

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: P199412

Luminaire Tested: **S122-DIP-U2-2-40-X-X0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199412  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P27883 P27883)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122-DIP-U2-2-40-X-X0048-1D-UDD-1-5-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE  
UPLIGHT LL2-4000K, SATIN WHITE DIFFUSER  
DOWNLIGHT LL2-4000K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7770.2 lumens  
Efficiency: N/A  
Efficacy: 96.5 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

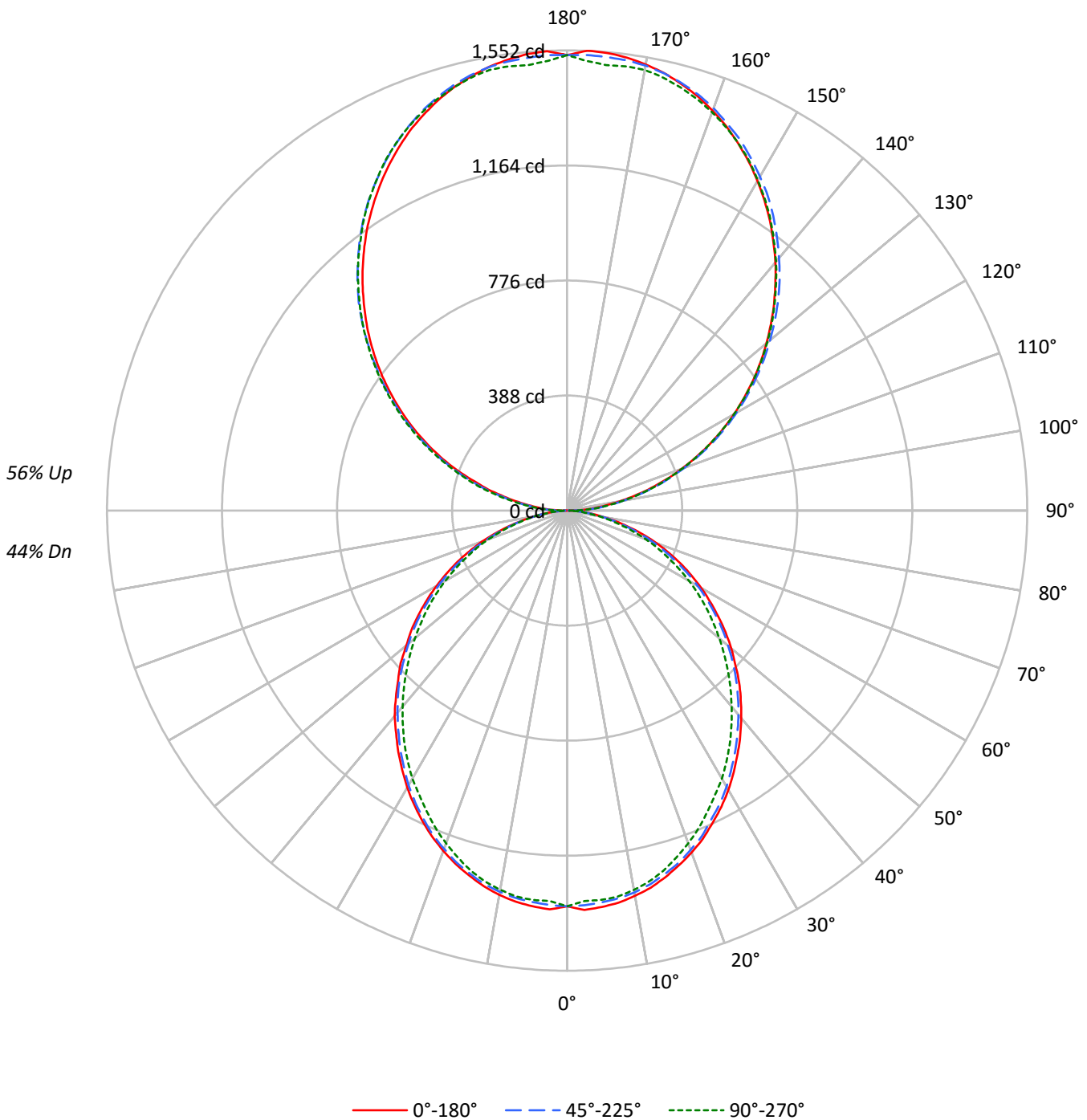
Input Watts (W): 80.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	44				
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43	37				
2	88	81	75	69	80	74	69	64	62	58	55	50	47	45	40	38	36	31				
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	35	33	31	27				
4	73	63	55	49	67	58	51	46	48	43	39	39	36	33	31	29	27	23				
5	67	56	48	42	61	51	44	39	43	38	34	35	31	28	28	25	23	20				
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20	17				
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15				
8	53	41	33	28	49	38	31	26	32	27	23	27	22	19	21	18	16	14				
9	49	37	30	25	45	35	28	23	29	24	20	24	20	17	20	17	15	12				
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	18	15	13	11				

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

	0°	90°	180°
0°	21110	21110	21110
5°	21136	17486	21103
10°	20850	14932	20801
15°	20455	12844	20374
20°	19990	11051	19889
25°	19434	9538	19330
30°	18869	8290	18708
35°	18183	7174	18016
40°	17513	6170	17354
45°	16813	5279	16516
50°	16026	4477	15682
55°	15148	3749	14897
60°	14254	3074	13888
65°	13169	2414	12716
70°	11816	1815	11244
75°	9867	1222	9207
80°	7354	711	6678
85°	4568	281	3842



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.8	1.6
10°-20°	356.2	4.6
20°-30°	525.4	6.8
30°-40°	612.7	7.9
40°-50°	614.0	7.9
50°-60°	537.1	6.9
60°-70°	395.2	5.1
70°-80°	214.2	2.8
80°-90°	54.9	0.7
90°-100°	106.5	1.4
100°-110°	312.6	4.0
110°-120°	525.7	6.8
120°-130°	685.6	8.8
130°-140°	764.4	9.8
140°-150°	747.5	9.6
150°-160°	628.8	8.1
160°-170°	418.0	5.4
170°-180°	145.6	1.9
0°-30°	1007.5	13.0
0°-40°	1620.2	20.9
0°-60°	2771.4	35.7
0°-90°	3435.6	44.2
90°-120°	944.8	12.2
90°-150°	3142.3	40.4
90°-180°	4335.0	55.8
0°-180°	7770.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1335	1335	1335	1335	1335	
5°	1342	1326	1318	1325	1340	127
15°	1280	1270	1257	1268	1275	361
25°	1161	1150	1120	1147	1155	535
35°	1002	989	957	982	993	627
45°	821	806	767	798	806	632
55°	621	610	573	599	611	556
65°	421	405	376	392	407	417
75°	217	206	188	193	202	231
85°	52	48	41	42	43	58
90°	2	5	7	6	1	12
95°	89	102	101	96	84	92
105°	293	306	301	291	276	309
115°	532	540	532	524	513	525
125°	765	777	767	762	747	684
135°	987	1006	990	994	967	761
145°	1192	1212	1196	1198	1173	746
155°	1366	1380	1367	1366	1348	629
165°	1490	1493	1477	1484	1477	420
175°	1550	1535	1508	1533	1545	147
180°	1536	1536	1536	1536	1536	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7
2.5°	1348.2	1329.6	1332.7	1328.5	1318.2	1327.5	1331.6	1328.5	1346.1
5°	1342.0	1323.4	1326.5	1321.3	1318.2	1321.3	1325.4	1321.3	1339.9
7.5°	1333.7	1313.1	1319.3	1316.2	1313.1	1315.1	1318.2	1311.0	1330.6
10°	1319.3	1298.6	1307.9	1301.7	1298.6	1300.7	1305.8	1295.5	1316.2
12.5°	1302.7	1282.1	1291.4	1284.2	1281.1	1281.1	1290.3	1279.0	1297.6
15°	1280.0	1263.5	1269.7	1262.5	1257.3	1260.4	1267.6	1259.4	1274.9
17.5°	1254.2	1239.8	1247.0	1235.6	1226.3	1233.6	1243.9	1234.6	1250.1
20°	1227.4	1210.9	1218.1	1202.6	1194.3	1200.5	1214.0	1206.7	1221.2
22.5°	1197.4	1182.0	1188.2	1167.5	1159.2	1164.4	1184.0	1176.8	1190.2
25°	1161.3	1148.9	1150.0	1129.3	1120.0	1126.2	1146.9	1142.7	1155.1
27.5°	1126.2	1113.8	1114.9	1091.1	1080.8	1089.1	1109.7	1106.6	1118.0
30°	1088.0	1076.7	1075.6	1051.9	1043.6	1048.8	1069.4	1069.4	1078.7
32.5°	1045.7	1036.4	1031.2	1009.6	1001.3	1007.5	1025.1	1028.1	1035.4
35°	1002.3	996.1	988.9	968.3	956.9	965.2	981.7	985.8	993.1
37.5°	959.0	951.8	943.5	922.9	910.5	920.8	935.2	942.5	947.6
40°	913.6	908.4	899.1	878.5	863.0	873.3	889.8	898.1	905.3
42.5°	867.1	864.0	852.7	831.0	815.5	826.9	844.4	851.6	854.7
45°	820.7	816.5	806.2	783.5	767.0	779.4	798.0	805.2	806.2
47.5°	769.0	770.1	757.7	735.0	718.5	730.9	747.4	757.7	761.8
50°	722.6	723.6	709.2	686.5	669.9	679.2	698.9	709.2	707.1
52.5°	673.0	676.1	660.7	637.9	621.4	630.7	650.3	661.7	662.7
55°	621.4	626.6	610.1	587.4	572.9	582.2	598.7	612.1	611.1
57.5°	571.9	576.0	559.5	538.8	524.4	532.7	547.1	564.7	560.5
60°	522.3	526.5	508.9	488.3	475.9	480.0	496.5	511.0	508.9
62.5°	471.8	475.9	457.3	438.7	424.3	430.5	444.9	462.5	457.3
65°	421.2	424.3	404.7	388.1	375.7	381.9	392.3	410.8	406.7
67.5°	370.6	372.7	355.1	339.6	329.3	332.4	341.7	357.2	355.1
70°	320.0	322.1	305.6	291.1	281.8	284.9	292.1	306.6	304.5
72.5°	268.4	271.5	255.0	241.6	232.3	235.4	240.5	253.9	250.8
75°	216.8	218.8	206.5	196.1	187.9	188.9	193.0	203.4	202.3
77.5°	169.3	174.5	161.0	151.7	145.6	146.6	151.7	156.9	154.8
80°	122.8	129.0	119.7	112.5	107.4	106.3	110.5	114.6	111.5
82.5°	86.7	87.7	81.6	76.4	71.2	71.2	74.3	77.4	74.3
85°	51.6	53.7	48.5	44.4	41.3	40.3	42.3	45.4	43.4
87.5°	24.8	25.8	20.6	18.6	15.5	14.5	15.5	17.5	17.5
90°	2.1	5.2	5.2	6.2	7.2	7.2	6.2	6.2	1.0
92.5°	55.7	61.9	65.0	63.0	61.9	58.8	58.8	55.7	49.5
95°	88.8	98.1	102.2	101.2	101.2	97.0	96.0	92.9	83.6
97.5°	131.1	141.4	144.5	145.6	144.5	139.4	136.3	133.2	122.8
100°	179.6	189.9	193.0	193.0	192.0	186.8	182.7	178.6	167.2
102.5°	233.3	243.6	246.7	244.7	244.7	237.4	233.3	230.2	217.8
105°	293.2	303.5	305.6	302.5	301.4	294.2	291.1	287.0	275.6
107.5°	351.0	361.3	360.3	359.2	355.1	349.9	347.9	341.7	327.2
110°	410.8	424.3	419.1	417.0	412.9	407.8	405.7	403.6	392.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	470.7	485.2	479.0	476.9	471.8	465.6	465.6	464.5	453.2
115°	531.6	546.1	539.9	535.8	531.6	525.4	524.4	525.4	513.0
117.5°	590.5	607.0	599.8	594.6	590.5	583.2	584.3	586.3	572.9
120°	649.3	667.9	659.6	653.4	650.3	642.1	643.1	647.2	631.8
122.5°	707.1	725.7	718.5	712.3	709.2	699.9	701.9	704.0	689.6
125°	764.9	783.5	777.3	770.1	767.0	760.8	761.8	761.8	747.4
127.5°	821.7	840.3	836.1	827.9	823.8	815.5	819.6	816.5	804.1
130°	877.4	895.0	892.9	883.6	880.5	875.4	878.5	869.2	859.9
132.5°	932.1	949.7	950.7	940.4	936.3	931.1	937.3	927.0	914.6
135°	986.9	1002.3	1006.5	995.1	990.0	985.8	994.1	977.6	967.2
137.5°	1039.5	1051.9	1061.2	1047.8	1043.6	1036.4	1046.7	1030.2	1020.9
140°	1093.2	1103.5	1111.8	1101.4	1096.3	1090.1	1098.3	1081.8	1072.5
142.5°	1142.7	1154.1	1162.3	1152.0	1145.8	1140.7	1148.9	1131.4	1123.1
145°	1192.3	1201.6	1211.9	1202.6	1196.4	1191.2	1198.5	1180.9	1172.7
147.5°	1238.7	1247.0	1259.4	1249.1	1242.9	1238.7	1243.9	1226.3	1219.1
150°	1284.2	1288.3	1300.7	1294.5	1286.2	1282.1	1286.2	1270.7	1264.5
152.5°	1326.5	1329.6	1340.9	1333.7	1329.6	1322.3	1327.5	1312.0	1307.9
155°	1365.7	1366.7	1380.2	1371.9	1366.7	1361.6	1365.7	1353.3	1348.2
157.5°	1402.9	1402.9	1412.2	1408.0	1399.8	1397.7	1400.8	1387.4	1386.4
160°	1434.9	1432.8	1444.2	1436.9	1429.7	1427.6	1432.8	1420.4	1419.4
162.5°	1464.8	1460.7	1471.0	1461.7	1455.5	1453.4	1460.7	1449.3	1450.4
165°	1489.6	1484.4	1492.7	1483.4	1477.2	1476.2	1484.4	1473.1	1477.2
167.5°	1511.3	1503.0	1510.2	1500.9	1495.8	1494.7	1504.0	1493.7	1499.9
170°	1527.8	1517.5	1523.6	1511.3	1509.2	1507.1	1518.5	1509.2	1519.5
172.5°	1541.2	1529.8	1531.9	1518.5	1511.3	1515.4	1527.8	1522.6	1534.0
175°	1549.5	1537.1	1535.0	1520.5	1508.2	1517.5	1532.9	1531.9	1545.3
177.5°	1552.5	1541.2	1538.1	1521.6	1517.5	1519.5	1537.1	1538.1	1550.5
180°	1536.0	1536.0	1536.0	1536.0	1536.0	1536.0	1536.0	1536.0	1536.0

(END OF REPORT)