

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: P199395

Luminaire Tested: **S122-DIW-U1-2-40-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199395  
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-DIW-U1-2-40-0048-1D-UDD-1-NA-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT WALL LED LUMINAIRE  
UPLIGHT LL1-4000K, NO LENS  
DOWNLIGHT LL2-4000K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

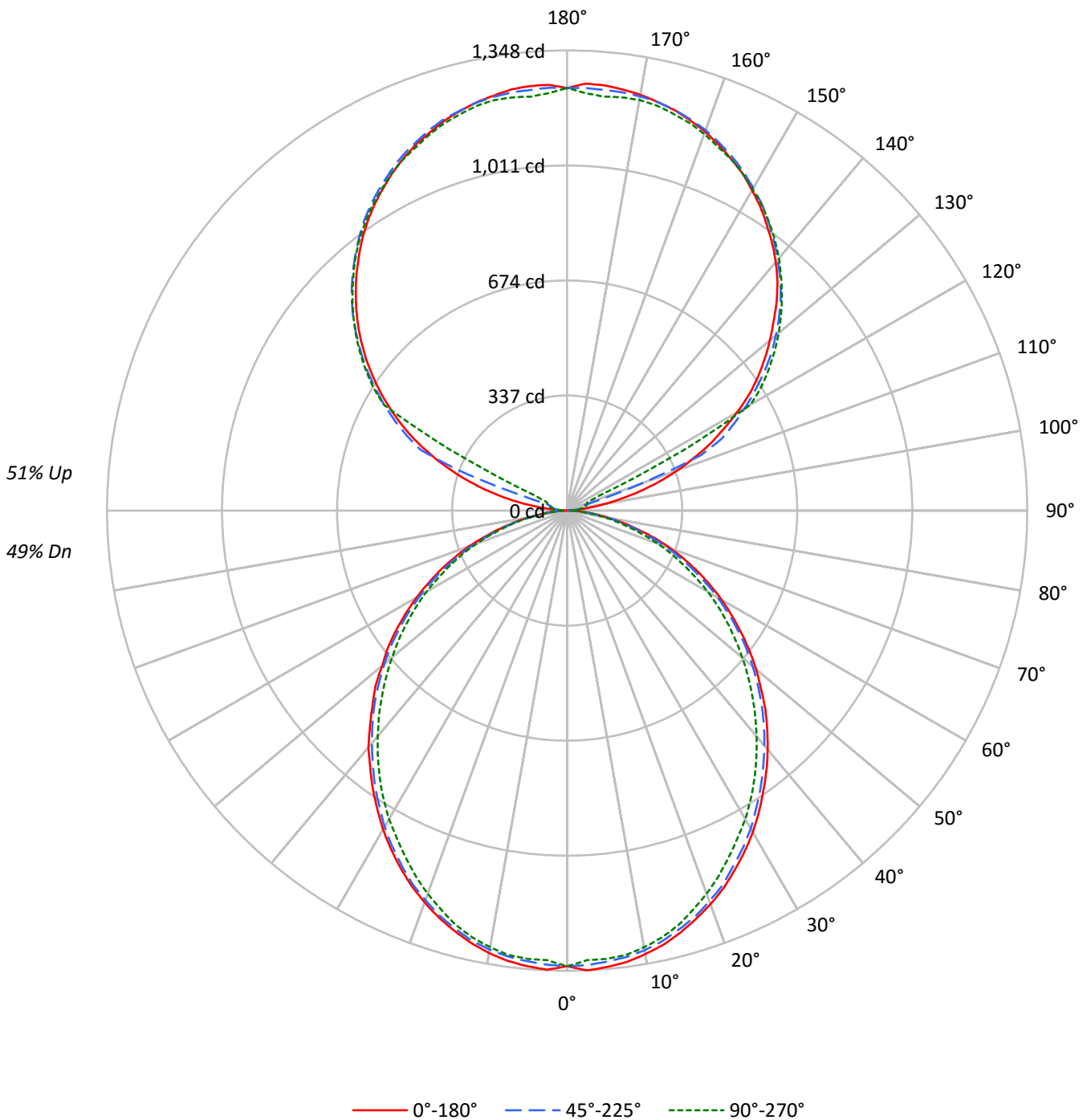
Lumens per Lamp: N/A  
Luminaire Lumens: 6947.6 lumens  
Efficiency: N/A  
Efficacy: 103.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.17 / 1.31  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4.08' x H: 0.38')  
CIE Type: General Diffuse

Input Watts (W): 67  
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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	49				
1	98	93	90	86	90	86	83	80	73	70	68	61	59	57	49	48	47	42				
2	89	82	75	70	82	75	70	66	64	60	57	53	50	48	43	41	40	35				
3	81	72	64	59	75	66	60	55	56	52	48	47	44	41	38	36	34	30				
4	74	63	56	50	68	59	52	46	50	45	41	42	38	35	34	31	29	25				
5	68	57	48	42	63	52	45	40	45	39	35	38	33	30	31	28	25	22				
6	63	51	43	37	58	47	40	35	40	35	30	34	30	26	28	25	22	19				
7	58	46	38	32	53	43	35	30	37	31	27	31	27	23	26	22	20	17				
8	54	42	34	28	50	39	32	27	33	28	24	28	24	21	24	20	18	15				
9	50	38	30	25	46	35	29	24	31	25	21	26	22	19	22	18	16	14				
10	47	35	28	23	43	32	26	22	28	23	19	24	20	17	20	17	15	13				

**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	1.8
10°-20°	356.2	5.1
20°-30°	525.4	7.6
30°-40°	612.7	8.8
40°-50°	614.0	8.8
50°-60°	537.1	7.7
60°-70°	395.2	5.7
70°-80°	214.2	3.1
80°-90°	54.9	0.8
90°-100°	30.9	0.4
100°-110°	139.0	2.0
110°-120°	404.0	5.8
120°-130°	631.2	9.1
130°-140°	680.5	9.8
140°-150°	643.1	9.3
150°-160°	524.4	7.5
160°-170°	341.3	4.9
170°-180°	117.6	1.7
0°-30°	1007.5	14.5
0°-40°	1620.2	23.3
0°-60°	2771.4	39.9
0°-90°	3435.6	49.5
90°-120°	573.9	8.3
90°-150°	2528.7	36.4
90°-180°	3512.0	50.6
0°-180°	6947.6	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	5
95°	30	24	28	29	52	42
105°	223	47	57	49	262	237
115°	461	500	102	517	493	454
125°	682	703	721	715	699	608
135°	868	885	890	893	875	669
145°	1020	1030	1031	1037	1024	639
155°	1136	1144	1136	1145	1137	524
165°	1215	1215	1203	1213	1212	343
175°	1250	1237	1217	1237	1248	119
180°	1238	1238	1238	1238	1238	



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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°	4.3	10.0	10.0	12.2	12.9	15.1	17.2	17.9	19.4
95°	30.1	21.5	24.4	26.5	28.0	30.1	28.7	26.5	52.3
97.5°	67.4	27.2	34.4	35.8	38.0	38.7	38.7	30.1	95.4
100°	112.6	31.5	40.9	46.6	48.0	48.0	43.7	67.4	147.0
102.5°	165.6	140.5	44.5	51.6	54.5	52.3	46.6	228.7	204.3
105°	223.0	253.1	47.3	54.5	57.4	55.9	48.8	281.8	262.4
107.5°	283.2	306.9	50.2	57.4	60.2	58.1	59.5	336.3	320.5
110°	343.4	363.5	225.1	59.5	62.4	59.5	311.9	391.5	378.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	400.8	421.6	423.0	63.1	63.8	68.1	463.9	447.4	436.6
115°	461.0	478.2	500.5	291.1	101.8	320.5	516.9	502.6	493.3
117.5°	516.2	532.7	549.9	511.9	390.0	557.1	567.9	557.1	547.8
120°	574.3	590.8	601.6	618.8	620.2	620.2	618.0	609.4	599.4
122.5°	631.7	642.4	651.0	668.2	674.0	667.5	666.1	658.2	650.3
125°	681.9	691.9	703.4	714.8	720.6	714.1	714.8	704.8	699.1
127.5°	729.2	737.8	752.8	760.0	765.7	758.6	761.4	750.7	746.4
130°	775.1	780.8	798.0	803.7	808.8	804.5	806.6	795.1	791.6
132.5°	820.2	828.1	842.5	844.6	850.3	843.9	851.8	836.0	834.6
135°	867.6	874.0	884.8	885.5	889.8	886.2	892.6	879.7	875.4
137.5°	912.0	914.9	924.2	921.3	927.8	922.0	931.4	918.5	915.6
140°	950.7	952.9	959.3	960.8	965.1	960.0	967.2	954.3	952.9
142.5°	986.6	989.4	995.2	994.5	999.5	994.5	1003.1	991.6	990.2
145°	1020.3	1024.6	1029.6	1027.4	1031.0	1028.2	1036.8	1024.6	1023.9
147.5°	1054.0	1055.4	1062.6	1059.0	1061.1	1057.6	1066.9	1056.8	1055.4
150°	1083.4	1086.2	1090.5	1086.2	1086.9	1084.8	1094.1	1085.5	1084.1
152.5°	1112.8	1112.0	1118.5	1109.9	1113.5	1109.9	1120.6	1112.0	1112.0
155°	1136.4	1135.7	1143.6	1134.3	1135.7	1132.8	1145.0	1135.0	1137.1
157.5°	1160.1	1156.5	1165.8	1156.5	1153.6	1155.8	1165.1	1155.8	1160.1
160°	1180.9	1177.3	1185.9	1175.9	1173.7	1175.1	1185.2	1176.6	1178.0
162.5°	1198.8	1193.8	1201.7	1190.9	1190.9	1188.8	1201.7	1193.1	1197.4
165°	1214.6	1208.8	1215.3	1204.5	1203.1	1201.7	1213.1	1207.4	1211.7
167.5°	1226.0	1220.3	1226.0	1213.9	1215.3	1212.4	1223.9	1220.3	1225.3
170°	1236.8	1229.6	1231.8	1221.0	1221.0	1218.9	1231.1	1227.5	1234.6
172.5°	1244.0	1236.1	1236.1	1223.9	1221.0	1222.5	1235.4	1234.6	1244.7
175°	1250.4	1239.7	1236.8	1225.3	1217.4	1224.6	1236.8	1239.0	1248.3
177.5°	1251.9	1241.8	1239.0	1226.0	1223.9	1224.6	1239.7	1240.4	1248.3
180°	1237.5	1237.5	1237.5	1237.5	1237.5	1237.5	1237.5	1237.5	1237.5

(END OF REPORT)