

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: P199451

Luminaire Tested: **S123-DIP-U2-2-35-X-X0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199451  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P27889 P27889)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123-DIP-U2-2-35-X-X0048-1D-UDD-1-NA-W  
Description: DEFINE 3-INCH DIRECT/INDIRECT PENDANT 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: 8901.9 lumens  
Efficiency: N/A  
Efficacy: 110.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.32  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4.08' x H: 0.38')  
CIE Type: General Diffuse

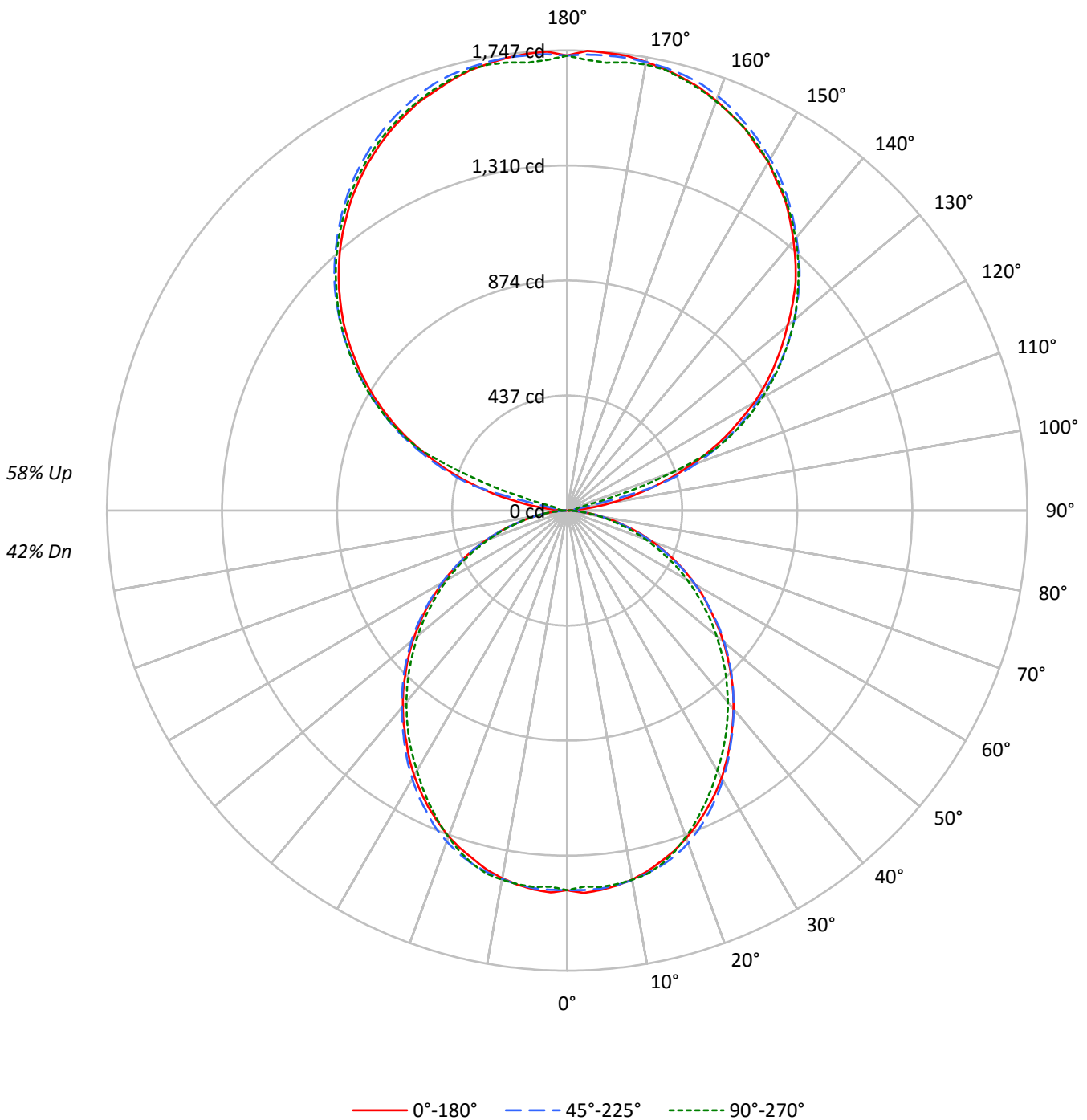
Input Watts (W): 80.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	79	79	79	63	63	63	49	49	49	42
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	43	42	42	36
2	87	80	74	69	80	73	68	64	61	57	54	49	46	44	38	36	35	30
3	80	70	63	57	73	65	58	53	54	49	45	43	40	37	34	32	30	25
4	73	62	55	49	66	57	50	45	48	42	38	39	35	32	30	28	26	22
5	67	55	47	42	61	51	44	39	42	37	33	35	31	28	27	24	22	19
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	25	22	20	17
7	57	45	37	31	52	41	34	29	35	29	25	28	24	21	23	20	17	15
8	53	41	33	28	48	37	31	26	32	26	22	26	22	19	21	18	16	13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	27	22	18	22	18	15	18	15	13	11

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

	0°	90°	180°
0°	15194	15194	15194
5°	15183	13417	15162
10°	14983	12049	14930
15°	14681	10816	14607
20°	14365	9566	14289
25°	13968	8441	13879
30°	13551	7438	13435
35°	13050	6579	12893
40°	12550	5783	12409
45°	12019	5046	11841
50°	11444	4355	11281
55°	10807	3697	10629
60°	10225	3089	9916
65°	9443	2479	9067
70°	8469	1890	8025
75°	7100	1303	6584
80°	5310	779	4751
85°	3010	333	2656



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.6	1.5
10°-20°	390.0	4.4
20°-30°	576.4	6.5
30°-40°	670.9	7.5
40°-50°	673.3	7.6
50°-60°	589.2	6.6
60°-70°	435.2	4.9
70°-80°	237.7	2.7
80°-90°	61.5	0.7
90°-100°	40.3	0.5
100°-110°	284.3	3.2
110°-120°	680.5	7.6
120°-130°	880.8	9.9
130°-140°	956.0	10.7
140°-150°	905.0	10.2
150°-160°	739.2	8.3
160°-170°	480.3	5.4
170°-180°	164.8	1.9
0°-30°	1103.0	12.4
0°-40°	1773.9	19.9
0°-60°	3036.4	34.1
0°-90°	3770.8	42.4
90°-120°	1005.0	11.3
90°-150°	3746.9	42.1
90°-180°	5131.0	57.6
0°-180°	8901.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1441	1441	1441	1441	1441	
5°	1446	1441	1434	1439	1444	137
15°	1378	1394	1389	1389	1371	389
25°	1252	1269	1233	1262	1244	577
35°	1079	1083	1048	1077	1066	675
45°	880	883	846	876	867	679
55°	665	668	632	662	654	597
65°	453	448	419	437	435	448
75°	234	229	211	216	217	249
85°	51	55	50	49	45	59
90°	3	6	4	5	2	5
95°	51	22	25	24	62	68
105°	327	321	49	376	354	347
115°	662	688	696	705	684	653
125°	962	992	996	995	976	859
135°	1227	1248	1242	1250	1226	943
145°	1442	1456	1445	1457	1433	900
155°	1599	1614	1599	1616	1590	736
165°	1699	1712	1696	1712	1692	480
175°	1744	1734	1707	1735	1741	166
180°	1727	1727	1727	1727	1727	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1441	1441	1441	1441	1441	1441	1441	1441	1441
2.5°	1453	1438	1442	1440	1429	1440	1441	1437	1451
5°	1446	1433	1441	1438	1434	1438	1439	1431	1444
7.5°	1436	1425	1434	1433	1431	1433	1432	1421	1433
10°	1422	1412	1424	1426	1423	1425	1420	1409	1417
12.5°	1403	1395	1410	1414	1412	1413	1406	1390	1398
15°	1378	1374	1394	1397	1389	1394	1389	1369	1371
17.5°	1354	1350	1372	1368	1357	1365	1366	1344	1346
20°	1323	1321	1344	1332	1318	1328	1337	1315	1316
22.5°	1289	1291	1308	1291	1277	1287	1304	1283	1281
25°	1252	1258	1269	1249	1233	1244	1262	1250	1244
27.5°	1214	1223	1227	1204	1188	1199	1222	1214	1204
30°	1172	1183	1182	1158	1140	1152	1176	1175	1162
32.5°	1126	1141	1133	1110	1095	1104	1128	1131	1116
35°	1079	1095	1083	1061	1048	1057	1077	1086	1066
37.5°	1031	1047	1033	1012	999	1008	1027	1038	1019
40°	982	997	983	965	949	959	976	988	971
42.5°	932	948	933	915	898	911	926	938	920
45°	880	897	883	862	846	859	876	886	867
47.5°	827	847	831	809	793	806	824	834	816
50°	774	791	779	756	740	752	772	780	763
52.5°	720	740	726	703	688	698	717	726	708
55°	665	681	668	649	632	644	662	668	654
57.5°	617	629	617	596	580	589	606	614	600
60°	562	573	561	541	527	535	549	559	545
62.5°	507	518	504	486	473	482	494	503	490
65°	453	463	448	432	419	428	437	447	435
67.5°	398	407	393	377	366	373	381	391	381
70°	344	351	339	324	314	320	327	335	326
72.5°	290	299	284	272	263	265	273	279	272
75°	234	240	229	219	211	213	216	225	217
77.5°	182	189	180	171	165	167	168	174	166
80°	133	139	133	126	122	123	123	127	119
82.5°	89	95	91	86	85	83	83	86	78
85°	51	58	55	51	50	49	49	51	45
87.5°	23	28	25	22	20	19	19	22	17
90°	3	7	6	4	4	4	5	6	2
92.5°	11	13	13	13	13	15	16	16	19
95°	51	19	22	24	25	25	24	21	62
97.5°	106	84	27	30	32	31	29	107	120
100°	172	195	30	34	36	35	33	219	190
102.5°	245	272	108	38	39	38	165	295	271
105°	327	350	321	64	49	78	376	373	354
107.5°	410	433	438	284	257	298	460	454	440
110°	495	512	523	528	431	535	542	534	522



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	580	598	608	615	607	620	622	614	603
115°	662	678	688	699	696	701	705	694	684
117.5°	739	759	765	776	780	776	780	771	762
120°	820	836	840	850	855	849	854	846	836
122.5°	893	907	917	921	926	919	925	916	907
125°	962	977	992	991	996	988	995	984	976
127.5°	1028	1043	1061	1058	1062	1054	1063	1050	1043
130°	1092	1110	1126	1122	1126	1119	1127	1115	1108
132.5°	1161	1178	1188	1184	1184	1180	1191	1178	1168
135°	1227	1238	1248	1242	1242	1238	1250	1238	1226
137.5°	1283	1295	1302	1298	1298	1293	1305	1294	1282
140°	1337	1348	1354	1349	1349	1345	1357	1348	1335
142.5°	1390	1400	1406	1398	1398	1394	1409	1399	1384
145°	1442	1449	1456	1444	1445	1439	1457	1447	1433
147.5°	1481	1494	1502	1488	1488	1483	1502	1492	1476
150°	1528	1533	1542	1530	1529	1525	1543	1532	1518
152.5°	1560	1572	1580	1567	1566	1561	1581	1569	1555
155°	1599	1604	1614	1602	1599	1597	1616	1601	1590
157.5°	1627	1633	1647	1636	1628	1631	1646	1629	1620
160°	1656	1658	1674	1663	1654	1658	1673	1652	1649
162.5°	1681	1682	1697	1684	1677	1678	1696	1675	1670
165°	1699	1697	1712	1701	1696	1696	1712	1693	1692
167.5°	1716	1715	1722	1715	1714	1709	1721	1708	1711
170°	1729	1725	1729	1719	1719	1714	1730	1719	1723
172.5°	1741	1733	1733	1719	1716	1715	1734	1728	1734
175°	1744	1737	1734	1719	1707	1716	1735	1731	1741
177.5°	1747	1736	1733	1715	1712	1713	1734	1732	1744
180°	1727	1727	1727	1727	1727	1727	1727	1727	1727

(END OF REPORT)