

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: P199414

Luminaire Tested: **S122-DIW-U2-LO-30-0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199414  
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-DIW-U2-LO-30-0048-1D-UDD-1-5-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT WALL LED LUMINAIRE  
UPLIGHT LL2-3000K, SATIN WHITE DIFFUSER  
DOWNLIGHT LLO-3000K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

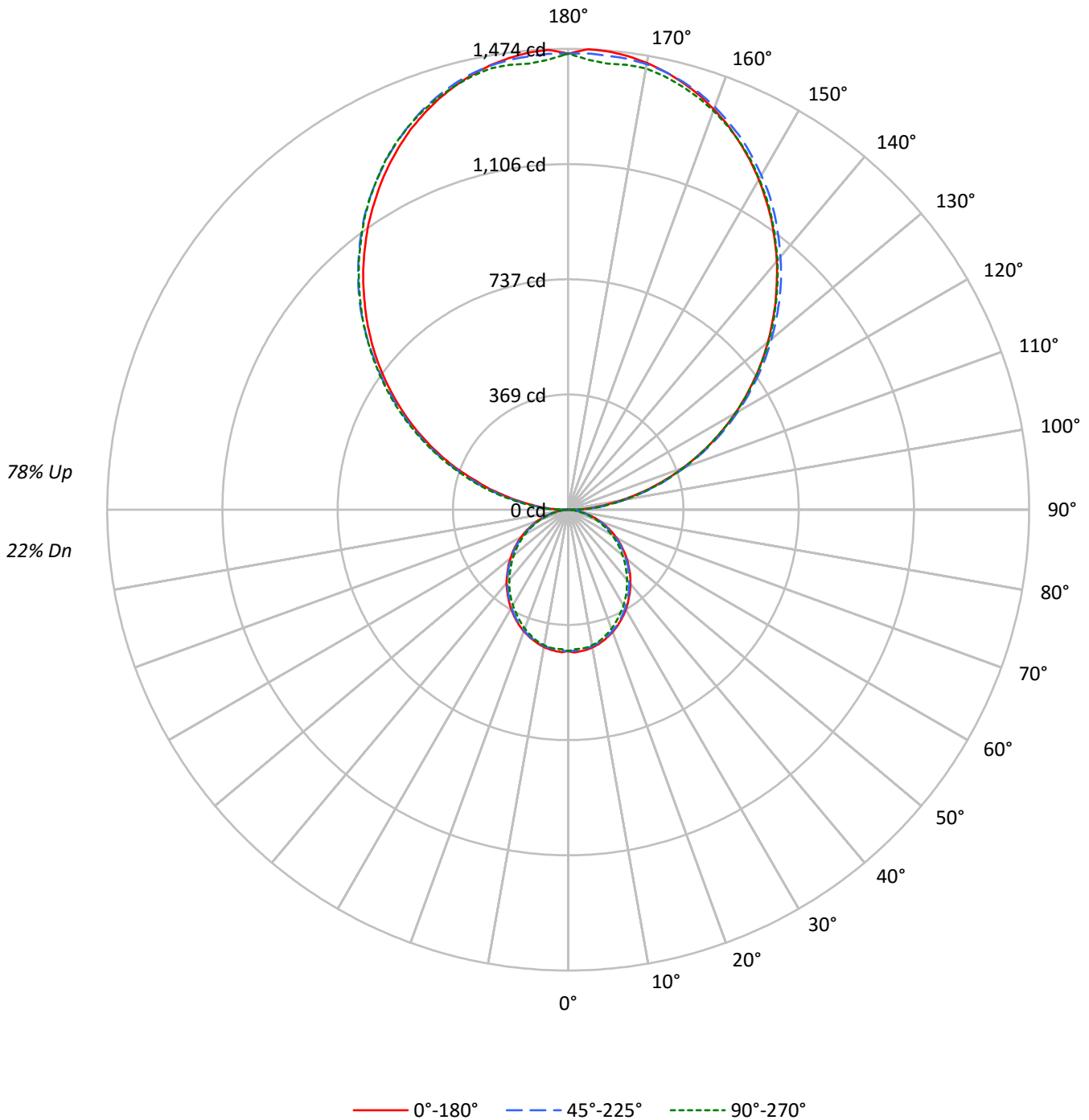
Lumens per Lamp: N/A  
Luminaire Lumens: 5279.9 lumens  
Efficiency: N/A  
Efficacy: 101.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.17 / 1.31  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4.08' x H: 0.38')  
CIE Type: Semi-Indirect

Input Watts (W): 52.3  
Input Voltage (V): NR  
Input Current (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	100	100	100	100	89	89	89	89	68	68	68	48	48	48	30	30	30	22
1	92	87	84	80	81	78	75	72	59	57	55	42	41	40	27	26	26	19
2	83	76	70	66	74	68	63	59	52	49	46	37	35	33	24	23	22	16
3	76	67	60	54	67	60	54	49	46	42	38	33	30	28	21	20	18	13
4	69	59	52	46	61	53	46	41	41	36	33	29	26	24	19	17	16	11
5	64	52	45	39	56	47	40	35	36	31	28	26	23	21	17	15	14	10
6	58	47	39	34	52	42	35	30	32	28	24	24	20	18	15	13	12	9
7	54	42	35	29	48	38	31	27	29	25	21	21	18	16	14	12	11	8
8	50	38	31	26	44	34	28	23	27	22	19	19	16	14	13	11	10	7
9	46	35	27	23	41	31	25	21	24	20	17	18	15	13	12	10	9	6
10	43	32	25	20	38	28	22	18	22	18	15	16	13	11	11	9	8	6

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

	0°	90°	180°
0°	7154	7154	7154
5°	7163	5926	7152
10°	7066	5060	7049
15°	6932	4353	6905
20°	6775	3746	6741
25°	6587	3233	6552
30°	6394	2810	6341
35°	6163	2431	6105
40°	5935	2091	5881
45°	5697	1789	5597
50°	5431	1517	5314
55°	5134	1271	5049
60°	4831	1042	4708
65°	4462	818	4308
70°	4006	615	3811
75°	3345	414	3122
80°	2491	241	2264
85°	1549	95	1301



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.6	0.8
10°-20°	120.7	2.3
20°-30°	178.1	3.4
30°-40°	207.7	3.9
40°-50°	208.1	3.9
50°-60°	182.0	3.4
60°-70°	133.9	2.5
70°-80°	72.6	1.4
80°-90°	18.6	0.4
90°-100°	100.7	1.9
100°-110°	296.8	5.6
110°-120°	499.2	9.5
120°-130°	651.0	12.3
130°-140°	725.8	13.7
140°-150°	709.8	13.4
150°-160°	597.1	11.3
160°-170°	396.9	7.5
170°-180°	138.2	2.6
0°-30°	341.5	6.5
0°-40°	549.1	10.4
0°-60°	939.2	17.8
0°-90°	1164.3	22.1
90°-120°	896.7	17.0
90°-150°	2983.4	56.5
90°-180°	4116.0	78.0
0°-180°	5279.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	452	452	452	452	452	
5°	455	450	447	449	454	43
15°	434	430	426	430	432	122
25°	394	390	380	389	392	181
35°	340	335	324	333	336	213
45°	278	273	260	270	273	214
55°	211	207	194	203	207	189
65°	143	137	127	133	138	141
75°	74	70	64	65	69	78
85°	18	16	14	14	15	20
90°	1	2	2	2	0	9
95°	84	97	96	91	79	87
105°	278	290	286	276	262	294
115°	505	513	505	498	487	499
125°	726	738	728	723	710	649
135°	937	956	940	944	918	723
145°	1132	1151	1136	1138	1114	708
155°	1297	1311	1298	1297	1280	597
165°	1414	1417	1403	1410	1403	399
175°	1471	1458	1432	1456	1467	140
180°	1459	1459	1459	1459	1459	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	452.3	452.3	452.3	452.3	452.3	452.3	452.3	452.3	452.3
2.5°	456.9	450.6	451.6	450.2	446.7	449.9	451.3	450.2	456.2
5°	454.8	448.5	449.5	447.8	446.7	447.8	449.2	447.8	454.1
7.5°	452.0	445.0	447.1	446.0	445.0	445.7	446.7	444.3	450.9
10°	447.1	440.1	443.3	441.2	440.1	440.8	442.6	439.1	446.0
12.5°	441.5	434.5	437.7	435.2	434.2	434.2	437.3	433.5	439.8
15°	433.8	428.2	430.3	427.9	426.1	427.2	429.6	426.8	432.1
17.5°	425.1	420.2	422.6	418.8	415.6	418.1	421.6	418.4	423.7
20°	416.0	410.4	412.8	407.6	404.8	406.9	411.4	409.0	413.9
22.5°	405.8	400.6	402.7	395.7	392.9	394.6	401.3	398.8	403.4
25°	393.6	389.4	389.7	382.7	379.6	381.7	388.7	387.3	391.5
27.5°	381.7	377.5	377.8	369.8	366.3	369.1	376.1	375.0	378.9
30°	368.7	364.9	364.5	356.5	353.7	355.4	362.4	362.4	365.6
32.5°	354.4	351.2	349.5	342.1	339.3	341.4	347.4	348.4	350.9
35°	339.7	337.6	335.1	328.2	324.3	327.1	332.7	334.1	336.5
37.5°	325.0	322.6	319.8	312.8	308.6	312.1	317.0	319.4	321.2
40°	309.6	307.9	304.7	297.7	292.5	296.0	301.6	304.4	306.8
42.5°	293.9	292.8	289.0	281.6	276.4	280.2	286.2	288.6	289.7
45°	278.1	276.7	273.2	265.5	259.9	264.1	270.4	272.9	273.2
47.5°	260.6	261.0	256.8	249.1	243.5	247.7	253.3	256.8	258.2
50°	244.9	245.2	240.3	232.6	227.0	230.2	236.8	240.3	239.6
52.5°	228.1	229.1	223.9	216.2	210.6	213.8	220.4	224.2	224.6
55°	210.6	212.4	206.8	199.1	194.2	197.3	202.9	207.5	207.1
57.5°	193.8	195.2	189.6	182.6	177.7	180.5	185.4	191.4	190.0
60°	177.0	178.4	172.5	165.5	161.3	162.7	168.3	173.2	172.5
62.5°	159.9	161.3	155.0	148.7	143.8	145.9	150.8	156.7	155.0
65°	142.7	143.8	137.1	131.5	127.3	129.4	132.9	139.2	137.8
67.5°	125.6	126.3	120.3	115.1	111.6	112.6	115.8	121.0	120.3
70°	108.5	109.2	103.6	98.7	95.5	96.6	99.0	103.9	103.2
72.5°	91.0	92.0	86.4	81.9	78.7	79.8	81.5	86.1	85.0
75°	73.5	74.2	70.0	66.5	63.7	64.0	65.4	68.9	68.6
77.5°	57.4	59.1	54.6	51.4	49.3	49.7	51.4	53.2	52.5
80°	41.6	43.7	40.6	38.1	36.4	36.0	37.4	38.8	37.8
82.5°	29.4	29.7	27.6	25.9	24.1	24.1	25.2	26.2	25.2
85°	17.5	18.2	16.4	15.0	14.0	13.6	14.3	15.4	14.7
87.5°	8.4	8.7	7.0	6.3	5.2	4.9	5.2	5.9	5.9
90°	0.7	1.7	1.7	2.1	2.4	2.4	2.1	2.1	0.3
92.5°	52.9	58.8	61.8	59.8	58.8	55.9	55.9	52.9	47.1
95°	84.3	93.1	97.0	96.1	96.1	92.1	91.2	88.2	79.4
97.5°	124.5	134.3	137.2	138.2	137.2	132.3	129.4	126.4	116.6
100°	170.6	180.4	183.3	183.3	182.3	177.4	173.5	169.6	158.8
102.5°	221.5	231.3	234.3	232.3	232.3	225.5	221.5	218.6	206.8
105°	278.4	288.2	290.1	287.2	286.2	279.4	276.4	272.5	261.7
107.5°	333.3	343.1	342.1	341.1	337.2	332.3	330.3	324.5	310.7
110°	390.1	402.9	398.0	396.0	392.1	387.2	385.2	383.3	372.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	447.0	460.7	454.8	452.9	448.0	442.1	442.1	441.1	430.3
115°	504.8	518.5	512.7	508.7	504.8	498.9	498.0	498.9	487.2
117.5°	560.7	576.4	569.5	564.6	560.7	553.8	554.8	556.8	544.0
120°	616.6	634.2	626.4	620.5	617.5	609.7	610.7	614.6	599.9
122.5°	671.5	689.1	682.2	676.4	673.4	664.6	666.6	668.5	654.8
125°	726.3	744.0	738.1	731.2	728.3	722.4	723.4	723.4	709.7
127.5°	780.3	797.9	794.0	786.1	782.2	774.4	778.3	775.4	763.6
130°	833.2	849.9	847.9	839.1	836.1	831.2	834.2	825.4	816.5
132.5°	885.1	901.8	902.8	893.0	889.1	884.2	890.0	880.2	868.5
135°	937.1	951.8	955.7	944.9	940.0	936.1	944.0	928.3	918.5
137.5°	987.1	998.9	1007.7	994.9	991.0	984.1	993.9	978.3	969.4
140°	1038.1	1047.9	1055.7	1045.9	1041.0	1035.1	1043.0	1027.3	1018.5
142.5°	1085.1	1095.9	1103.7	1093.9	1088.1	1083.2	1091.0	1074.3	1066.5
145°	1132.2	1141.0	1150.8	1142.0	1136.1	1131.2	1138.0	1121.4	1113.5
147.5°	1176.3	1184.1	1195.9	1186.1	1180.2	1176.3	1181.2	1164.5	1157.6
150°	1219.4	1223.3	1235.1	1229.2	1221.4	1217.4	1221.4	1206.7	1200.8
152.5°	1259.6	1262.5	1273.3	1266.5	1262.5	1255.7	1260.6	1245.9	1241.9
155°	1296.8	1297.8	1310.6	1302.7	1297.8	1292.9	1296.8	1285.1	1280.2
157.5°	1332.1	1332.1	1340.9	1337.0	1329.2	1327.2	1330.2	1317.4	1316.4
160°	1362.5	1360.6	1371.3	1364.5	1357.6	1355.7	1360.6	1348.8	1347.8
162.5°	1390.9	1387.0	1396.8	1388.0	1382.1	1380.2	1387.0	1376.2	1377.2
165°	1414.5	1409.6	1417.4	1408.6	1402.7	1401.7	1409.6	1398.8	1402.7
167.5°	1435.1	1427.2	1434.1	1425.2	1420.3	1419.4	1428.2	1418.4	1424.3
170°	1450.7	1440.9	1446.8	1435.1	1433.1	1431.1	1441.9	1433.1	1442.9
172.5°	1463.5	1452.7	1454.7	1441.9	1435.1	1439.0	1450.7	1445.8	1456.6
175°	1471.3	1459.6	1457.6	1443.9	1432.1	1440.9	1455.6	1454.7	1467.4
177.5°	1474.3	1463.5	1460.5	1444.9	1440.9	1442.9	1459.6	1460.5	1472.3
180°	1458.6	1458.6	1458.6	1458.6	1458.6	1458.6	1458.6	1458.6	1458.6

(END OF REPORT)