

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: P199492

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199492  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P28062 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-1-NA-W  
Description: DEFINE 4-INCH DIRECT/INDIRECT WALL LED LUMINAIRE  
UPLIGHT LL2-3500K, NO LENS  
DOWNLIGHT LL2-3500K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

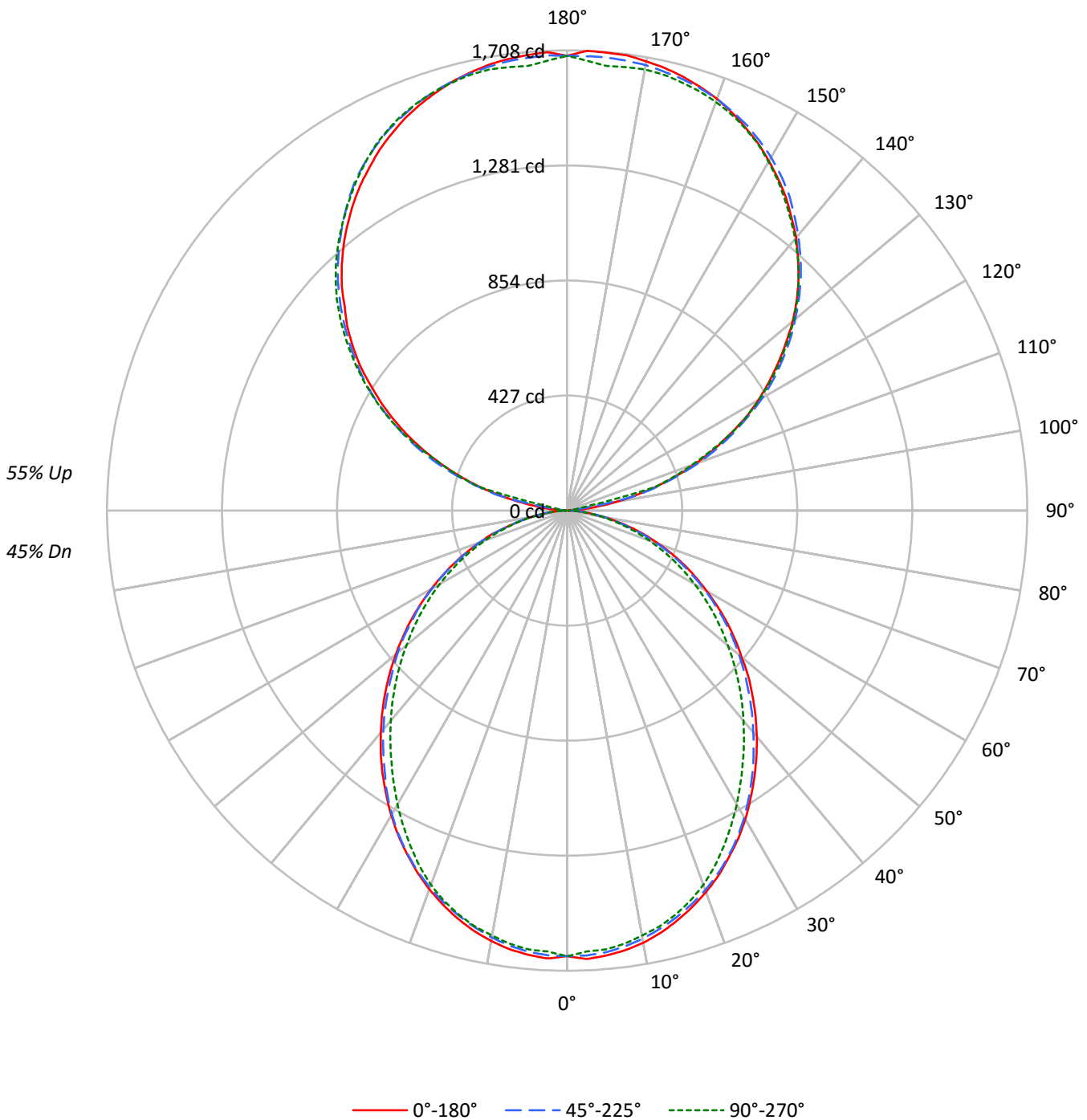
Lumens per Lamp: N/A  
Luminaire Lumens: 9161.6 lumens  
Efficiency: N/A  
Efficacy: 113.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.14 / 1.28  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')  
CIE Type: General Diffuse

Input Watts (W): 80.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

TEST NUMBER: P199492

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

### Luminous Intensity Polar Plot





TEST NUMBER: P199492

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

**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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45
1	97	92	89	85	88	85	82	79	71	68	66	58	56	54	45	44	43	38
2	88	81	75	70	80	74	69	65	62	58	55	51	48	46	40	38	37	32
3	80	71	64	58	73	65	59	54	55	50	46	45	41	39	36	33	31	27
4	74	63	55	49	67	58	51	46	49	43	39	40	36	33	32	29	27	23
5	68	56	48	42	62	52	45	39	43	38	34	36	32	29	29	26	24	20
6	62	50	42	37	57	46	39	34	39	34	30	32	28	25	26	23	21	18
7	57	45	37	32	53	42	35	30	36	30	26	29	25	22	24	21	19	16
8	53	41	34	28	49	38	31	27	32	27	23	27	23	20	22	19	17	14
9	50	38	30	25	45	35	28	24	30	24	21	25	21	18	20	17	15	13
10	46	34	27	23	43	32	26	21	27	22	19	23	19	16	19	16	14	12

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

	0°	90°	180°
0°	13080	13080	13080
5°	13057	11816	13033
10°	12873	10735	12818
15°	12593	9770	12529
20°	12272	8825	12183
25°	11882	7870	11773
30°	11473	6970	11325
35°	10985	6140	10831
40°	10495	5406	10313
45°	9967	4731	9772
50°	9371	4094	9204
55°	8837	3502	8605
60°	8174	2934	7942
65°	7520	2380	7223
70°	6684	1831	6370
75°	5621	1287	5211
80°	4222	784	3953
85°	2479	347	2346



TEST NUMBER: P199492

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

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.7	1.7
10°-20°	439.0	4.8
20°-30°	643.1	7.0
30°-40°	737.1	8.0
40°-50°	726.6	7.9
50°-60°	626.4	6.8
60°-70°	456.7	5.0
70°-80°	249.1	2.7
80°-90°	65.4	0.7
90°-100°	43.1	0.5
100°-110°	341.2	3.7
110°-120°	660.3	7.2
120°-130°	858.6	9.4
130°-140°	932.0	10.2
140°-150°	881.9	9.6
150°-160°	719.4	7.9
160°-170°	465.7	5.1
170°-180°	160.2	1.7
0°-30°	1237.8	13.5
0°-40°	1974.9	21.6
0°-60°	3327.9	36.3
0°-90°	4099.1	44.7
90°-120°	1044.6	11.4
90°-150°	3717.2	40.6
90°-180°	5063.0	55.3
0°-180°	9161.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1654	1654	1654	1654	1654	
5°	1658	1646	1635	1644	1655	157
15°	1576	1564	1553	1556	1568	444
25°	1420	1416	1375	1404	1407	654
35°	1211	1198	1137	1181	1194	757
45°	973	953	899	937	954	751
55°	725	713	662	698	706	647
65°	481	470	434	458	462	476
75°	247	238	219	228	229	262
85°	56	57	53	54	53	64
90°	2	4	3	4	2	7
95°	59	15	16	16	53	75
105°	340	349	335	341	330	359
115°	663	680	666	671	646	657
125°	956	976	964	954	939	855
135°	1214	1227	1215	1203	1183	936
145°	1417	1434	1409	1413	1386	886
155°	1568	1578	1565	1562	1543	723
165°	1666	1658	1645	1649	1648	471
175°	1706	1688	1657	1687	1697	162
180°	1688	1688	1688	1688	1688	



TEST NUMBER: P199492

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

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1654	1654	1654	1654	1654	1654	1654	1654	1654
2.5°	1666	1647	1653	1649	1638	1649	1652	1646	1664
5°	1658	1640	1646	1640	1635	1639	1644	1637	1655
7.5°	1646	1627	1632	1627	1622	1626	1629	1623	1642
10°	1629	1609	1614	1608	1602	1606	1609	1603	1622
12.5°	1605	1586	1590	1586	1581	1582	1584	1578	1598
15°	1576	1557	1564	1560	1553	1557	1556	1549	1568
17.5°	1543	1525	1533	1529	1519	1525	1525	1514	1534
20°	1507	1488	1499	1489	1478	1484	1489	1476	1496
22.5°	1467	1447	1460	1442	1430	1437	1449	1435	1453
25°	1420	1404	1416	1391	1375	1385	1404	1390	1407
27.5°	1374	1358	1368	1340	1318	1331	1355	1343	1358
30°	1323	1310	1315	1282	1259	1273	1301	1294	1306
32.5°	1267	1257	1257	1222	1198	1214	1244	1242	1250
35°	1211	1205	1198	1160	1137	1152	1181	1189	1194
37.5°	1154	1150	1137	1100	1078	1094	1121	1133	1136
40°	1095	1093	1075	1040	1018	1034	1062	1077	1076
42.5°	1035	1037	1015	981	959	975	1001	1021	1016
45°	973	979	953	922	899	916	937	962	954
47.5°	913	920	893	861	839	857	878	905	893
50°	845	859	833	801	779	796	821	844	830
52.5°	786	796	773	742	721	735	760	783	768
55°	725	736	713	682	662	676	698	721	706
57.5°	661	672	651	623	604	619	642	658	644
60°	599	613	590	563	547	559	577	596	582
62.5°	539	552	530	505	490	501	520	535	522
65°	481	489	470	447	434	441	458	475	462
67.5°	422	430	411	391	378	385	399	415	403
70°	362	369	353	335	324	331	344	356	345
72.5°	305	310	295	281	273	278	287	298	293
75°	247	253	238	226	219	221	228	237	229
77.5°	192	198	186	177	173	174	179	186	176
80°	141	146	139	131	127	129	132	136	132
82.5°	95	100	95	90	87	89	90	92	89
85°	56	60	57	54	53	53	54	56	53
87.5°	25	28	26	24	21	22	23	25	23
90°	2	5	4	3	3	3	4	5	2
92.5°	19	10	10	10	10	10	10	11	13
95°	59	38	15	16	16	16	16	26	53
97.5°	115	134	29	19	19	19	29	127	107
100°	182	200	146	46	34	43	128	189	173
102.5°	257	280	269	151	87	129	261	268	250
105°	340	360	349	354	335	341	341	345	330
107.5°	422	439	433	429	414	418	428	426	409
110°	504	521	521	508	490	497	513	503	489



TEST NUMBER: P199492

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

**CANDELA DISTRIBUTION (continued):**

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

(END OF REPORT)