

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: P201203

Luminaire Tested: **S124-DIW-U2-2-35-0048-1D-UDD-3-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201203
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-16-1199-1 P28061)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124-DIW-U2-2-35-0048-1D-UDD-3-NA-W
Description: DEFINE 4-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LL2-3500K, NO LENS
DOWNLIGHT LL2-3500K, ASYMMETRIC LENS
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

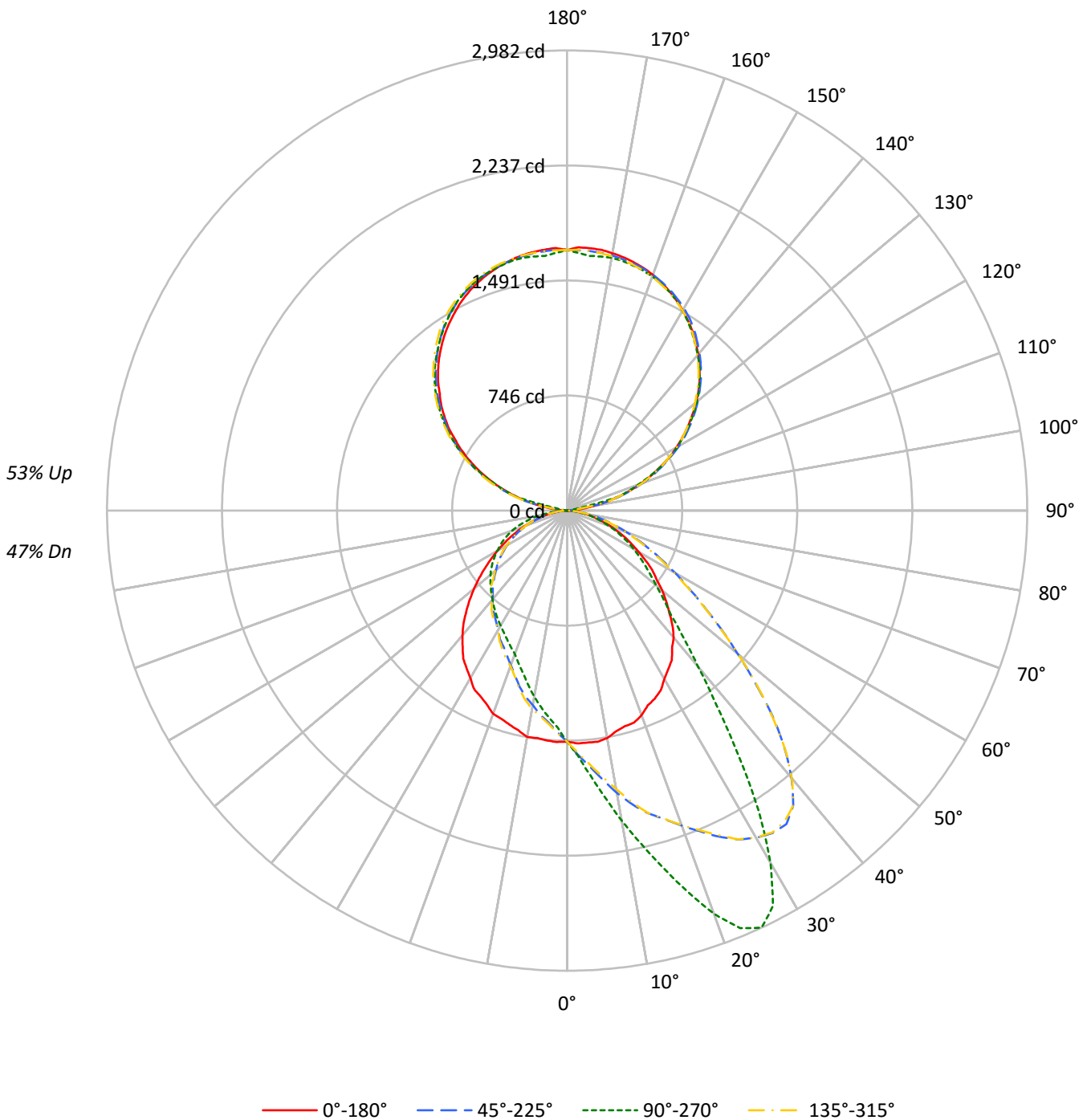
Lumens per Lamp: N/A
Luminaire Lumens: 9470.9 lumens
Efficiency: N/A
Efficacy: 117.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.4 / 1.52
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')
CIE Type: General Diffuse

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	50	30	10	0	
RCR																						
0	106	106	106	106	98	98	98	98	81	81	81	67	67	67	53	53	53	47				47
1	97	93	89	86	89	86	82	79	72	69	67	59	57	56	47	46	45				40	
2	89	81	75	70	81	75	70	66	63	59	56	52	49	47	42	40	38				34	
3	81	72	65	59	74	66	60	55	56	51	47	46	43	40	37	35	33				29	
4	74	64	56	50	68	59	52	47	50	45	40	41	37	34	33	31	28				25	
5	68	57	49	43	62	52	45	40	44	39	35	37	33	30	30	27	25				22	
6	63	51	43	37	57	47	40	35	40	35	31	33	29	26	27	24	22				19	
7	58	46	38	33	53	43	36	31	36	31	27	30	26	23	25	22	19				17	
8	54	42	34	29	49	39	32	27	33	28	24	28	24	21	23	20	17				15	
9	50	38	31	26	46	35	29	24	30	25	21	26	21	19	21	18	16				14	
10	47	35	28	23	43	32	26	22	28	23	19	24	20	17	20	17	14				12	

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	11839	11839	11839	11839
5°	11884	12445	11781	9728
10°	11830	13677	11774	8209
15°	11562	15048	11483	6889
20°	11491	16599	11409	5911
25°	11246	17067	11112	5271
30°	10918	14587	10875	4772
35°	10731	10433	10640	4363
40°	10294	6999	10112	3999
45°	9598	4974	9465	3684
50°	8905	3953	8727	3406
55°	8215	3242	7923	3121
60°	7287	2671	7110	2805
65°	6535	2117	6300	2495
70°	5594	1611	5410	2142
75°	4483	1128	4346	1687
80°	3384	660	3084	1111
85°	1948	255	1594	524



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.1	1.5
10°-20°	453.7	4.8
20°-30°	756.4	8.0
30°-40°	880.7	9.3
40°-50°	790.5	8.3
50°-60°	633.5	6.7
60°-70°	446.1	4.7
70°-80°	240.0	2.5
80°-90°	61.9	0.7
90°-100°	42.6	0.5
100°-110°	341.2	3.6
110°-120°	660.3	7.0
120°-130°	858.6	9.1
130°-140°	932.0	9.8
140°-150°	881.9	9.3
150°-160°	719.4	7.6
160°-170°	465.7	4.9
170°-180°	160.2	1.7
0°-30°	1356.3	14.3
0°-40°	2236.9	23.6
0°-60°	3661.0	38.7
0°-90°	4408.8	46.6
90°-120°	1044.1	11.0
90°-150°	3716.7	39.2
90°-180°	5062.0	53.4
0°-180°	9470.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1497	1497	1497	1497	1497	
5°	1509	1722	1496	1346	1509	144
15°	1447	2392	1437	1095	1447	410
25°	1344	2982	1328	921	1344	618
35°	1183	1932	1173	808	1183	733
45°	937	945	924	700	937	724
55°	674	613	650	590	674	598
65°	418	386	403	455	418	412
75°	197	192	191	287	197	213
85°	44	39	36	80	44	51
90°	0	0	0	0	0	5
95°	59	16	53	16	59	75
105°	340	335	330	335	340	359
115°	663	666	646	666	663	657
125°	956	964	939	964	956	855
135°	1214	1215	1183	1215	1214	936
145°	1417	1409	1386	1409	1417	886
155°	1568	1565	1543	1565	1568	723
165°	1666	1645	1648	1645	1666	471
175°	1706	1657	1697	1657	1706	162
180°	1688	1688	1688	1688	1688	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1497	1497	1497	1497	1497	1497	1497	1497	1497	1497	1497
2.5°	1510	1538	1583	1595	1589	1582	1569	1521	1501	1456	1438
5°	1509	1574	1662	1718	1722	1694	1648	1558	1496	1420	1379
7.5°	1511	1624	1756	1849	1872	1826	1737	1592	1487	1385	1334
10°	1497	1658	1858	1989	2041	1965	1832	1635	1490	1359	1280
12.5°	1465	1677	1950	2134	2211	2108	1935	1661	1459	1314	1237
15°	1447	1701	2031	2296	2392	2263	2030	1687	1437	1272	1184
17.5°	1440	1736	2095	2463	2587	2424	2094	1708	1415	1230	1121
20°	1411	1751	2173	2630	2780	2584	2169	1722	1401	1196	1066
22.5°	1366	1740	2250	2782	2929	2734	2242	1719	1360	1140	1017
25°	1344	1721	2332	2883	2982	2855	2320	1700	1328	1089	974
27.5°	1313	1708	2403	2903	2888	2881	2402	1670	1305	1040	941
30°	1259	1669	2448	2794	2635	2770	2446	1645	1254	1005	892
32.5°	1218	1608	2478	2563	2313	2539	2474	1588	1212	947	856
35°	1183	1559	2479	2223	1932	2224	2459	1537	1173	901	821
37.5°	1117	1513	2407	1888	1590	1886	2407	1492	1112	869	796
40°	1074	1439	2263	1583	1318	1578	2266	1427	1055	817	750
42.5°	1010	1382	2085	1318	1112	1323	2087	1366	994	776	714
45°	937	1317	1883	1118	945	1122	1872	1308	924	732	680
47.5°	871	1239	1651	961	843	967	1660	1237	856	690	639
50°	803	1168	1443	839	752	836	1442	1154	787	647	603
52.5°	729	1082	1251	741	678	743	1246	1082	718	603	568
55°	674	995	1080	658	613	661	1076	996	650	558	529
57.5°	604	914	931	587	554	588	924	906	585	512	489
60°	534	817	806	523	498	524	790	813	521	466	448
62.5°	473	719	691	462	444	465	676	719	461	419	408
65°	418	626	587	405	386	408	574	626	403	371	366
67.5°	356	539	494	349	339	351	482	535	345	324	322
70°	303	453	410	296	285	298	400	447	293	274	274
72.5°	246	371	334	245	237	245	325	365	240	227	229
75°	197	295	266	198	192	198	256	288	191	182	186
77.5°	156	223	202	155	153	153	193	216	145	139	149
80°	113	161	147	113	107	111	139	154	103	101	108
82.5°	75	108	99	76	72	74	91	100	66	67	77
85°	44	63	59	44	39	41	52	56	36	37	46
87.5°	21	30	27	18	15	15	20	22	14	15	20
90°	0	0	0	0	0	0	0	0	0	0	0
92.5°	19	10	10	10	10	10	10	11	13	11	10
95°	59	38	15	16	16	16	16	26	53	26	16
97.5°	115	134	29	19	19	19	29	127	107	127	29
100°	182	200	146	46	34	43	128	189	173	189	128
102.5°	257	280	269	151	87	129	261	268	250	268	261
105°	340	360	349	354	335	341	341	345	330	345	341
107.5°	422	439	433	429	414	418	428	426	409	426	428
110°	504	521	521	508	490	497	513	503	489	503	513



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CATALOG NUMBER: S124-DIW-U2-2-35-0048-1D-UDD-3-NA-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	586	599	602	595	574	584	593	577	568	577	593
115°	663	682	680	681	666	666	671	659	646	659	671
117.5°	746	760	757	758	748	744	743	735	721	735	743
120°	819	835	837	830	823	815	820	809	794	809	820
122.5°	888	906	909	902	895	886	890	878	864	878	890
125°	956	976	976	971	964	955	954	944	939	944	954
127.5°	1024	1047	1043	1038	1032	1022	1017	1011	1003	1011	1017
130°	1093	1109	1105	1101	1097	1085	1081	1075	1066	1075	1081
132.5°	1156	1165	1167	1159	1159	1144	1143	1136	1120	1136	1143
135°	1214	1223	1227	1215	1215	1200	1203	1193	1183	1193	1203
137.5°	1269	1276	1281	1267	1268	1254	1259	1242	1238	1242	1259
140°	1322	1325	1334	1319	1317	1305	1312	1295	1290	1295	1312
142.5°	1369	1373	1384	1368	1363	1354	1363	1342	1339	1342	1363
145°	1417	1418	1434	1415	1409	1402	1413	1388	1386	1388	1413
147.5°	1459	1457	1476	1460	1454	1447	1459	1430	1430	1430	1459
150°	1498	1496	1514	1501	1495	1489	1496	1469	1469	1469	1496
152.5°	1536	1529	1547	1536	1534	1525	1531	1505	1509	1505	1531
155°	1568	1561	1578	1569	1565	1558	1562	1537	1543	1537	1562
157.5°	1599	1588	1603	1599	1592	1588	1588	1568	1575	1568	1588
160°	1626	1613	1626	1620	1614	1609	1613	1593	1602	1593	1613
162.5°	1648	1636	1643	1635	1632	1624	1632	1616	1626	1616	1632
165°	1666	1653	1658	1647	1645	1639	1649	1638	1648	1638	1649
167.5°	1682	1670	1668	1657	1657	1649	1661	1655	1665	1655	1661
170°	1693	1683	1679	1663	1663	1656	1673	1668	1680	1668	1673
172.5°	1704	1691	1684	1667	1660	1661	1682	1678	1690	1678	1682
175°	1706	1696	1688	1670	1657	1666	1687	1688	1697	1688	1687
177.5°	1708	1698	1688	1673	1671	1669	1691	1690	1703	1690	1691
180°	1688	1688	1688	1688	1688	1688	1688	1688	1688	1688	1688



TEST NUMBER: P201203

CATALOG NUMBER: S124-DIW-U2-2-35-0048-1D-UDD-3-NA-W

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1497	1497	1497	1497	1497	1497
2.5°	1420	1408	1413	1442	1458	1510
5°	1356	1346	1349	1387	1422	1509
7.5°	1297	1287	1293	1342	1403	1511
10°	1238	1225	1234	1305	1366	1497
12.5°	1174	1160	1173	1255	1316	1465
15°	1112	1095	1120	1197	1273	1447
17.5°	1055	1041	1069	1127	1246	1440
20°	1006	990	1017	1072	1204	1411
22.5°	967	955	973	1036	1147	1366
25°	941	921	936	992	1091	1344
27.5°	906	890	904	949	1056	1313
30°	867	862	861	894	1009	1259
32.5°	835	835	828	859	947	1218
35°	804	808	802	839	909	1183
37.5°	775	780	776	804	874	1117
40°	745	753	743	756	819	1074
42.5°	715	727	716	722	790	1010
45°	685	700	686	697	740	937
47.5°	655	674	657	648	697	871
50°	623	648	627	611	653	803
52.5°	591	621	596	573	617	729
55°	557	590	564	532	565	674
57.5°	523	557	529	497	525	604
60°	484	523	492	452	478	534
62.5°	444	489	452	411	430	473
65°	404	455	412	369	383	418
67.5°	363	418	372	326	334	356
70°	323	379	331	284	287	303
72.5°	280	335	288	239	239	246
75°	235	287	243	196	193	197
77.5°	192	234	199	155	150	156
80°	147	180	154	118	111	113
82.5°	104	128	111	83	75	75
85°	65	80	73	51	48	44
87.5°	29	36	36	25	23	21
90°	0	0	0	0	0	0
92.5°	10	10	10	10	10	19
95°	16	16	16	15	38	59
97.5°	19	19	19	29	134	115
100°	43	34	46	146	200	182
102.5°	129	87	151	269	280	257
105°	341	335	354	349	360	340
107.5°	418	414	429	433	439	422
110°	497	490	508	521	521	504



TEST NUMBER: P201203

CATALOG NUMBER: S124-DIW-U2-2-35-0048-1D-UDD-3-NA-W

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	584	574	595	602	599	586
115°	666	666	681	680	682	663
117.5°	744	748	758	757	760	746
120°	815	823	830	837	835	819
122.5°	886	895	902	909	906	888
125°	955	964	971	976	976	956
127.5°	1022	1032	1038	1043	1047	1024
130°	1085	1097	1101	1105	1109	1093
132.5°	1144	1159	1159	1167	1165	1156
135°	1200	1215	1215	1227	1223	1214
137.5°	1254	1268	1267	1281	1276	1269
140°	1305	1317	1319	1334	1325	1322
142.5°	1354	1363	1368	1384	1373	1369
145°	1402	1409	1415	1434	1418	1417
147.5°	1447	1454	1460	1476	1457	1459
150°	1489	1495	1501	1514	1496	1498
152.5°	1525	1534	1536	1547	1529	1536
155°	1558	1565	1569	1578	1561	1568
157.5°	1588	1592	1599	1603	1588	1599
160°	1609	1614	1620	1626	1613	1626
162.5°	1624	1632	1635	1643	1636	1648
165°	1639	1645	1647	1658	1653	1666
167.5°	1649	1657	1657	1668	1670	1682
170°	1656	1663	1663	1679	1683	1693
172.5°	1661	1660	1667	1684	1691	1704
175°	1666	1657	1670	1688	1696	1706
177.5°	1669	1671	1673	1688	1698	1708
180°	1688	1688	1688	1688	1688	1688

(END OF REPORT)