-S560D1195U927-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831491
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-17)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D1195U927-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

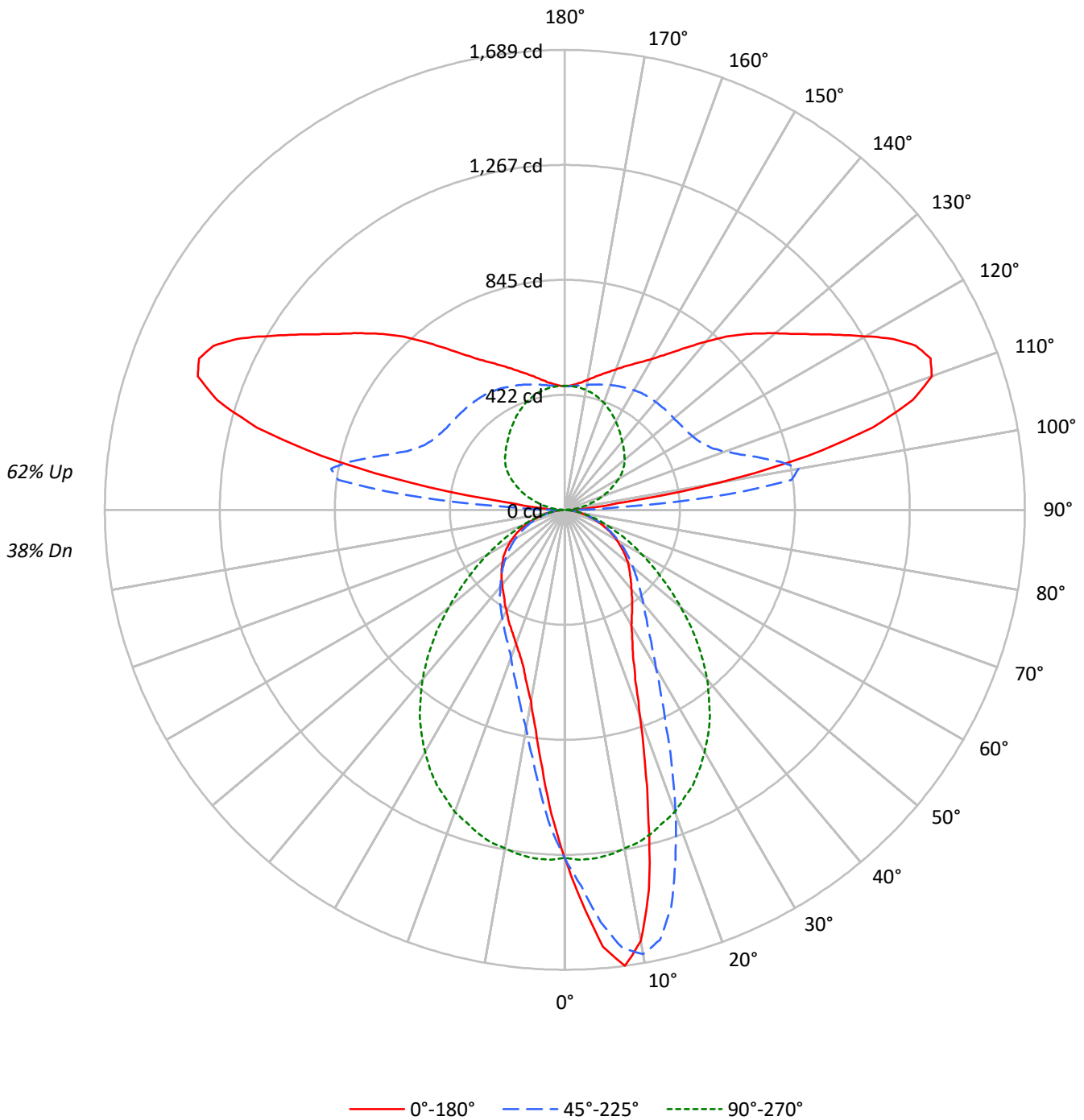
Lumens per Lamp: N/A
Luminaire Lumens: 5478.1 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 50.6
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	104	104	104	104	95	95	95	95	76	76	76	60	60	60	45	45	45	38				
1	95	91	88	84	86	83	80	77	67	65	63	53	52	51	40	39	38	32				
2	87	80	74	69	79	73	68	64	60	56	53	47	45	43	36	34	33	28				
3	80	71	64	58	72	65	59	54	53	49	45	42	39	37	32	30	29	24				
4	73	63	55	50	66	58	51	46	47	43	39	38	35	32	29	27	25	21				
5	67	56	49	43	61	52	45	40	43	38	34	34	31	28	26	24	22	19				
6	62	51	43	37	56	46	40	35	39	34	30	31	28	25	24	22	20	17				
7	58	46	38	33	52	42	36	31	35	30	26	28	25	22	22	20	18	15				
8	54	42	34	29	49	38	32	27	32	27	24	26	23	20	21	18	16	14				
9	50	38	31	26	45	35	29	25	30	25	21	24	21	18	19	17	15	13				
10	47	35	28	24	43	32	26	22	27	23	19	22	19	16	18	15	14	12				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	13764	13764	13764	13764	13764
5°	17407	16429	13887	11191	10283
10°	17575	18107	13795	8921	7795
15°	13238	16811	13700	7554	6593
20°	9223	13604	13526	6606	5987
25°	7033	10461	13227	6078	5616
30°	6084	8311	12751	5705	5317
35°	5645	7017	12202	5435	5106
40°	5344	6295	11431	5178	5036
45°	5167	5826	10450	4976	5004
50°	5077	5456	9291	4794	4978
55°	4889	5183	8150	4620	4999
60°	4712	4893	7025	4458	4917
65°	4429	4618	6059	4284	4821
70°	4088	4268	5155	3997	4538
75°	3701	3826	4417	3714	4146
80°	3050	3347	3496	3236	3496
85°	2421	2717	2569	2754	2779

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 11931 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.9	2.2
10°-20°	300.7	5.5
20°-30°	356.1	6.5
30°-40°	358.0	6.5
40°-50°	328.5	6.0
50°-60°	271.1	4.9
60°-70°	191.8	3.5
70°-80°	102.4	1.9
80°-90°	28.5	0.5
90°-100°	246.7	4.5
100°-110°	722.3	13.2
110°-120°	705.4	12.9
120°-130°	561.8	10.3
130°-140°	443.2	8.1
140°-150°	330.6	6.0
150°-160°	230.5	4.2
160°-170°	135.4	2.5
170°-180°	44.1	0.8
0°-30°	777.7	14.2
0°-40°	1135.7	20.7
0°-60°	1735.4	31.7
0°-90°	2058.0	37.6
90°-120°	1674.5	30.6
90°-150°	3010.1	54.9
90°-180°	3420.0	62.4
0°-180°	5478.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1279	1279	1279	1279	1279	
5°	1611	1520	1285	1036	952	153
15°	1188	1509	1229	678	592	328
25°	592	881	1114	512	473	279
35°	430	534	929	414	389	270
45°	339	383	686	327	329	263
55°	260	276	434	246	266	233
65°	174	181	238	168	189	173
75°	89	92	106	89	100	94
85°	20	22	21	22	22	22
90°	27	23	2	23	27	15
95°	107	546	31	546	107	174
105°	1171	740	107	740	1171	1168
115°	1424	566	189	566	1424	1388
125°	1123	528	262	528	1123	1016
135°	910	521	307	521	910	706
145°	712	514	351	514	712	452
155°	590	498	398	498	590	275
165°	514	477	435	477	514	147
175°	463	457	454	457	463	45
180°	455	455	455	455	455	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7
2.5°	1441.3	1439.8	1438.3	1430.9	1423.5	1419.9	1416.3	1405.7	1395.0	1383.1	1371.2
5°	1611.0	1615.1	1619.3	1614.5	1609.8	1595.2	1580.7	1561.4	1542.1	1520.5	1498.8
7.5°	1689.3	1691.6	1694.0	1691.1	1688.1	1684.2	1680.4	1663.2	1646.0	1623.7	1601.5
10°	1608.0	1613.3	1618.7	1630.2	1641.8	1654.9	1667.9	1665.5	1663.2	1656.6	1650.1
12.5°	1429.4	1435.9	1442.4	1465.6	1488.7	1518.4	1548.1	1573.6	1599.1	1616.9	1634.7
15°	1187.9	1206.0	1224.1	1245.2	1266.2	1309.8	1353.4	1407.1	1460.8	1508.6	1556.4
17.5°	978.4	985.3	992.1	1014.6	1037.2	1092.1	1147.0	1209.0	1271.0	1350.2	1429.4
20°	805.2	811.4	817.6	847.3	877.0	920.0	963.0	1032.7	1102.5	1187.6	1272.7
22.5°	676.4	686.2	696.0	712.6	729.2	770.5	811.7	873.7	935.7	1029.8	1123.8
25°	592.2	599.3	606.4	616.5	626.6	659.5	692.4	743.5	794.5	880.8	967.2
27.5°	534.6	537.6	540.5	550.6	560.7	582.1	603.4	647.3	691.3	764.5	837.8
30°	489.5	491.6	493.7	502.6	511.5	526.0	540.5	572.3	604.0	668.7	733.4
32.5°	458.1	459.6	461.0	467.9	474.7	485.1	495.4	518.6	541.7	595.1	648.5
35°	429.6	430.5	431.4	436.4	441.5	449.2	456.9	474.4	491.9	534.0	576.1
37.5°	404.7	405.9	407.0	410.0	413.0	419.8	426.6	440.6	454.5	486.8	519.2
40°	380.3	382.4	384.5	386.6	388.6	394.3	399.9	410.6	421.3	448.0	474.7
42.5°	359.6	361.6	363.7	364.6	365.5	368.8	372.0	381.8	391.6	411.5	431.4
45°	339.4	340.3	341.2	342.1	343.0	345.6	348.3	356.9	365.5	382.7	399.9
47.5°	321.0	321.0	321.0	321.6	322.2	324.6	326.9	333.2	339.4	352.7	366.1
50°	303.2	303.2	303.2	302.3	301.4	302.9	304.4	309.1	313.9	325.8	337.6
52.5°	281.8	281.8	281.8	282.1	282.4	282.4	282.4	286.6	290.7	301.4	312.1
55°	260.5	261.7	262.9	262.0	261.1	261.7	262.3	264.9	267.6	276.2	284.8
57.5°	239.1	239.7	240.3	240.0	239.7	240.0	240.3	242.7	245.1	251.6	258.1
60°	218.9	218.9	218.9	218.4	217.8	218.4	218.9	220.1	221.3	227.3	233.2
62.5°	196.4	196.7	197.0	197.3	197.6	197.0	196.4	197.9	199.4	203.8	208.3
65°	173.9	174.1	174.4	175.3	176.2	175.6	175.0	176.5	178.0	181.3	184.5
67.5°	153.7	153.1	152.5	152.8	153.1	154.0	154.9	155.2	155.5	159.0	162.6
70°	129.9	130.5	131.1	130.8	130.5	130.8	131.1	132.0	132.9	135.6	138.3
72.5°	108.6	108.9	109.2	109.2	109.2	109.8	110.4	111.3	112.1	113.6	115.1
75°	89.0	89.0	89.0	89.6	90.2	90.5	90.8	90.8	90.8	92.0	93.2
77.5°	67.6	69.1	70.6	70.3	70.0	70.6	71.2	72.1	73.0	73.6	74.2
80°	49.2	49.2	49.2	49.5	49.8	50.7	51.6	52.2	52.8	54.0	55.2
82.5°	31.4	31.7	32.0	32.9	33.8	34.4	35.0	35.9	36.8	36.8	36.8
85°	19.6	19.0	18.4	19.0	19.6	20.2	20.8	21.1	21.4	22.0	22.5
87.5°	9.5	9.5	9.5	9.5	9.5	9.8	10.1	10.1	10.1	10.1	10.1
90°	26.7	27.6	26.7	25.8	26.7	24.9	23.9	23.0	22.1	23.0	20.2
92.5°	48.8	50.6	49.7	53.4	55.2	61.7	70.9	91.1	127.9	171.2	189.6
95°	106.8	110.4	116.9	125.2	142.7	175.8	224.6	331.3	442.7	545.8	486.0
97.5°	219.1	229.2	251.3	286.2	347.9	452.8	574.3	761.2	867.9	839.4	626.8
100°	577.1	576.2	612.1	679.3	772.2	902.9	1010.6	1085.1	1052.9	871.6	589.1
102.5°	914.0	940.6	969.2	1018.9	1086.1	1156.9	1208.5	1192.8	1062.1	811.8	533.8
105°	1170.7	1175.3	1204.8	1239.8	1282.1	1306.0	1288.6	1196.5	1004.1	740.0	490.6
107.5°	1338.3	1348.4	1360.3	1376.9	1382.4	1357.6	1285.8	1141.3	921.3	676.5	459.3
110°	1434.0	1435.8	1437.7	1430.3	1404.5	1340.1	1224.1	1054.8	844.0	624.0	442.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1453.3	1452.4	1443.2	1416.5	1364.0	1276.6	1143.1	969.2	776.8	589.1	433.5
115°	1423.8	1419.2	1400.8	1360.3	1291.3	1191.0	1055.7	895.5	725.3	566.0	432.6
117.5°	1359.4	1353.0	1325.4	1280.3	1208.5	1104.5	980.2	838.5	691.2	550.4	433.5
120°	1274.7	1269.2	1247.1	1195.6	1122.9	1029.9	919.5	795.2	665.4	540.3	437.2
122.5°	1195.6	1188.2	1163.4	1118.3	1055.7	971.0	870.7	761.2	644.3	533.8	443.6
125°	1122.9	1116.4	1093.4	1052.9	994.0	920.4	832.0	731.7	626.8	528.3	450.1
127.5°	1060.3	1054.8	1033.6	998.6	945.2	877.1	796.1	705.0	610.2	525.5	457.4
130°	1008.8	1001.4	982.1	948.9	900.1	837.6	763.0	680.2	597.3	522.8	464.8
132.5°	958.1	953.5	937.0	903.8	858.7	799.8	731.7	657.2	585.4	521.9	470.3
135°	910.3	903.8	887.3	859.6	814.5	762.1	702.3	636.9	575.2	520.9	475.8
137.5°	859.6	854.1	840.3	811.8	773.1	726.2	672.8	617.6	566.0	519.1	479.5
140°	806.3	807.2	792.5	766.7	731.7	692.1	648.0	601.0	557.8	518.2	483.2
142.5°	756.6	757.5	744.6	722.5	694.0	660.8	624.0	585.4	550.4	516.3	486.0
145°	711.5	709.6	702.3	682.9	659.9	633.2	603.8	573.4	544.0	514.5	486.9
147.5°	672.8	671.9	664.5	650.7	632.3	613.0	588.1	563.3	537.5	511.7	486.9
150°	639.7	639.7	634.2	624.0	610.2	592.7	573.4	552.2	531.1	508.1	486.9
152.5°	612.1	612.1	609.3	600.1	590.0	576.2	559.6	542.1	523.7	503.5	484.1
155°	590.0	589.1	587.2	579.8	571.6	560.5	546.7	532.0	516.3	497.9	482.3
157.5°	568.8	568.8	567.0	561.4	554.1	544.9	533.8	520.9	508.1	493.3	479.5
160°	548.6	549.5	549.5	544.0	537.5	531.1	521.9	511.7	499.8	487.8	477.7
162.5°	530.1	531.1	531.1	526.5	522.8	517.3	509.0	500.7	491.5	482.3	474.0
165°	514.5	514.5	515.4	511.7	508.1	503.5	497.0	491.5	484.1	476.8	470.3
167.5°	498.9	498.9	499.8	497.0	495.2	491.5	487.8	483.2	476.8	471.2	466.6
170°	485.0	485.0	486.0	484.1	483.2	481.4	477.7	474.9	470.3	465.7	463.0
172.5°	472.2	473.1	474.9	473.1	473.1	472.2	469.4	467.6	463.9	461.1	460.2
175°	463.0	463.9	464.8	463.9	463.9	463.9	462.0	461.1	459.3	457.4	457.4
177.5°	456.5	456.5	458.4	457.4	458.4	458.4	457.4	456.5	455.6	454.7	455.6
180°	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7
2.5°	1367.7	1364.1	1351.1	1338.0	1323.2	1308.3	1297.4	1286.4	1270.1	1253.8	1240.4
5°	1482.2	1465.6	1438.0	1410.4	1373.0	1335.6	1310.4	1285.2	1251.4	1217.6	1190.6
7.5°	1573.0	1544.5	1505.9	1467.4	1418.4	1369.5	1323.2	1276.9	1225.3	1173.7	1131.5
10°	1630.8	1611.5	1567.0	1522.5	1457.0	1391.4	1326.7	1262.1	1195.6	1129.2	1073.4
12.5°	1636.5	1638.2	1597.3	1556.4	1482.2	1408.0	1329.4	1250.8	1167.1	1083.5	1018.5
15°	1586.9	1617.5	1594.9	1572.4	1497.6	1422.9	1326.1	1229.4	1133.0	1036.6	961.5
17.5°	1495.0	1560.5	1563.8	1567.0	1492.3	1417.5	1310.4	1203.3	1094.1	985.0	906.1
20°	1369.5	1466.2	1499.4	1532.6	1471.8	1411.0	1295.9	1180.8	1058.5	936.3	853.5
22.5°	1241.3	1358.8	1419.6	1480.4	1435.3	1390.2	1267.7	1145.2	1016.1	887.1	803.1
25°	1095.3	1223.5	1316.9	1410.4	1382.8	1355.2	1234.5	1113.7	976.4	839.0	753.3
27.5°	968.1	1098.3	1211.0	1323.8	1317.8	1311.9	1192.0	1072.2	931.6	790.9	708.2
30°	854.7	976.1	1102.2	1228.2	1242.8	1257.3	1141.6	1025.9	885.0	744.1	664.3
32.5°	754.4	860.4	995.6	1130.9	1159.4	1187.9	1083.5	979.0	839.6	700.2	623.3
35°	672.3	768.4	903.7	1039.0	1074.6	1110.2	1019.4	928.6	792.7	656.8	583.6
37.5°	599.6	680.0	812.0	944.0	987.6	1031.2	950.0	868.7	741.4	614.1	546.8
40°	539.4	604.0	725.4	846.7	897.1	947.6	880.5	813.5	692.7	572.0	510.0
42.5°	488.9	546.5	656.5	766.6	815.0	863.3	806.7	750.0	642.6	535.2	478.5
45°	445.9	491.9	591.9	691.8	737.8	783.8	735.2	686.5	591.9	497.2	444.4
47.5°	405.6	445.0	530.5	615.9	656.8	697.8	659.8	621.8	541.7	461.6	413.9
50°	369.4	401.1	475.9	550.6	586.2	621.8	588.3	554.8	488.9	423.1	381.5
52.5°	337.9	363.7	426.3	488.9	519.5	550.0	521.3	492.5	440.3	388.1	351.9
55°	306.8	328.7	383.0	437.3	458.1	478.8	456.6	434.3	392.2	350.1	319.5
57.5°	277.7	297.3	341.8	386.3	402.3	418.3	398.1	378.0	346.2	314.5	289.0
60°	249.2	265.2	302.3	339.4	349.2	359.0	342.7	326.3	304.1	281.8	259.0
62.5°	222.8	237.3	264.9	292.5	299.0	305.6	293.1	280.7	263.7	246.8	229.0
65°	195.5	206.5	229.0	251.6	255.7	259.9	248.9	237.9	225.2	212.4	199.4
67.5°	170.3	178.0	196.4	214.8	215.1	215.4	206.5	197.6	190.5	183.3	173.0
70°	145.7	153.1	165.2	177.4	177.7	178.0	170.9	163.8	158.4	153.1	145.4
72.5°	120.5	125.8	135.0	144.2	143.6	143.0	138.5	134.1	129.9	125.8	120.2
75°	97.6	102.1	108.3	114.5	112.7	111.0	108.6	106.2	102.7	99.1	95.5
77.5°	76.8	79.5	83.1	86.6	85.4	84.3	82.2	80.1	77.4	74.8	73.3
80°	56.4	57.6	59.9	62.3	61.7	61.1	58.7	56.4	55.8	55.2	53.1
82.5°	38.3	39.8	40.3	40.9	40.6	40.3	38.6	36.8	36.2	35.6	35.3
85°	22.8	23.1	23.4	23.7	22.8	22.0	21.4	20.8	20.8	20.8	20.5
87.5°	10.4	10.7	10.7	10.7	10.4	10.1	9.5	8.9	9.2	9.5	9.5
90°	17.5	14.7	12.0	10.1	8.3	5.5	3.7	1.8	3.7	5.5	8.3
92.5°	141.7	93.0	63.5	46.9	37.7	29.5	20.2	13.8	20.2	29.5	37.7
95°	335.0	197.9	119.7	83.8	59.8	44.2	34.1	31.3	34.1	44.2	59.8
97.5°	372.8	213.5	136.2	96.6	72.7	58.9	50.6	49.7	50.6	58.9	72.7
100°	347.0	210.8	146.3	110.4	88.4	75.5	69.0	68.1	69.0	75.5	88.4
102.5°	324.9	214.5	158.3	126.1	106.8	94.8	89.3	87.4	89.3	94.8	106.8
105°	316.6	221.8	172.1	143.6	126.1	115.0	109.5	106.8	109.5	115.0	126.1
107.5°	314.8	233.8	189.6	162.9	146.3	135.3	129.8	127.0	129.8	135.3	146.3
110°	319.4	249.4	208.0	182.2	166.6	156.5	151.9	149.1	151.9	156.5	166.6

TEST NUMBER: P831491

CATALOG NUMBER: S123DIP-S560D1195U927-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	328.6	265.1	227.3	202.5	186.8	176.7	172.1	169.4	172.1	176.7	186.8
115°	338.7	282.6	247.6	222.7	207.1	197.9	192.4	188.7	192.4	197.9	207.1
117.5°	351.6	301.0	266.0	243.0	225.5	217.2	212.6	208.0	212.6	217.2	225.5
120°	366.3	318.5	285.3	262.3	244.8	235.6	231.0	228.3	231.0	235.6	244.8
122.5°	380.1	336.9	304.7	279.8	263.2	253.1	248.5	245.7	248.5	253.1	263.2
125°	394.8	354.4	322.1	297.3	279.8	269.7	264.2	262.3	264.2	269.7	279.8
127.5°	406.8	370.0	338.7	313.9	294.5	284.4	278.0	275.2	278.0	284.4	294.5
130°	418.8	383.8	353.4	328.6	309.3	298.2	289.9	287.2	289.9	298.2	309.3
132.5°	429.8	395.8	366.3	342.4	323.1	309.3	300.0	296.4	300.0	309.3	323.1
135°	439.0	407.7	379.2	354.4	335.0	321.2	311.1	307.4	311.1	321.2	335.0
137.5°	446.4	416.0	388.4	365.4	346.1	331.3	321.2	317.5	321.2	331.3	346.1
140°	451.9	424.3	397.6	374.6	356.2	341.5	332.3	327.7	332.3	341.5	356.2
142.5°	457.4	430.7	405.0	383.8	365.4	352.5	342.4	338.7	342.4	352.5	365.4
145°	461.1	436.3	412.3	391.2	375.5	361.7	353.4	350.7	353.4	361.7	375.5
147.5°	463.9	440.9	418.8	400.4	384.7	372.8	364.5	362.6	364.5	372.8	384.7
150°	464.8	445.5	424.3	407.7	394.8	382.9	375.5	374.6	375.5	382.9	394.8
152.5°	466.6	448.2	430.7	415.1	404.1	393.9	386.6	386.6	386.6	393.9	404.1
155°	466.6	451.9	436.3	423.4	413.3	404.1	398.5	398.5	398.5	404.1	413.3
157.5°	467.6	453.8	440.9	430.7	421.5	413.3	408.7	407.7	408.7	413.3	421.5
160°	467.6	456.5	445.5	436.3	429.8	422.5	418.8	418.8	418.8	422.5	429.8
162.5°	466.6	457.4	448.2	440.9	435.3	429.8	427.1	427.1	427.1	429.8	435.3
165°	464.8	458.4	451.0	444.6	440.9	436.3	434.4	435.3	434.4	436.3	440.9
167.5°	463.9	458.4	452.8	448.2	445.5	441.8	440.9	441.8	440.9	441.8	445.5
170°	461.1	457.4	452.8	451.0	449.2	446.4	445.5	447.3	445.5	446.4	449.2
172.5°	460.2	457.4	453.8	452.8	451.9	450.1	450.1	451.0	450.1	450.1	451.9
175°	458.4	456.5	454.7	453.8	453.8	451.9	452.8	453.8	452.8	451.9	453.8
177.5°	457.4	455.6	454.7	454.7	454.7	453.8	454.7	455.6	454.7	453.8	454.7
180°	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7



TEST NUMBER: P831491

CATALOG NUMBER: S123DIP-S560D1195U927-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7	1278.7
2.5°	1227.1	1215.5	1203.9	1195.0	1186.1	1171.0	1155.9	1152.3	1148.7	1143.7	1138.6
5°	1163.6	1135.1	1106.6	1081.1	1055.6	1035.7	1015.8	1002.8	989.7	980.2	970.7
7.5°	1089.4	1046.7	1004.0	973.7	943.4	914.7	885.9	876.7	867.5	855.0	842.6
10°	1017.6	970.4	923.3	883.8	844.3	816.2	788.0	776.7	765.4	749.7	734.0
12.5°	953.5	901.9	850.3	810.5	770.8	743.5	716.2	699.9	683.5	674.6	665.7
15°	886.5	831.3	776.1	739.3	702.5	677.9	653.3	639.0	624.8	616.2	607.6
17.5°	827.1	772.5	718.0	682.7	647.3	624.8	602.3	589.8	577.3	570.8	564.3
20°	770.8	717.4	664.0	629.5	595.1	576.7	558.3	550.3	542.3	537.0	531.6
22.5°	719.1	666.6	614.1	584.7	555.4	540.5	525.7	520.1	514.4	510.0	505.5
25°	667.5	620.6	573.8	548.9	523.9	511.8	499.6	494.0	488.3	483.9	479.4
27.5°	625.4	580.6	535.8	514.4	493.1	483.6	474.1	469.6	465.2	461.0	456.9
30°	584.5	544.4	504.4	486.0	467.6	459.0	450.4	445.9	441.5	437.6	433.7
32.5°	546.5	512.1	477.6	460.7	443.8	436.7	429.6	424.2	418.9	415.9	413.0
35°	510.3	479.4	448.6	434.6	420.7	413.6	406.4	402.0	397.5	395.2	392.8
37.5°	479.4	451.8	424.2	410.9	397.5	390.7	383.9	380.0	376.2	375.3	374.4
40°	448.0	424.2	400.5	387.5	374.4	368.5	362.5	360.2	357.8	357.2	356.6
42.5°	421.9	398.7	375.6	363.7	351.9	346.8	341.8	340.6	339.4	340.3	341.2
45°	391.6	372.3	353.0	342.1	331.1	326.9	322.8	321.9	321.0	322.8	324.6
47.5°	366.1	348.3	330.5	320.1	309.7	306.8	303.8	303.5	303.2	305.6	308.0
50°	340.0	322.8	305.6	297.3	289.0	286.3	283.6	284.5	285.4	289.3	293.1
52.5°	315.7	299.6	283.6	275.9	268.2	266.4	264.6	266.7	268.8	272.9	277.1
55°	289.0	274.4	259.9	254.0	248.0	246.2	244.5	248.6	252.8	256.6	260.5
57.5°	263.4	250.7	237.9	232.6	227.3	227.0	226.7	230.5	234.4	238.5	242.7
60°	236.2	225.5	214.8	210.6	206.5	207.1	207.7	212.1	216.6	219.8	223.1
62.5°	211.2	202.3	193.4	189.6	185.7	187.2	188.7	193.1	197.6	201.4	205.3
65°	186.3	178.9	171.5	168.8	166.1	168.2	170.3	174.1	178.0	180.7	183.3
67.5°	162.6	156.3	150.1	148.0	146.0	148.0	150.1	154.0	157.8	160.5	163.2
70°	137.7	132.6	127.6	126.1	124.6	127.0	129.4	132.6	135.9	138.5	141.2
72.5°	114.5	110.7	106.8	106.5	106.2	108.3	110.4	113.6	116.9	118.7	120.5
75°	92.0	89.9	87.8	87.5	87.2	89.3	91.4	93.2	94.9	96.4	97.9
77.5°	71.8	70.0	68.2	68.5	68.8	70.3	71.8	73.6	75.4	76.2	77.1
80°	51.0	50.4	49.8	50.4	51.0	52.2	53.4	54.6	55.8	56.4	57.0
82.5°	35.0	34.4	33.8	34.7	35.6	36.5	37.4	38.3	39.2	39.5	39.8
85°	20.2	21.1	22.0	22.0	22.0	22.3	22.5	22.8	23.1	22.8	22.5
87.5°	9.5	9.8	10.1	10.1	10.1	10.4	10.7	10.7	10.7	10.4	10.1
90°	10.1	12.0	14.7	17.5	20.2	23.0	22.1	23.0	23.9	24.9	26.7
92.5°	46.9	63.5	93.0	141.7	189.6	171.2	127.9	91.1	70.9	61.7	55.2
95°	83.8	119.7	197.9	335.0	486.0	545.8	442.7	331.3	224.6	175.8	142.7
97.5°	96.6	136.2	213.5	372.8	626.8	839.4	867.9	761.2	574.3	452.8	347.9
100°	110.4	146.3	210.8	347.0	589.1	871.6	1052.9	1085.1	1010.6	902.9	772.2
102.5°	126.1	158.3	214.5	324.9	533.8	811.8	1062.1	1192.8	1208.5	1156.9	1086.1
105°	143.6	172.1	221.8	316.6	490.6	740.0	1004.1	1196.5	1288.6	1306.0	1282.1
107.5°	162.9	189.6	233.8	314.8	459.3	676.5	921.3	1141.3	1285.8	1357.6	1382.4
110°	182.2	208.0	249.4	319.4	442.7	624.0	844.0	1054.8	1224.1	1340.1	1404.5



TEST NUMBER: P831491

CATALOG NUMBER: S123DIP-S560D1195U927-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	202.5	227.3	265.1	328.6	433.5	589.1	776.8	969.2	1143.1	1276.6	1364.0
115°	222.7	247.6	282.6	338.7	432.6	566.0	725.3	895.5	1055.7	1191.0	1291.3
117.5°	243.0	266.0	301.0	351.6	433.5	550.4	691.2	838.5	980.2	1104.5	1208.5
120°	262.3	285.3	318.5	366.3	437.2	540.3	665.4	795.2	919.5	1029.9	1122.9
122.5°	279.8	304.7	336.9	380.1	443.6	533.8	644.3	761.2	870.7	971.0	1055.7
125°	297.3	322.1	354.4	394.8	450.1	528.3	626.8	731.7	832.0	920.4	994.0
127.5°	313.9	338.7	370.0	406.8	457.4	525.5	610.2	705.0	796.1	877.1	945.2
130°	328.6	353.4	383.8	418.8	464.8	522.8	597.3	680.2	763.0	837.6	900.1
132.5°	342.4	366.3	395.8	429.8	470.3	521.9	585.4	657.2	731.7	799.8	858.7
135°	354.4	379.2	407.7	439.0	475.8	520.9	575.2	636.9	702.3	762.1	814.5
137.5°	365.4	388.4	416.0	446.4	479.5	519.1	566.0	617.6	672.8	726.2	773.1
140°	374.6	397.6	424.3	451.9	483.2	518.2	557.8	601.0	648.0	692.1	731.7
142.5°	383.8	405.0	430.7	457.4	486.0	516.3	550.4	585.4	624.0	660.8	694.0
145°	391.2	412.3	436.3	461.1	486.9	514.5	544.0	573.4	603.8	633.2	659.9
147.5°	400.4	418.8	440.9	463.9	486.9	511.7	537.5	563.3	588.1	613.0	632.3
150°	407.7	424.3	445.5	464.8	486.9	508.1	531.1	552.2	573.4	592.7	610.2
152.5°	415.1	430.7	448.2	466.6	484.1	503.5	523.7	542.1	559.6	576.2	590.0
155°	423.4	436.3	451.9	466.6	482.3	497.9	516.3	532.0	546.7	560.5	571.6
157.5°	430.7	440.9	453.8	467.6	479.5	493.3	508.1	520.9	533.8	544.9	554.1
160°	436.3	445.5	456.5	467.6	477.7	487.8	499.8	511.7	521.9	531.1	537.5
162.5°	440.9	448.2	457.4	466.6	474.0	482.3	491.5	500.7	509.0	517.3	522.8
165°	444.6	451.0	458.4	464.8	470.3	476.8	484.1	491.5	497.0	503.5	508.1
167.5°	448.2	452.8	458.4	463.9	466.6	471.2	476.8	483.2	487.8	491.5	495.2
170°	451.0	452.8	457.4	461.1	463.0	465.7	470.3	474.9	477.7	481.4	483.2
172.5°	452.8	453.8	457.4	460.2	460.2	461.1	463.9	467.6	469.4	472.2	473.1
175°	453.8	454.7	456.5	458.4	457.4	457.4	459.3	461.1	462.0	463.9	463.9
177.5°	454.7	454.7	455.6	457.4	455.6	454.7	455.6	456.5	457.4	458.4	458.4
180°	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7



TEST NUMBER: P831491

CATALOG NUMBER: S123DIP-S560D1195U927-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1278.7	1278.7	1278.7	1278.7
2.5°	1136.6	1134.5	1126.2	1117.9
5°	963.6	956.5	954.1	951.7
7.5°	842.0	841.4	828.9	816.5
10°	734.9	735.8	724.5	713.2
12.5°	658.3	650.9	650.0	649.1
15°	600.8	593.9	592.8	591.6
17.5°	560.1	556.0	554.8	553.6
20°	529.3	526.9	524.8	522.7
22.5°	502.6	499.6	497.8	496.0
25°	476.8	474.1	473.5	472.9
27.5°	453.6	450.4	450.4	450.4
30°	431.7	429.6	428.7	427.8
32.5°	411.2	409.4	409.4	409.4
35°	391.9	391.0	389.8	388.6
37.5°	374.4	374.4	373.8	373.2
40°	357.5	358.4	358.4	358.4
42.5°	342.1	343.0	343.0	343.0
45°	326.0	327.5	328.1	328.7
47.5°	310.3	312.7	313.3	313.9
50°	294.9	296.7	297.0	297.3
52.5°	279.2	281.2	282.7	284.2
55°	262.6	264.6	265.5	266.4
57.5°	244.8	246.8	247.1	247.4
60°	225.2	227.3	227.8	228.4
62.5°	206.5	207.7	208.3	208.9
65°	185.1	186.9	188.1	189.3
67.5°	164.7	166.1	166.1	166.1
70°	141.8	142.4	143.3	144.2
72.5°	120.7	121.0	121.0	121.0
75°	98.5	99.1	99.4	99.7
77.5°	77.4	77.7	77.7	77.7
80°	56.7	56.4	56.4	56.4
82.5°	38.9	38.0	38.0	38.0
85°	22.3	22.0	22.3	22.5
87.5°	10.1	10.1	10.1	10.1
90°	25.8	26.7	27.6	26.7
92.5°	53.4	49.7	50.6	48.8
95°	125.2	116.9	110.4	106.8
97.5°	286.2	251.3	229.2	219.1
100°	679.3	612.1	576.2	577.1
102.5°	1018.9	969.2	940.6	914.0
105°	1239.8	1204.8	1175.3	1170.7
107.5°	1376.9	1360.3	1348.4	1338.3
110°	1430.3	1437.7	1435.8	1434.0



TEST NUMBER: P831491

CATALOG NUMBER: S123DIP-S560D1195U927-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	1416.5	1443.2	1452.4	1453.3
115°	1360.3	1400.8	1419.2	1423.8
117.5°	1280.3	1325.4	1353.0	1359.4
120°	1195.6	1247.1	1269.2	1274.7
122.5°	1118.3	1163.4	1188.2	1195.6
125°	1052.9	1093.4	1116.4	1122.9
127.5°	998.6	1033.6	1054.8	1060.3
130°	948.9	982.1	1001.4	1008.8
132.5°	903.8	937.0	953.5	958.1
135°	859.6	887.3	903.8	910.3
137.5°	811.8	840.3	854.1	859.6
140°	766.7	792.5	807.2	806.3
142.5°	722.5	744.6	757.5	756.6
145°	682.9	702.3	709.6	711.5
147.5°	650.7	664.5	671.9	672.8
150°	624.0	634.2	639.7	639.7
152.5°	600.1	609.3	612.1	612.1
155°	579.8	587.2	589.1	590.0
157.5°	561.4	567.0	568.8	568.8
160°	544.0	549.5	549.5	548.6
162.5°	526.5	531.1	531.1	530.1
165°	511.7	515.4	514.5	514.5
167.5°	497.0	499.8	498.9	498.9
170°	484.1	486.0	485.0	485.0
172.5°	473.1	474.9	473.1	472.2
175°	463.9	464.8	463.9	463.0
177.5°	457.4	458.4	456.5	456.5
180°	454.7	454.7	454.7	454.7



TEST NUMBER: P831491

CATALOG NUMBER: S123DIP-S560D1195U927-4F0-1E-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	11.39	12.13	12.46	13.19	14.63	13.63	14.36	14.69	15.42	16.87
	3H	13.03	13.69	14.10	14.76	16.22	15.04	15.70	16.12	16.77	18.23
	4H	13.60	14.22	14.68	15.30	16.76	15.49	16.11	16.57	17.18	18.65
	6H	13.96	14.54	15.06	15.61	17.09	15.76	16.33	16.85	17.41	18.88
	8H	14.06	14.60	15.15	15.69	17.17	15.82	16.36	16.91	17.45	18.92
	12H	14.10	14.62	15.20	15.70	17.20	15.83	16.35	16.93	17.43	18.93
4H	2H	11.95	12.58	13.04	13.65	15.11	13.78	14.40	14.87	15.47	16.94
	3H	13.77	14.29	14.87	15.39	16.87	15.38	15.90	16.48	17.00	18.48
	4H	14.46	14.94	15.56	16.03	17.53	15.96	16.44	17.07	17.53	19.03
	6H	14.93	15.34	16.04	16.45	17.94	16.36	16.77	17.47	17.88	19.37
	8H	15.06	15.45	16.17	16.55	18.06	16.47	16.85	17.58	17.96	19.46
	12H	15.13	15.47	16.25	16.59	18.10	16.51	16.85	17.64	17.97	19.48
8H	4H	14.72	15.10	15.83	16.20	17.71	16.06	16.44	17.17	17.55	19.05
	6H	15.30	15.62	16.43	16.76	18.27	16.56	16.87	17.69	18.02	19.52
	8H	15.51	15.78	16.65	16.91	18.44	16.74	17.01	17.87	18.14	19.66
	12H	15.63	15.87	16.77	16.99	18.56	16.83	17.07	17.97	18.20	19.76
12H	4H	14.71	15.06	15.84	16.18	17.69	16.03	16.37	17.15	17.49	19.00
	6H	15.35	15.63	16.49	16.76	18.28	16.57	16.85	17.71	17.97	19.50
	8H	15.58	15.82	16.72	16.95	18.51	16.77	17.01	17.91	18.13	19.69