

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: P199409

Luminaire Tested: **S122-DIP-U2-2-30-X-X0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199409  
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-DIP-U2-2-30-X-X0048-1D-UDD-1-NA-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE  
UPLIGHT LL2-3000K, NO LENS  
DOWNLIGHT LL2-3000K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8063.4 lumens  
Efficiency: N/A  
Efficacy: 100.2 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

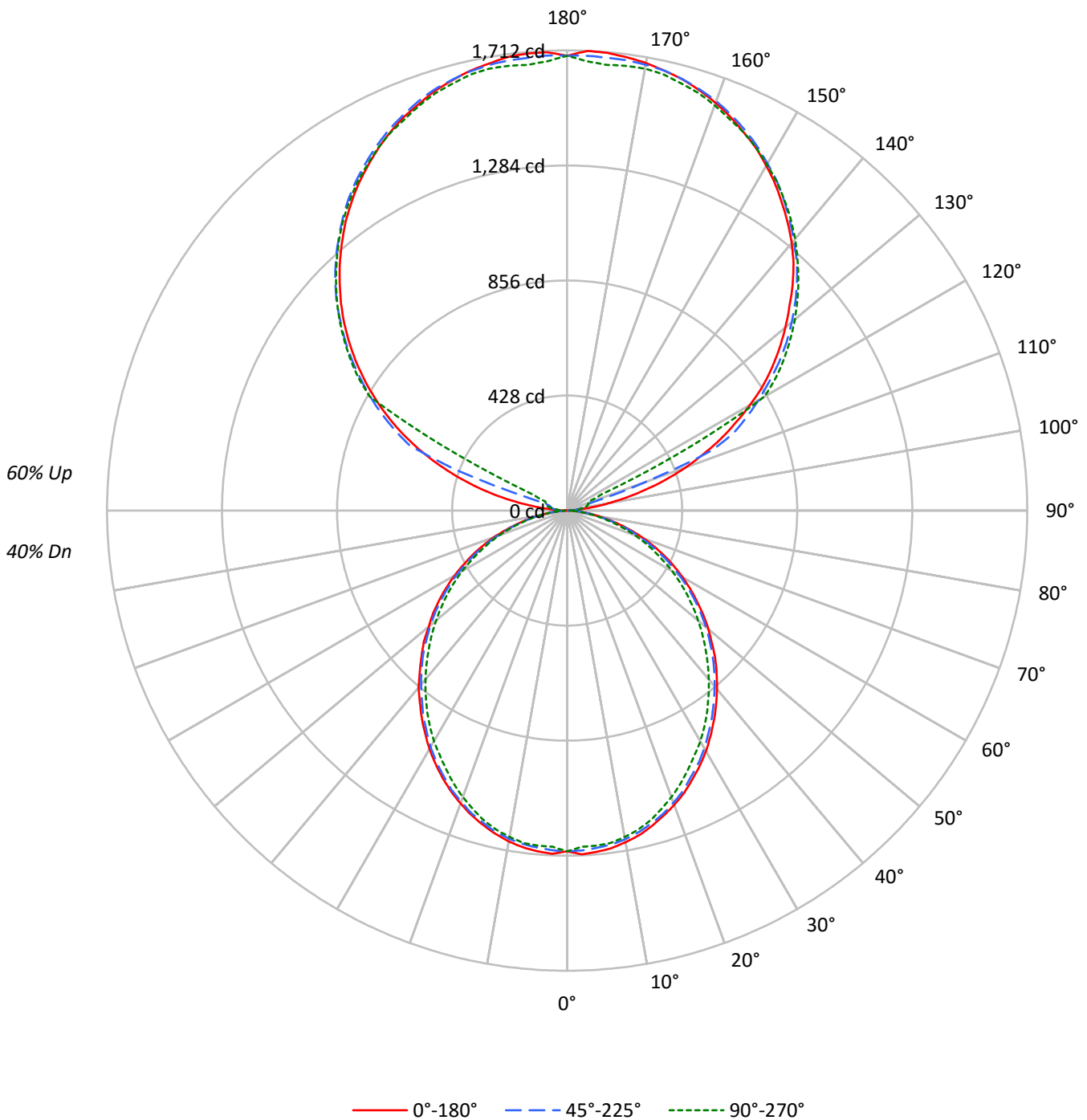
Input Watts (W): 80.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	20045	20045	20045
5°	20070	16604	20039
10°	19798	14179	19752
15°	19425	12196	19346
20°	18982	10494	18886
25°	18455	9057	18356
30°	17919	7872	17765
35°	17267	6812	17107
40°	16629	5859	16480
45°	15965	5012	15684
50°	15219	4252	14893
55°	14385	3560	14146
60°	13536	2919	13190
65°	12503	2292	12075
70°	11222	1723	10679
75°	9366	1160	8743
80°	6983	674	6342
85°	4338	266	3648



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.5	1.5
10°-20°	338.3	4.2
20°-30°	498.9	6.2
30°-40°	581.8	7.2
40°-50°	583.1	7.2
50°-60°	510.0	6.3
60°-70°	375.3	4.7
70°-80°	203.4	2.5
80°-90°	52.1	0.6
90°-100°	42.0	0.5
100°-110°	190.0	2.4
110°-120°	552.3	6.8
120°-130°	862.9	10.7
130°-140°	930.3	11.5
140°-150°	879.2	10.9
150°-160°	717.0	8.9
160°-170°	466.6	5.8
170°-180°	160.8	2.0
0°-30°	956.7	11.9
0°-40°	1538.5	19.1
0°-60°	2631.6	32.6
0°-90°	3262.4	40.5
90°-120°	784.3	9.7
90°-150°	3456.7	42.9
90°-180°	4801.0	59.5
0°-180°	8063.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1267	1267	1267	1267	1267	
5°	1274	1260	1252	1259	1272	121
15°	1216	1206	1194	1204	1211	343
25°	1103	1092	1064	1089	1097	508
35°	952	939	909	932	943	596
45°	779	766	728	758	766	600
55°	590	579	544	568	580	528
65°	400	384	357	372	386	396
75°	206	196	178	183	192	219
85°	49	46	39	40	41	55
90°	2	5	7	6	1	5
95°	41	33	38	39	72	58
105°	305	65	78	67	359	324
115°	630	684	139	707	674	621
125°	932	962	985	977	956	831
135°	1186	1210	1216	1220	1197	914
145°	1395	1408	1410	1417	1400	873
155°	1554	1564	1553	1565	1555	717
165°	1660	1662	1645	1658	1657	469
175°	1710	1691	1664	1691	1707	162
180°	1692	1692	1692	1692	1692	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1267.4	1267.4	1267.4	1267.4	1267.4	1267.4	1267.4	1267.4	1267.4
2.5°	1280.2	1262.5	1265.5	1261.6	1251.7	1260.6	1264.5	1261.6	1278.2
5°	1274.3	1256.7	1259.6	1254.7	1251.7	1254.7	1258.6	1254.7	1272.3
7.5°	1266.5	1246.8	1252.7	1249.8	1246.8	1248.8	1251.7	1244.9	1263.5
10°	1252.7	1233.1	1241.9	1236.1	1233.1	1235.1	1240.0	1230.2	1249.8
12.5°	1237.0	1217.4	1226.3	1219.4	1216.5	1216.5	1225.3	1214.5	1232.1
15°	1215.5	1199.8	1205.7	1198.8	1193.9	1196.9	1203.7	1195.9	1210.6
17.5°	1191.0	1177.3	1184.1	1173.3	1164.5	1171.4	1181.2	1172.4	1187.1
20°	1165.5	1149.8	1156.7	1142.0	1134.1	1140.0	1152.7	1145.9	1159.6
22.5°	1137.1	1122.4	1128.2	1108.6	1100.8	1105.7	1124.3	1117.5	1130.2
25°	1102.8	1091.0	1092.0	1072.4	1063.5	1069.4	1089.0	1085.1	1096.9
27.5°	1069.4	1057.7	1058.6	1036.1	1026.3	1034.1	1053.7	1050.8	1061.6
30°	1033.2	1022.4	1021.4	998.9	991.0	995.9	1015.5	1015.5	1024.3
32.5°	993.0	984.1	979.2	958.7	950.8	956.7	973.4	976.3	983.2
35°	951.8	945.9	939.1	919.5	908.7	916.5	932.2	936.1	943.0
37.5°	910.6	903.8	895.9	876.3	864.6	874.4	888.1	894.9	899.8
40°	867.5	862.6	853.8	834.2	819.5	829.3	845.0	852.8	859.7
42.5°	823.4	820.4	809.7	789.1	774.4	785.2	801.8	808.7	811.6
45°	779.3	775.4	765.6	744.0	728.3	740.1	757.7	764.6	765.6
47.5°	730.3	731.2	719.5	697.9	682.2	694.0	709.7	719.5	723.4
50°	686.2	687.1	673.4	651.9	636.2	645.0	663.6	673.4	671.5
52.5°	639.1	642.0	627.3	605.8	590.1	598.9	617.5	628.3	629.3
55°	590.1	595.0	579.3	557.7	544.0	552.8	568.5	581.3	580.3
57.5°	543.0	547.0	531.3	511.7	498.0	505.8	519.5	536.2	532.3
60°	496.0	499.9	483.3	463.6	451.9	455.8	471.5	485.2	483.3
62.5°	448.0	451.9	434.2	416.6	402.9	408.8	422.5	439.1	434.2
65°	399.9	402.9	384.2	368.6	356.8	362.7	372.5	390.1	386.2
67.5°	351.9	353.9	337.2	322.5	312.7	315.6	324.5	339.2	337.2
70°	303.9	305.8	290.1	276.4	267.6	270.5	277.4	291.1	289.2
72.5°	254.9	257.8	242.1	229.4	220.6	223.5	228.4	241.1	238.2
75°	205.8	207.8	196.0	186.2	178.4	179.4	183.3	193.1	192.1
77.5°	160.8	165.7	152.9	144.1	138.2	139.2	144.1	149.0	147.0
80°	116.6	122.5	113.7	106.8	101.9	101.0	104.9	108.8	105.9
82.5°	82.3	83.3	77.4	72.5	67.6	67.6	70.6	73.5	70.6
85°	49.0	51.0	46.1	42.1	39.2	38.2	40.2	43.1	41.2
87.5°	23.5	24.5	19.6	17.6	14.7	13.7	14.7	16.7	16.7
90°	2.0	4.9	4.9	5.9	6.9	6.9	5.9	5.9	1.0
92.5°	5.9	13.7	13.7	16.7	17.6	20.6	23.5	24.5	26.5
95°	41.2	29.4	33.3	36.3	38.2	41.2	39.2	36.3	71.6
97.5°	92.1	37.2	47.1	49.0	52.0	52.9	52.9	41.2	130.4
100°	153.9	43.1	55.9	63.7	65.7	65.7	59.8	92.1	200.9
102.5°	226.4	192.1	60.8	70.6	74.5	71.6	63.7	312.7	279.4
105°	304.9	346.0	64.7	74.5	78.4	76.5	66.7	385.2	358.8
107.5°	387.2	419.5	68.6	78.4	82.3	79.4	81.4	459.7	438.2
110°	469.5	497.0	307.8	81.4	85.3	81.4	426.4	535.2	517.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	547.9	576.4	578.3	86.3	87.2	93.1	634.2	611.7	597.0
115°	630.3	653.8	684.2	398.0	139.2	438.2	706.7	687.1	674.4
117.5°	705.8	728.3	751.8	699.9	533.2	761.6	776.3	761.6	748.9
120°	785.2	807.7	822.4	845.9	847.9	847.9	845.0	833.2	819.5
122.5°	863.6	878.3	890.0	913.6	921.4	912.6	910.6	899.8	889.1
125°	932.2	945.9	961.6	977.3	985.1	976.3	977.3	963.6	955.7
127.5°	996.9	1008.7	1029.2	1039.0	1046.9	1037.1	1041.0	1026.3	1020.4
130°	1059.6	1067.5	1091.0	1098.8	1105.7	1099.8	1102.8	1087.1	1082.2
132.5°	1121.4	1132.2	1151.8	1154.7	1162.5	1153.7	1164.5	1142.9	1141.0
135°	1186.1	1194.9	1209.6	1210.6	1216.5	1211.6	1220.4	1202.7	1196.9
137.5°	1246.8	1250.8	1263.5	1259.6	1268.4	1260.6	1273.3	1255.7	1251.7
140°	1299.8	1302.7	1311.5	1313.5	1319.4	1312.5	1322.3	1304.7	1302.7
142.5°	1348.8	1352.7	1360.6	1359.6	1366.4	1359.6	1371.3	1355.7	1353.7
145°	1394.9	1400.7	1407.6	1404.7	1409.6	1405.6	1417.4	1400.7	1399.8
147.5°	1440.9	1442.9	1452.7	1447.8	1450.7	1445.8	1458.6	1444.9	1442.9
150°	1481.1	1485.0	1490.9	1485.0	1486.0	1483.1	1495.8	1484.1	1482.1
152.5°	1521.3	1520.3	1529.2	1517.4	1522.3	1517.4	1532.1	1520.3	1520.3
155°	1553.7	1552.7	1563.5	1550.7	1552.7	1548.8	1565.4	1551.7	1554.6
157.5°	1586.0	1581.1	1593.8	1581.1	1577.2	1580.1	1592.9	1580.1	1586.0
160°	1614.4	1609.5	1621.3	1607.6	1604.6	1606.6	1620.3	1608.6	1610.5
162.5°	1638.9	1632.1	1642.9	1628.2	1628.2	1625.2	1642.9	1631.1	1637.0
165°	1660.5	1652.7	1661.5	1646.8	1644.8	1642.9	1658.5	1650.7	1656.6
167.5°	1676.2	1668.3	1676.2	1659.5	1661.5	1657.6	1673.2	1668.3	1675.2
170°	1690.9	1681.1	1684.0	1669.3	1669.3	1666.4	1683.0	1678.1	1687.9
172.5°	1700.7	1689.9	1689.9	1673.2	1669.3	1671.3	1688.9	1687.9	1701.7
175°	1709.5	1694.8	1690.9	1675.2	1664.4	1674.2	1690.9	1693.8	1706.6
177.5°	1711.5	1697.8	1693.8	1676.2	1673.2	1674.2	1694.8	1695.8	1706.6
180°	1691.9	1691.9	1691.9	1691.9	1691.9	1691.9	1691.9	1691.9	1691.9

(END OF REPORT)