

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: P199417

Luminaire Tested: **S122-DIP-U2-LO-35-X-X0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199417  
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-LO-35-X-X0048-1D-UDD-1-NA-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE  
UPLIGHT LL2-3500K, NO LENS  
DOWNLIGHT LLO-3500K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6085.2 lumens  
Efficiency: N/A  
Efficacy: 116.4 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: Semi-Indirect

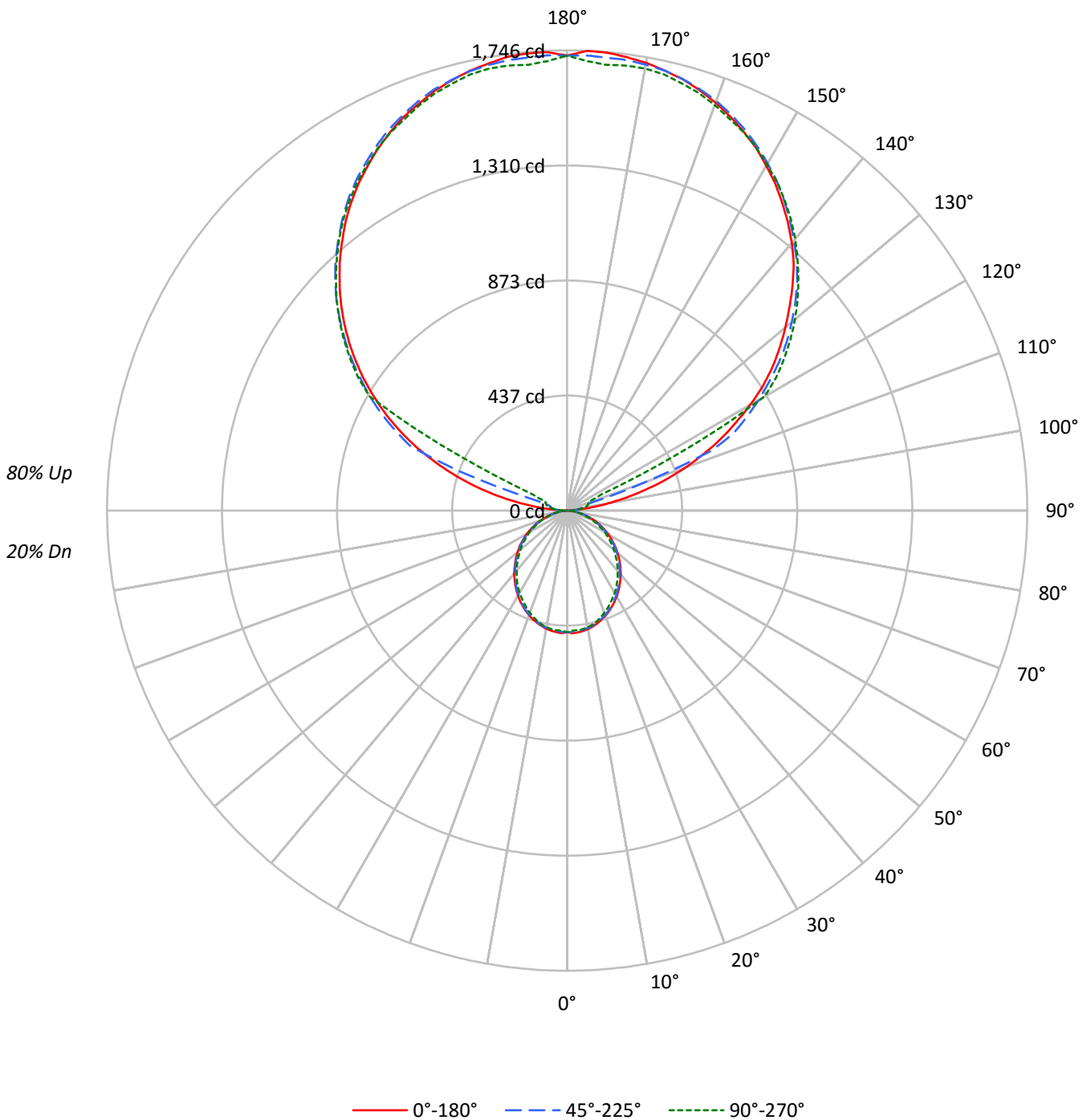
Input Watts (W): 52.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	100	100	100	88	88	88	88	66	66	66	46	46	46	28	28	28	20				
1	91	87	83	80	80	77	74	71	58	56	54	41	40	39	25	24	24	16				
2	83	76	70	65	73	67	62	58	51	48	45	36	34	32	22	21	20	14				
3	75	67	60	54	66	59	53	49	45	41	38	32	29	27	19	18	17	12				
4	69	59	51	46	61	52	46	41	40	35	32	28	25	23	17	16	15	10				
5	63	52	44	39	55	46	40	35	35	31	27	25	22	20	15	14	13	9				
6	58	47	39	33	51	41	35	30	32	27	24	23	20	17	14	12	11	8				
7	53	42	34	29	47	37	31	26	29	24	21	20	17	15	13	11	10	7				
8	49	38	30	25	44	34	27	23	26	21	18	19	16	13	12	10	9	6				
9	46	34	27	22	40	31	24	20	24	19	16	17	14	12	11	9	8	5				
10	43	31	24	20	38	28	22	18	22	17	14	16	13	11	10	8	7	5				

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

	0°	90°	180°
0°	7299	7299	7299
5°	7308	6046	7297
10°	7208	5163	7191
15°	7073	4441	7044
20°	6912	3821	6876
25°	6719	3297	6684
30°	6525	2866	6469
35°	6286	2480	6228
40°	6056	2133	6000
45°	5812	1825	5709
50°	5540	1548	5423
55°	5239	1296	5151
60°	4929	1063	4803
65°	4552	835	4396
70°	4084	627	3888
75°	3409	423	3186
80°	2545	246	2306
85°	1576	97	1328



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.5	0.7
10°-20°	123.2	2.0
20°-30°	181.7	3.0
30°-40°	211.8	3.5
40°-50°	212.3	3.5
50°-60°	185.7	3.1
60°-70°	136.6	2.2
70°-80°	74.1	1.2
80°-90°	19.0	0.3
90°-100°	42.3	0.7
100°-110°	193.8	3.2
110°-120°	563.4	9.3
120°-130°	880.3	14.5
130°-140°	949.1	15.6
140°-150°	896.9	14.7
150°-160°	731.4	12.0
160°-170°	476.0	7.8
170°-180°	164.0	2.7
0°-30°	348.3	5.7
0°-40°	560.2	9.2
0°-60°	958.2	15.7
0°-90°	1187.8	19.5
90°-120°	799.6	13.1
90°-150°	3526.0	57.9
90°-180°	4897.0	80.5
0°-180°	6085.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	462	462	462	462	462	
5°	464	459	456	458	463	44
15°	443	439	435	438	441	125
25°	402	398	387	396	399	185
35°	346	342	331	339	343	217
45°	284	279	265	276	279	219
55°	215	211	198	207	211	192
65°	146	140	130	136	141	144
75°	75	71	65	67	70	80
85°	18	17	14	15	15	20
90°	1	2	2	2	0	2
95°	42	34	39	40	73	59
105°	311	66	80	68	366	331
115°	643	698	142	721	688	634
125°	951	981	1005	997	975	848
135°	1210	1234	1241	1245	1221	932
145°	1423	1436	1438	1446	1428	891
155°	1585	1595	1584	1597	1586	731
165°	1694	1695	1678	1692	1690	478
175°	1744	1725	1698	1725	1741	166
180°	1726	1726	1726	1726	1726	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	461.5	461.5	461.5	461.5	461.5	461.5	461.5	461.5	461.5
2.5°	466.1	459.7	460.8	459.3	455.8	459.0	460.4	459.3	465.4
5°	464.0	457.5	458.6	456.8	455.8	456.8	458.3	456.8	463.3
7.5°	461.1	454.0	456.1	455.0	454.0	454.7	455.8	453.3	460.0
10°	456.1	449.0	452.2	450.1	449.0	449.7	451.5	447.9	455.0
12.5°	450.4	443.3	446.5	444.0	442.9	442.9	446.1	442.2	448.6
15°	442.6	436.8	439.0	436.5	434.7	435.8	438.3	435.4	440.8
17.5°	433.6	428.6	431.1	427.2	424.0	426.5	430.1	426.9	432.2
20°	424.4	418.6	421.1	415.8	412.9	415.1	419.7	417.2	422.2
22.5°	414.0	408.7	410.8	403.7	400.8	402.6	409.4	406.9	411.5
25°	401.5	397.2	397.6	390.4	387.2	389.4	396.5	395.1	399.4
27.5°	389.4	385.1	385.5	377.2	373.7	376.5	383.7	382.6	386.5
30°	376.2	372.2	371.9	363.7	360.8	362.6	369.7	369.7	373.0
32.5°	361.5	358.3	356.5	349.0	346.2	348.3	354.4	355.5	358.0
35°	346.5	344.4	341.9	334.8	330.8	333.7	339.4	340.8	343.3
37.5°	331.6	329.1	326.2	319.1	314.8	318.4	323.4	325.8	327.6
40°	315.9	314.1	310.9	303.7	298.4	301.9	307.6	310.5	313.0
42.5°	299.8	298.7	294.8	287.3	282.0	285.9	291.9	294.4	295.5
45°	283.7	282.3	278.7	270.9	265.2	269.5	275.9	278.4	278.7
47.5°	265.9	266.2	262.0	254.1	248.4	252.7	258.4	262.0	263.4
50°	249.8	250.2	245.2	237.3	231.6	234.8	241.6	245.2	244.5
52.5°	232.7	233.8	228.4	220.6	214.9	218.1	224.8	228.8	229.1
55°	214.9	216.6	210.9	203.1	198.1	201.3	207.0	211.6	211.3
57.5°	197.7	199.2	193.4	186.3	181.3	184.2	189.2	195.2	193.8
60°	180.6	182.0	176.0	168.8	164.5	166.0	171.7	176.7	176.0
62.5°	163.1	164.5	158.1	151.7	146.7	148.8	153.8	159.9	158.1
65°	145.6	146.7	139.9	134.2	129.9	132.1	135.6	142.0	140.6
67.5°	128.1	128.8	122.8	117.4	113.9	114.9	118.1	123.5	122.8
70°	110.6	111.4	105.6	100.6	97.4	98.5	101.0	106.0	105.3
72.5°	92.8	93.9	88.2	83.5	80.3	81.4	83.2	87.8	86.7
75°	74.9	75.7	71.4	67.8	65.0	65.3	66.7	70.3	70.0
77.5°	58.5	60.3	55.7	52.5	50.3	50.7	52.5	54.2	53.5
80°	42.5	44.6	41.4	38.9	37.1	36.8	38.2	39.6	38.5
82.5°	30.0	30.3	28.2	26.4	24.6	24.6	25.7	26.8	25.7
85°	17.8	18.6	16.8	15.3	14.3	13.9	14.6	15.7	15.0
87.5°	8.6	8.9	7.1	6.4	5.4	5.0	5.4	6.1	6.1
90°	0.7	1.8	1.8	2.1	2.5	2.5	2.1	2.1	0.4
92.5°	6.0	14.0	14.0	17.0	18.0	21.0	24.0	25.0	27.0
95°	42.0	30.0	34.0	37.0	39.0	42.0	40.0	37.0	73.0
97.5°	94.0	38.0	48.0	50.0	53.0	54.0	54.0	42.0	133.0
100°	157.0	44.0	57.0	65.0	67.0	67.0	61.0	94.0	205.0
102.5°	231.0	196.0	62.0	72.0	76.0	73.0	65.0	319.0	285.0
105°	311.0	353.0	66.0	76.0	80.0	78.0	68.0	393.0	366.0
107.5°	395.0	428.0	70.0	80.0	84.0	81.0	83.0	469.0	447.0
110°	479.0	507.0	314.0	83.0	87.0	83.0	435.0	546.0	528.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	559.0	588.0	590.0	88.0	89.0	95.0	647.0	624.0	609.0
115°	643.0	667.0	698.0	406.0	142.0	447.0	721.0	701.0	688.0
117.5°	720.0	743.0	767.0	714.0	544.0	777.0	792.0	777.0	764.0
120°	801.0	824.0	839.0	863.0	865.0	865.0	862.0	850.0	836.0
122.5°	881.0	896.0	908.0	932.0	940.0	931.0	929.0	918.0	907.0
125°	951.0	965.0	981.0	997.0	1005.0	996.0	997.0	983.0	975.0
127.5°	1017.0	1029.0	1050.0	1060.0	1068.0	1058.0	1062.0	1047.0	1041.0
130°	1081.0	1089.0	1113.0	1121.0	1128.0	1122.0	1125.0	1109.0	1104.0
132.5°	1144.0	1155.0	1175.0	1178.0	1186.0	1177.0	1188.0	1166.0	1164.0
135°	1210.0	1219.0	1234.0	1235.0	1241.0	1236.0	1245.0	1227.0	1221.0
137.5°	1272.0	1276.0	1289.0	1285.0	1294.0	1286.0	1299.0	1281.0	1277.0
140°	1326.0	1329.0	1338.0	1340.0	1346.0	1339.0	1349.0	1331.0	1329.0
142.5°	1376.0	1380.0	1388.0	1387.0	1394.0	1387.0	1399.0	1383.0	1381.0
145°	1423.0	1429.0	1436.0	1433.0	1438.0	1434.0	1446.0	1429.0	1428.0
147.5°	1470.0	1472.0	1482.0	1477.0	1480.0	1475.0	1488.0	1474.0	1472.0
150°	1511.0	1515.0	1521.0	1515.0	1516.0	1513.0	1526.0	1514.0	1512.0
152.5°	1552.0	1551.0	1560.0	1548.0	1553.0	1548.0	1563.0	1551.0	1551.0
155°	1585.0	1584.0	1595.0	1582.0	1584.0	1580.0	1597.0	1583.0	1586.0
157.5°	1618.0	1613.0	1626.0	1613.0	1609.0	1612.0	1625.0	1612.0	1618.0
160°	1647.0	1642.0	1654.0	1640.0	1637.0	1639.0	1653.0	1641.0	1643.0
162.5°	1672.0	1665.0	1676.0	1661.0	1661.0	1658.0	1676.0	1664.0	1670.0
165°	1694.0	1686.0	1695.0	1680.0	1678.0	1676.0	1692.0	1684.0	1690.0
167.5°	1710.0	1702.0	1710.0	1693.0	1695.0	1691.0	1707.0	1702.0	1709.0
170°	1725.0	1715.0	1718.0	1703.0	1703.0	1700.0	1717.0	1712.0	1722.0
172.5°	1735.0	1724.0	1724.0	1707.0	1703.0	1705.0	1723.0	1722.0	1736.0
175°	1744.0	1729.0	1725.0	1709.0	1698.0	1708.0	1725.0	1728.0	1741.0
177.5°	1746.0	1732.0	1728.0	1710.0	1707.0	1708.0	1729.0	1730.0	1741.0
180°	1726.0	1726.0	1726.0	1726.0	1726.0	1726.0	1726.0	1726.0	1726.0

(END OF REPORT)