

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: NEO-RAY

Report Number: P199413

Luminaire Tested: **S122-DIW-U2-2-40-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199413  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P27883 P27986)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122-DIW-U2-2-40-0048-1D-UDD-1-NA-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT WALL LED LUMINAIRE  
UPLIGHT LL2-4000K, NO LENS  
DOWNLIGHT LL2-4000K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

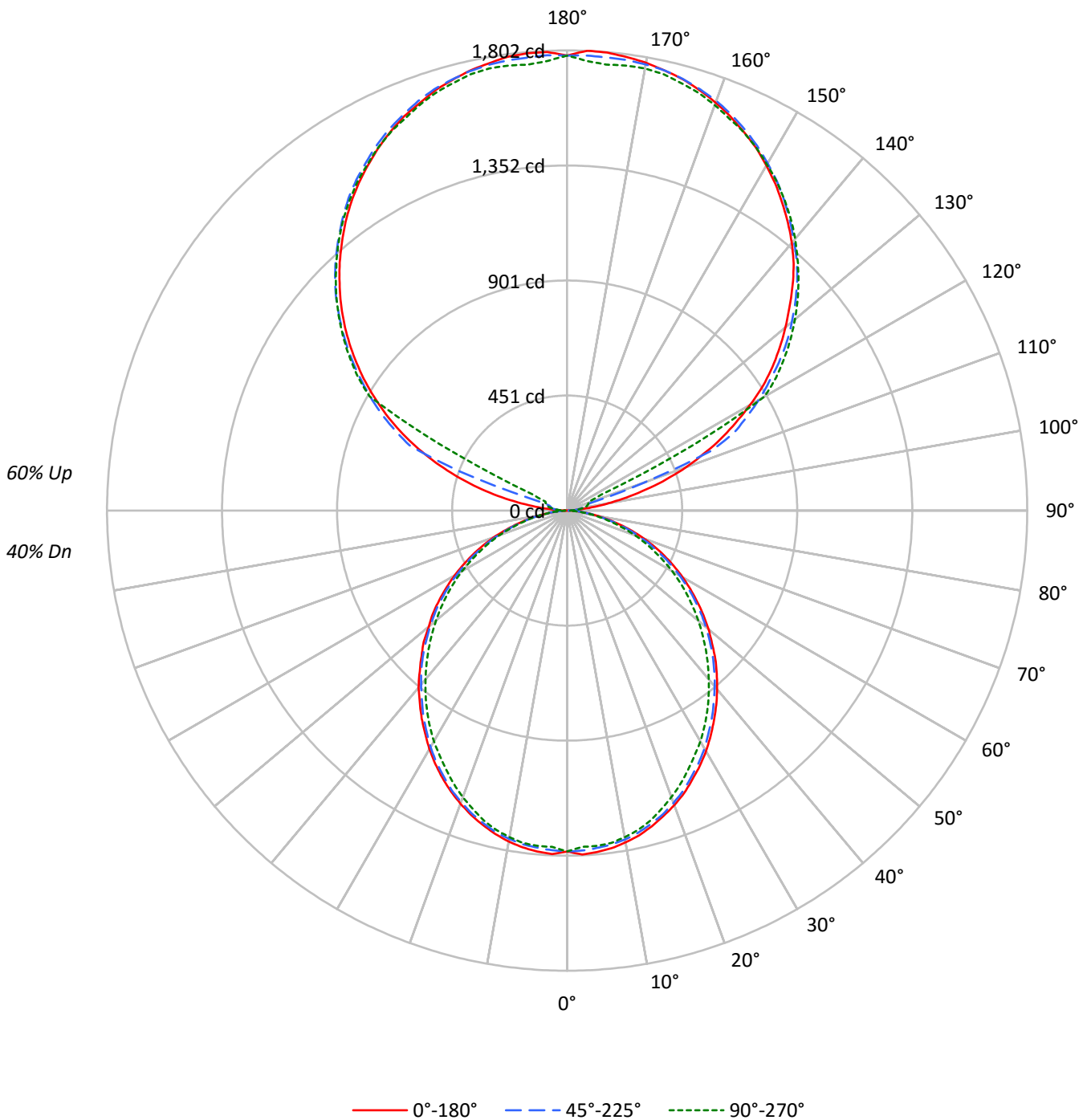
Lumens per Lamp: N/A  
Luminaire Lumens: 8491.6 lumens  
Efficiency: N/A  
Efficacy: 105.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.17 / 1.31  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4.08' x H: 0.38')  
CIE Type: General Diffuse

Input Watts (W): 80.5  
Input Voltage (V): NR  
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: 25 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	0
RCR																		
0	105	105	105	105	96	96	96	96	78	78	78	62	62	62	47	47	47	40
1	96	91	88	84	87	83	80	77	68	66	64	55	53	52	42	41	40	34
2	87	80	74	69	79	73	68	63	60	56	53	48	45	43	37	35	34	29
3	79	70	63	57	72	64	58	53	53	48	45	42	39	37	33	31	29	24
4	73	62	54	48	66	57	50	45	47	42	38	38	34	31	29	27	25	21
5	67	55	47	41	60	51	44	38	42	37	33	34	30	27	26	24	22	18
6	61	49	41	36	56	45	38	33	38	32	28	31	27	24	24	21	19	16
7	57	45	37	31	51	41	34	29	34	29	25	28	24	21	22	19	17	14
8	53	40	33	28	48	37	30	26	31	26	22	25	21	19	20	17	15	13
9	49	37	29	24	44	34	27	23	28	23	20	23	19	17	18	16	14	11
10	46	34	27	22	42	31	25	20	26	21	18	21	18	15	17	14	12	10

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

	0°	90°	180°
0°	21110	21110	21110
5°	21136	17486	21103
10°	20850	14932	20801
15°	20455	12844	20374
20°	19990	11051	19889
25°	19434	9538	19330
30°	18869	8290	18708
35°	18183	7174	18016
40°	17513	6170	17354
45°	16813	5279	16516
50°	16026	4477	15682
55°	15148	3749	14897
60°	14254	3074	13888
65°	13169	2414	12716
70°	11816	1815	11244
75°	9867	1222	9207
80°	7354	711	6678
85°	4568	281	3842



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.8	1.5
10°-20°	356.2	4.2
20°-30°	525.4	6.2
30°-40°	612.7	7.2
40°-50°	614.0	7.2
50°-60°	537.1	6.3
60°-70°	395.2	4.7
70°-80°	214.2	2.5
80°-90°	54.9	0.6
90°-100°	44.2	0.5
100°-110°	200.1	2.4
110°-120°	581.6	6.8
120°-130°	908.8	10.7
130°-140°	979.7	11.5
140°-150°	925.9	10.9
150°-160°	755.0	8.9
160°-170°	491.4	5.8
170°-180°	169.3	2.0
0°-30°	1007.5	11.9
0°-40°	1620.2	19.1
0°-60°	2771.4	32.6
0°-90°	3435.6	40.5
90°-120°	825.9	9.7
90°-150°	3640.3	42.9
90°-180°	5056.0	59.5
0°-180°	8491.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1335	1335	1335	1335	1335	
5°	1342	1326	1318	1325	1340	127
15°	1280	1270	1257	1268	1275	361
25°	1161	1150	1120	1147	1155	535
35°	1002	989	957	982	993	627
45°	821	806	767	798	806	632
55°	621	610	573	599	611	556
65°	421	405	376	392	407	417
75°	217	206	188	193	202	231
85°	52	48	41	42	43	58
90°	2	5	7	6	1	5
95°	43	35	40	41	75	61
105°	321	68	83	70	378	341
115°	664	720	147	744	710	654
125°	982	1013	1037	1029	1006	875
135°	1249	1274	1281	1285	1260	963
145°	1469	1482	1484	1493	1474	920
155°	1636	1646	1635	1648	1637	755
165°	1749	1750	1732	1747	1745	494
175°	1800	1781	1753	1781	1797	171
180°	1782	1782	1782	1782	1782	



TEST NUMBER: P199413

CATALOG NUMBER: S122-DIW-U2-2-40-0048-1D-UDD-1-NA-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7
2.5°	1348.2	1329.6	1332.7	1328.5	1318.2	1327.5	1331.6	1328.5	1346.1
5°	1342.0	1323.4	1326.5	1321.3	1318.2	1321.3	1325.4	1321.3	1339.9
7.5°	1333.7	1313.1	1319.3	1316.2	1313.1	1315.1	1318.2	1311.0	1330.6
10°	1319.3	1298.6	1307.9	1301.7	1298.6	1300.7	1305.8	1295.5	1316.2
12.5°	1302.7	1282.1	1291.4	1284.2	1281.1	1281.1	1290.3	1279.0	1297.6
15°	1280.0	1263.5	1269.7	1262.5	1257.3	1260.4	1267.6	1259.4	1274.9
17.5°	1254.2	1239.8	1247.0	1235.6	1226.3	1233.6	1243.9	1234.6	1250.1
20°	1227.4	1210.9	1218.1	1202.6	1194.3	1200.5	1214.0	1206.7	1221.2
22.5°	1197.4	1182.0	1188.2	1167.5	1159.2	1164.4	1184.0	1176.8	1190.2
25°	1161.3	1148.9	1150.0	1129.3	1120.0	1126.2	1146.9	1142.7	1155.1
27.5°	1126.2	1113.8	1114.9	1091.1	1080.8	1089.1	1109.7	1106.6	1118.0
30°	1088.0	1076.7	1075.6	1051.9	1043.6	1048.8	1069.4	1069.4	1078.7
32.5°	1045.7	1036.4	1031.2	1009.6	1001.3	1007.5	1025.1	1028.1	1035.4
35°	1002.3	996.1	988.9	968.3	956.9	965.2	981.7	985.8	993.1
37.5°	959.0	951.8	943.5	922.9	910.5	920.8	935.2	942.5	947.6
40°	913.6	908.4	899.1	878.5	863.0	873.3	889.8	898.1	905.3
42.5°	867.1	864.0	852.7	831.0	815.5	826.9	844.4	851.6	854.7
45°	820.7	816.5	806.2	783.5	767.0	779.4	798.0	805.2	806.2
47.5°	769.0	770.1	757.7	735.0	718.5	730.9	747.4	757.7	761.8
50°	722.6	723.6	709.2	686.5	669.9	679.2	698.9	709.2	707.1
52.5°	673.0	676.1	660.7	637.9	621.4	630.7	650.3	661.7	662.7
55°	621.4	626.6	610.1	587.4	572.9	582.2	598.7	612.1	611.1
57.5°	571.9	576.0	559.5	538.8	524.4	532.7	547.1	564.7	560.5
60°	522.3	526.5	508.9	488.3	475.9	480.0	496.5	511.0	508.9
62.5°	471.8	475.9	457.3	438.7	424.3	430.5	444.9	462.5	457.3
65°	421.2	424.3	404.7	388.1	375.7	381.9	392.3	410.8	406.7
67.5°	370.6	372.7	355.1	339.6	329.3	332.4	341.7	357.2	355.1
70°	320.0	322.1	305.6	291.1	281.8	284.9	292.1	306.6	304.5
72.5°	268.4	271.5	255.0	241.6	232.3	235.4	240.5	253.9	250.8
75°	216.8	218.8	206.5	196.1	187.9	188.9	193.0	203.4	202.3
77.5°	169.3	174.5	161.0	151.7	145.6	146.6	151.7	156.9	154.8
80°	122.8	129.0	119.7	112.5	107.4	106.3	110.5	114.6	111.5
82.5°	86.7	87.7	81.6	76.4	71.2	71.2	74.3	77.4	74.3
85°	51.6	53.7	48.5	44.4	41.3	40.3	42.3	45.4	43.4
87.5°	24.8	25.8	20.6	18.6	15.5	14.5	15.5	17.5	17.5
90°	2.1	5.2	5.2	6.2	7.2	7.2	6.2	6.2	1.0
92.5°	6.2	14.5	14.5	17.5	18.6	21.7	24.8	25.8	27.9
95°	43.4	31.0	35.1	38.2	40.3	43.4	41.3	38.2	75.4
97.5°	97.0	39.2	49.5	51.6	54.7	55.7	55.7	43.4	137.3
100°	162.1	45.4	58.8	67.1	69.2	69.2	63.0	97.0	211.6
102.5°	238.5	202.3	64.0	74.3	78.5	75.4	67.1	329.3	294.2
105°	321.0	364.4	68.1	78.5	82.6	80.5	70.2	405.7	377.8
107.5°	407.8	441.8	72.3	82.6	86.7	83.6	85.7	484.1	461.4
110°	494.5	523.4	324.1	85.7	89.8	85.7	449.0	563.6	545.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	577.0	607.0	609.0	90.8	91.9	98.1	667.9	644.1	628.7
115°	663.8	688.5	720.5	419.1	146.6	461.4	744.3	723.6	710.2
117.5°	743.2	767.0	791.8	737.0	561.6	802.1	817.6	802.1	788.7
120°	826.9	850.6	866.1	890.9	892.9	892.9	889.8	877.4	863.0
122.5°	909.4	924.9	937.3	962.1	970.3	961.1	959.0	947.6	936.3
125°	981.7	996.1	1012.7	1029.2	1037.4	1028.1	1029.2	1014.7	1006.5
127.5°	1049.8	1062.2	1083.9	1094.2	1102.5	1092.2	1096.3	1080.8	1074.6
130°	1115.9	1124.2	1148.9	1157.2	1164.4	1158.2	1161.3	1144.8	1139.6
132.5°	1180.9	1192.3	1212.9	1216.0	1224.3	1215.0	1226.3	1203.6	1201.6
135°	1249.1	1258.3	1273.8	1274.9	1281.1	1275.9	1285.2	1266.6	1260.4
137.5°	1313.1	1317.2	1330.6	1326.5	1335.8	1327.5	1340.9	1322.3	1318.2
140°	1368.8	1371.9	1381.2	1383.3	1389.4	1382.2	1392.5	1374.0	1371.9
142.5°	1420.4	1424.5	1432.8	1431.8	1439.0	1431.8	1444.2	1427.6	1425.6
145°	1468.9	1475.1	1482.4	1479.3	1484.4	1480.3	1492.7	1475.1	1474.1
147.5°	1517.5	1519.5	1529.8	1524.7	1527.8	1522.6	1536.0	1521.6	1519.5
150°	1559.8	1563.9	1570.1	1563.9	1564.9	1561.8	1575.3	1562.9	1560.8
152.5°	1602.1	1601.1	1610.4	1598.0	1603.1	1598.0	1613.5	1601.1	1601.1
155°	1636.2	1635.1	1646.5	1633.1	1635.1	1631.0	1648.5	1634.1	1637.2
157.5°	1670.2	1665.1	1678.5	1665.1	1660.9	1664.0	1677.5	1664.0	1670.2
160°	1700.2	1695.0	1707.4	1692.9	1689.8	1691.9	1706.4	1694.0	1696.0
162.5°	1726.0	1718.7	1730.1	1714.6	1714.6	1711.5	1730.1	1717.7	1723.9
165°	1748.7	1740.4	1749.7	1734.2	1732.2	1730.1	1746.6	1738.4	1744.6
167.5°	1765.2	1756.9	1765.2	1747.6	1749.7	1745.6	1762.1	1756.9	1764.2
170°	1780.7	1770.4	1773.5	1758.0	1758.0	1754.9	1772.4	1767.3	1777.6
172.5°	1791.0	1779.6	1779.6	1762.1	1758.0	1760.0	1778.6	1777.6	1792.0
175°	1800.3	1784.8	1780.7	1764.2	1752.8	1763.1	1780.7	1783.8	1797.2
177.5°	1802.4	1787.9	1783.8	1765.2	1762.1	1763.1	1784.8	1785.8	1797.2
180°	1781.7	1781.7	1781.7	1781.7	1781.7	1781.7	1781.7	1781.7	1781.7

(END OF REPORT)