

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: P199394

Luminaire Tested: **S122-DIW-U1-2-40-0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199394  
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-U1-2-40-0048-1D-UDD-1-5-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT WALL LED LUMINAIRE  
UPLIGHT LL1-4000K, SATIN WHITE DIFFUSER  
DOWNLIGHT LL2-4000K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

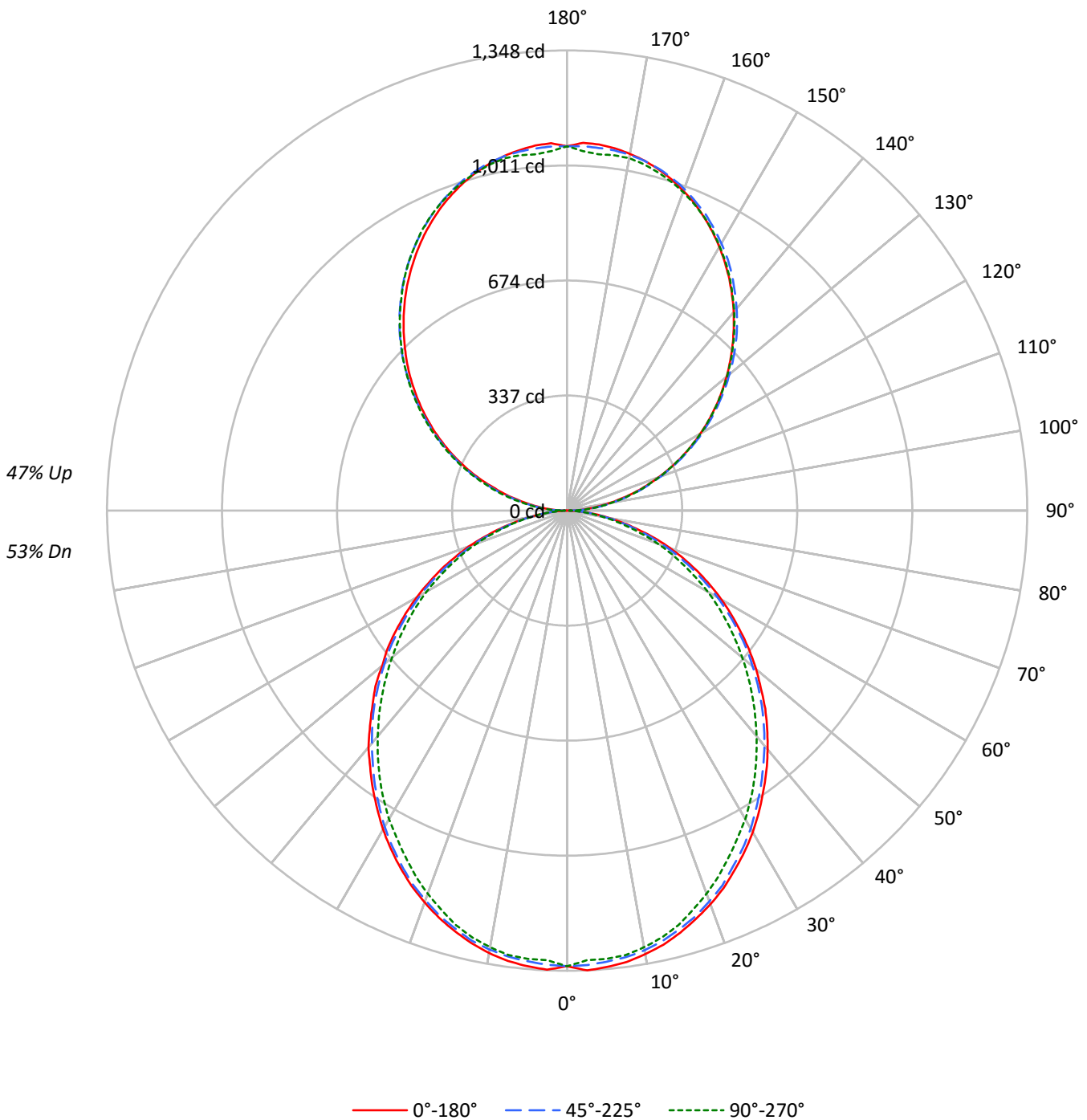
Lumens per Lamp: N/A  
Luminaire Lumens: 6446.5 lumens  
Efficiency: N/A  
Efficacy: 96.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.17 / 1.31  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4.08' x H: 0.38')  
CIE Type: General Diffuse

Input Watts (W): 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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	53				
1	99	94	90	87	91	87	84	81	75	72	70	63	61	60	52	51	50	45				
2	90	82	76	71	83	76	71	67	66	62	58	55	53	50	46	44	42	38				
3	82	72	65	59	76	67	61	56	58	53	49	49	45	42	41	38	36	32				
4	75	64	56	50	69	60	53	47	51	46	42	44	40	36	37	33	31	27				
5	69	57	49	43	63	53	46	41	46	40	36	39	35	31	33	30	27	24				
6	63	51	43	37	59	48	41	35	41	36	31	35	31	28	30	26	24	21				
7	59	46	38	33	54	43	36	31	38	32	28	32	28	24	27	24	21	19				
8	54	42	34	29	50	39	32	27	34	29	25	30	25	22	25	22	19	17				
9	51	38	31	26	47	36	29	25	31	26	22	27	23	20	23	20	17	15				
10	47	35	28	23	44	33	26	22	29	24	20	25	21	18	21	18	16	14				

**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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CATALOG NUMBER: S122-DIW-U1-2-40-0048-1D-UDD-1-5-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.8	2.0
10°-20°	356.2	5.5
20°-30°	525.4	8.2
30°-40°	612.7	9.5
40°-50°	614.0	9.5
50°-60°	537.1	8.3
60°-70°	395.2	6.1
70°-80°	214.2	3.3
80°-90°	54.9	0.9
90°-100°	74.2	1.2
100°-110°	217.1	3.4
110°-120°	365.1	5.7
120°-130°	476.2	7.4
130°-140°	530.9	8.2
140°-150°	519.2	8.1
150°-160°	436.7	6.8
160°-170°	290.3	4.5
170°-180°	101.1	1.6
0°-30°	1007.5	15.6
0°-40°	1620.2	25.1
0°-60°	2771.4	43.0
0°-90°	3435.6	53.3
90°-120°	656.5	10.2
90°-150°	2182.8	33.9
90°-180°	3011.0	46.7
0°-180°	6446.5	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	9
95°	62	71	70	67	58	64
105°	204	212	209	202	191	215
115°	369	375	369	364	356	365
125°	531	540	533	529	519	475
135°	685	699	688	690	672	529
145°	828	842	831	832	814	518
155°	949	959	949	949	936	437
165°	1035	1037	1026	1031	1026	292
175°	1076	1066	1048	1065	1073	102
180°	1067	1067	1067	1067	1067	



TEST NUMBER: P199394

CATALOG NUMBER: S122-DIW-U1-2-40-0048-1D-UDD-1-5-W

**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°	38.7	43.0	45.2	43.7	43.0	40.9	40.9	38.7	34.4
95°	61.7	68.1	71.0	70.3	70.3	67.4	66.7	64.5	58.1
97.5°	91.1	98.2	100.4	101.1	100.4	96.8	94.6	92.5	85.3
100°	124.8	131.9	134.1	134.1	133.4	129.8	126.9	124.0	116.2
102.5°	162.0	169.2	171.4	169.9	169.9	164.9	162.0	159.9	151.3
105°	203.6	210.8	212.2	210.1	209.4	204.3	202.2	199.3	191.4
107.5°	243.8	250.9	250.2	249.5	246.6	243.1	241.6	237.3	227.3
110°	285.4	294.7	291.1	289.7	286.8	283.2	281.8	280.3	272.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	326.9	337.0	332.7	331.2	327.7	323.4	323.4	322.6	314.8
115°	369.2	379.3	375.0	372.1	369.2	364.9	364.2	364.9	356.3
117.5°	410.1	421.6	416.6	413.0	410.1	405.1	405.8	407.2	397.9
120°	451.0	463.9	458.2	453.9	451.7	446.0	446.7	449.5	438.8
122.5°	491.1	504.0	499.0	494.7	492.6	486.1	487.5	489.0	478.9
125°	531.3	544.2	539.9	534.9	532.7	528.4	529.1	529.1	519.1
127.5°	570.7	583.6	580.8	575.0	572.2	566.4	569.3	567.1	558.5
130°	609.4	621.6	620.2	613.7	611.6	608.0	610.2	603.7	597.2
132.5°	647.4	659.6	660.3	653.2	650.3	646.7	651.0	643.9	635.2
135°	685.4	696.2	699.1	691.2	687.6	684.7	690.5	679.0	671.8
137.5°	722.0	730.6	737.1	727.7	724.9	719.9	727.0	715.6	709.1
140°	759.3	766.5	772.2	765.0	761.4	757.1	762.9	751.4	744.9
142.5°	793.7	801.6	807.3	800.2	795.9	792.3	798.0	785.8	780.1
145°	828.1	834.6	841.7	835.3	831.0	827.4	832.4	820.2	814.5
147.5°	860.4	866.1	874.7	867.6	863.3	860.4	864.0	851.8	846.8
150°	891.9	894.8	903.4	899.1	893.4	890.5	893.4	882.6	878.3
152.5°	921.3	923.5	931.4	926.3	923.5	918.5	922.0	911.3	908.4
155°	948.6	949.3	958.6	952.9	949.3	945.7	948.6	940.0	936.4
157.5°	974.4	974.4	980.8	978.0	972.2	970.8	972.9	963.6	962.9
160°	996.6	995.2	1003.1	998.0	993.0	991.6	995.2	986.6	985.9
162.5°	1017.4	1014.5	1021.7	1015.3	1010.9	1009.5	1014.5	1006.6	1007.4
165°	1034.6	1031.0	1036.8	1030.3	1026.0	1025.3	1031.0	1023.1	1026.0
167.5°	1049.7	1043.9	1048.9	1042.5	1038.9	1038.2	1044.6	1037.5	1041.8
170°	1061.1	1054.0	1058.3	1049.7	1048.2	1046.8	1054.7	1048.2	1055.4
172.5°	1070.5	1062.6	1064.0	1054.7	1049.7	1052.5	1061.1	1057.6	1065.4
175°	1076.2	1067.6	1066.2	1056.1	1047.5	1054.0	1064.7	1064.0	1073.3
177.5°	1078.3	1070.5	1068.3	1056.8	1054.0	1055.4	1067.6	1068.3	1076.9
180°	1066.9	1066.9	1066.9	1066.9	1066.9	1066.9	1066.9	1066.9	1066.9

(END OF REPORT)