

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: P199406

Luminaire Tested: **S122-DIW-U2-1-40-0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199406  
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-U2-1-40-0048-1D-UDD-1-5-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT WALL LED LUMINAIRE  
UPLIGHT LL2-4000K, SATIN WHITE DIFFUSER  
DOWNLIGHT LL1-4000K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

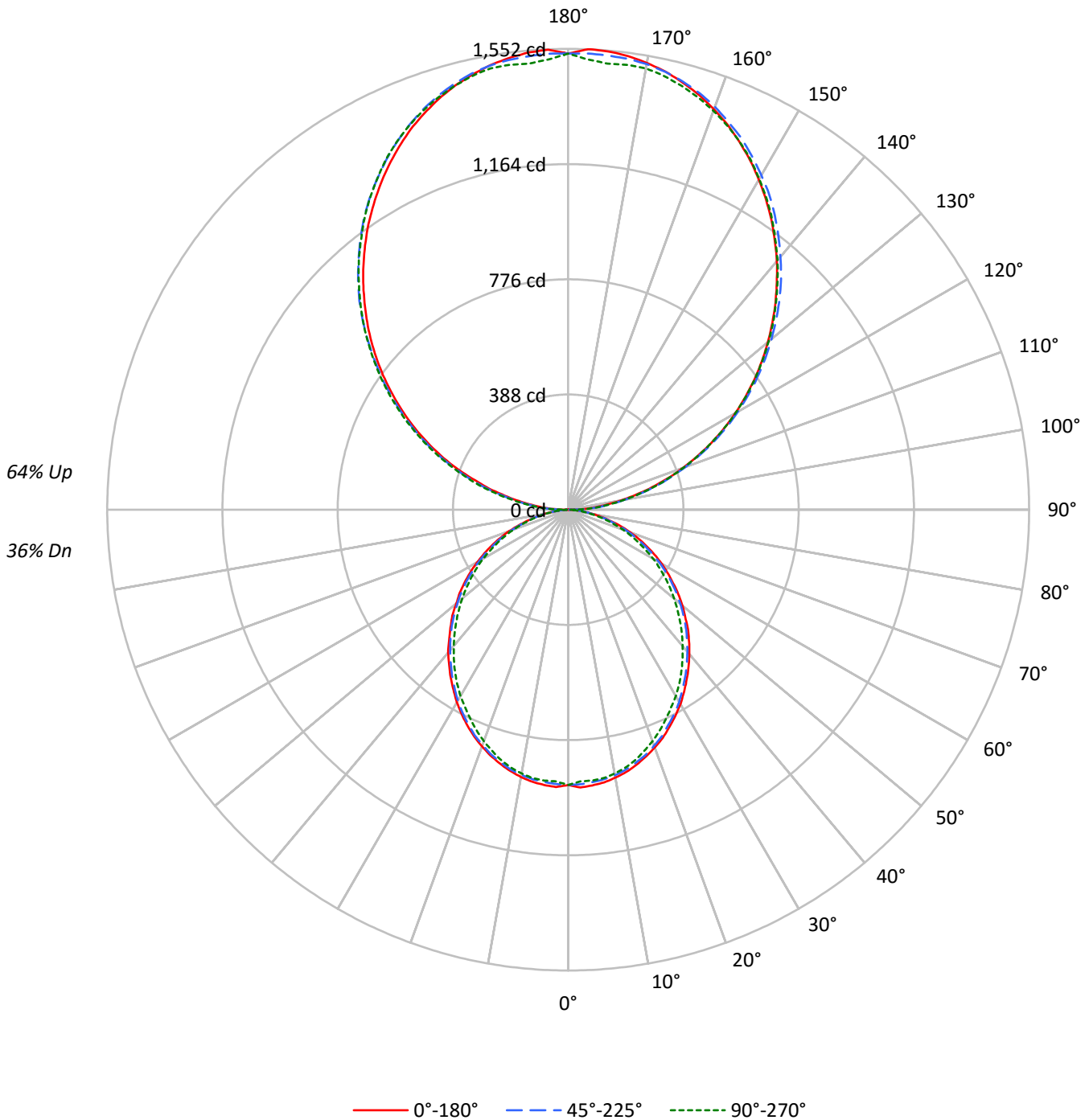
Lumens per Lamp: N/A  
Luminaire Lumens: 6720.6 lumens  
Efficiency: N/A  
Efficacy: 102.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.17 / 1.31  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4.08' x H: 0.38')  
CIE Type: Semi-Indirect

Input Watts (W): 65.5  
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

TEST NUMBER: P199406

CATALOG NUMBER: S122-DIW-U2-1-40-0048-1D-UDD-1-5-W

### Luminous Intensity Polar Plot





TEST NUMBER: P199406

CATALOG NUMBER: S122-DIW-U2-1-40-0048-1D-UDD-1-5-W

**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	104	104	104	104	94	94	94	94	75	75	75	58	58	58	43	43	43	36
1	95	90	87	83	85	82	79	76	66	64	62	51	50	49	38	37	36	30
2	86	79	73	68	78	72	66	62	58	54	51	45	43	41	33	32	30	25
3	79	69	62	56	71	63	57	52	51	47	43	40	37	34	30	28	26	21
4	72	61	54	48	65	56	49	44	45	40	37	35	32	29	26	24	22	18
5	66	54	47	41	59	50	43	38	40	35	31	32	28	25	24	21	19	16
6	61	49	41	35	55	44	38	33	36	31	27	29	25	22	22	19	17	14
7	56	44	36	31	50	40	33	28	33	28	24	26	22	20	20	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	18	15	14	11
9	48	36	29	24	44	33	27	22	27	22	19	22	18	16	17	14	12	10
10	45	33	26	21	41	30	24	20	25	20	17	20	17	14	15	13	11	9

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

	0°	90°	180°
0°	14663	14663	14663
5°	14681	12146	14657
10°	14481	10372	14448
15°	14208	8921	14151
20°	13884	7677	13814
25°	13498	6625	13426
30°	13106	5758	12994
35°	12630	4982	12512
40°	12163	4285	12054
45°	11677	3666	11472
50°	11131	3110	10892
55°	10521	2604	10348
60°	9901	2135	9647
65°	9145	1677	8833
70°	8209	1260	7810
75°	6854	849	6394
80°	5109	494	4635
85°	3170	195	2665



TEST NUMBER: P199406

CATALOG NUMBER: S122-DIW-U2-1-40-0048-1D-UDD-1-5-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.4	1.3
10°-20°	247.4	3.7
20°-30°	364.9	5.4
30°-40°	425.6	6.3
40°-50°	426.5	6.3
50°-60°	373.1	5.6
60°-70°	274.5	4.1
70°-80°	148.8	2.2
80°-90°	38.1	0.6
90°-100°	106.3	1.6
100°-110°	312.6	4.7
110°-120°	525.7	7.8
120°-130°	685.6	10.2
130°-140°	764.4	11.4
140°-150°	747.5	11.1
150°-160°	628.8	9.4
160°-170°	418.0	6.2
170°-180°	145.6	2.2
0°-30°	699.8	10.4
0°-40°	1125.4	16.7
0°-60°	1924.9	28.6
0°-90°	2386.3	35.5
90°-120°	944.6	14.1
90°-150°	3142.1	46.8
90°-180°	4334.0	64.5
0°-180°	6720.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	927	927	927	927	927	
5°	932	921	916	921	931	88
15°	889	882	873	880	886	251
25°	807	799	778	797	802	372
35°	696	687	665	682	690	436
45°	570	560	533	554	560	439
55°	432	424	398	416	424	387
65°	292	281	261	272	282	289
75°	151	143	130	134	140	160
85°	36	34	29	29	30	40
90°	1	4	5	4	1	10
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	



TEST NUMBER: P199406

CATALOG NUMBER: S122-DIW-U2-1-40-0048-1D-UDD-1-5-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	927.1	927.1	927.1	927.1	927.1	927.1	927.1	927.1	927.1
2.5°	936.4	923.5	925.6	922.8	915.6	922.0	924.9	922.8	934.9
5°	932.1	919.2	921.3	917.7	915.6	917.7	920.6	917.7	930.6
7.5°	926.3	912.0	916.3	914.2	912.0	913.4	915.6	910.6	924.2
10°	916.3	902.0	908.4	904.1	902.0	903.4	907.0	899.8	914.2
12.5°	904.8	890.5	896.9	891.9	889.8	889.8	896.2	888.3	901.3
15°	889.1	877.6	881.9	876.9	873.3	875.4	880.5	874.7	885.5
17.5°	871.1	861.1	866.1	858.2	851.8	856.8	864.0	857.5	868.3
20°	852.5	841.0	846.0	835.3	829.6	833.9	843.2	838.2	848.2
22.5°	831.7	820.9	825.3	810.9	805.2	808.8	822.4	817.4	826.7
25°	806.6	798.0	798.7	784.4	777.9	782.2	796.6	793.7	802.3
27.5°	782.2	773.6	774.3	757.9	750.7	756.4	770.8	768.6	776.5
30°	755.7	747.8	747.1	730.6	724.9	728.5	742.8	742.8	749.2
32.5°	726.3	719.9	716.3	701.2	695.5	699.8	712.0	714.1	719.1
35°	696.2	691.9	686.9	672.5	664.6	670.4	681.9	684.7	689.7
37.5°	666.1	661.1	655.3	641.0	632.4	639.6	649.6	654.6	658.2
40°	634.5	630.9	624.5	610.2	599.4	606.6	618.0	623.8	628.8
42.5°	602.3	600.1	592.2	577.2	566.4	574.3	586.5	591.5	593.7
45°	570.0	567.1	560.0	544.2	532.7	541.3	554.2	559.2	560.0
47.5°	534.2	534.9	526.3	510.5	499.0	507.6	519.1	526.3	529.1
50°	501.9	502.6	492.6	476.8	465.3	471.8	485.4	492.6	491.1
52.5°	467.5	469.6	458.9	443.1	431.6	438.1	451.7	459.6	460.3
55°	431.6	435.2	423.7	408.0	397.9	404.4	415.9	425.2	424.5
57.5°	397.2	400.1	388.6	374.3	364.2	370.0	380.0	392.2	389.3
60°	362.8	365.7	353.5	339.1	330.5	333.4	344.9	354.9	353.5
62.5°	327.7	330.5	317.6	304.7	294.7	299.0	309.0	321.2	317.6
65°	292.5	294.7	281.1	269.6	261.0	265.3	272.5	285.4	282.5
67.5°	257.4	258.8	246.6	235.9	228.7	230.9	237.3	248.1	246.6
70°	222.3	223.7	212.2	202.2	195.7	197.9	202.9	212.9	211.5
72.5°	186.4	188.6	177.1	167.8	161.3	163.5	167.1	176.4	174.2
75°	150.6	152.0	143.4	136.2	130.5	131.2	134.1	141.2	140.5
77.5°	117.6	121.2	111.8	105.4	101.1	101.8	105.4	109.0	107.5
80°	85.3	89.6	83.2	78.2	74.6	73.8	76.7	79.6	77.4
82.5°	60.2	60.9	56.6	53.1	49.5	49.5	51.6	53.8	51.6
85°	35.8	37.3	33.7	30.8	28.7	28.0	29.4	31.5	30.1
87.5°	17.2	17.9	14.3	12.9	10.8	10.0	10.8	12.2	12.2
90°	1.4	3.6	3.6	4.3	5.0	5.0	4.3	4.3	0.7
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



TEST NUMBER: P199406

CATALOG NUMBER: S122-DIW-U2-1-40-0048-1D-UDD-1-5-W

**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)