

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: P199426

Luminaire Tested: **S122-DIW-ULO-2-30-0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199426  
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-ULO-2-30-0048-1D-UDD-1-5-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT WALL LED LUMINAIRE  
UPLIGHT LLO-3000K, SATIN WHITE DIFFUSER  
DOWNLIGHT LL2-3000K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

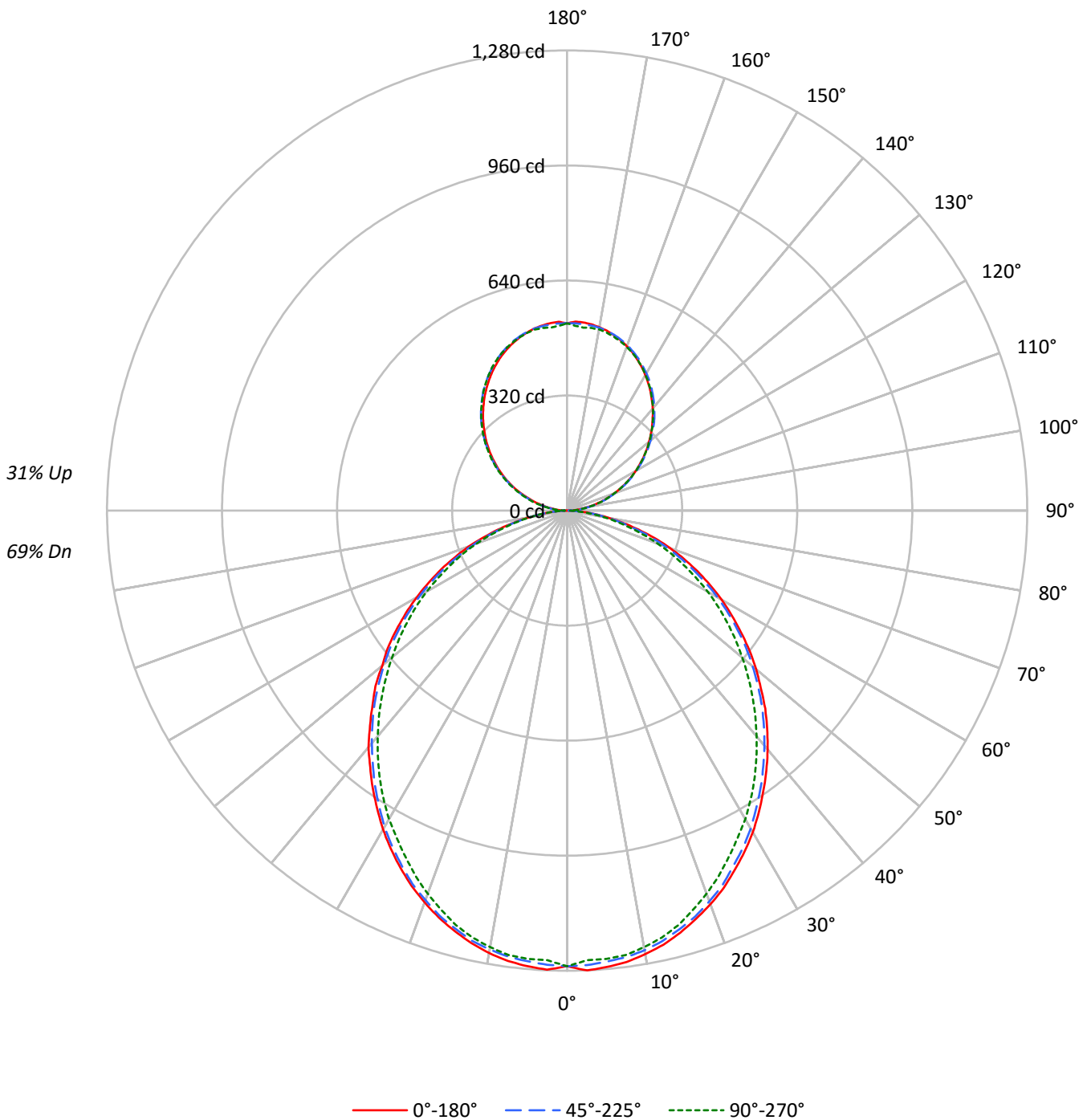
Lumens per Lamp: N/A  
Luminaire Lumens: 4731.8 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.17 / 1.31  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4.08' x H: 0.38')  
CIE Type: Semi-Direct

Input Watts (W): 55.1  
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	112	112	112	112	105	105	105	105	94	94	94	83	83	83	74	74	74	69
1	102	98	94	90	96	92	89	86	83	80	77	73	71	70	65	64	62	58
2	93	85	79	74	88	81	75	70	72	68	64	65	61	58	57	55	52	49
3	85	75	68	61	80	71	64	59	64	58	54	57	53	49	51	48	45	41
4	78	67	58	52	73	63	56	50	57	51	46	51	46	42	45	42	39	35
5	71	59	51	45	67	56	49	43	51	45	40	46	41	37	41	37	34	31
6	66	53	45	39	62	51	43	38	46	40	35	41	36	32	37	33	30	27
7	61	48	40	34	58	46	39	33	42	35	31	38	33	29	34	30	26	24
8	57	44	36	31	53	42	35	30	38	32	28	35	29	26	31	27	24	21
9	53	40	33	27	50	39	31	26	35	29	25	32	27	23	29	25	21	19
10	50	37	30	25	47	35	29	24	32	26	22	30	24	21	27	23	19	18

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

	0°	90°	180°
0°	20045	20045	20045
5°	20070	16604	20039
10°	19798	14179	19752
15°	19425	12196	19346
20°	18982	10494	18886
25°	18455	9057	18356
30°	17919	7872	17765
35°	17267	6812	17107
40°	16629	5859	16480
45°	15965	5012	15684
50°	15219	4252	14893
55°	14385	3560	14146
60°	13536	2919	13190
65°	12503	2292	12075
70°	11222	1723	10679
75°	9366	1160	8743
80°	6983	674	6342
85°	4338	266	3648



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.5	2.5
10°-20°	338.3	7.1
20°-30°	498.9	10.5
30°-40°	581.8	12.3
40°-50°	583.1	12.3
50°-60°	510.0	10.8
60°-70°	375.3	7.9
70°-80°	203.4	4.3
80°-90°	52.1	1.1
90°-100°	36.6	0.8
100°-110°	105.9	2.2
110°-120°	178.2	3.8
120°-130°	232.4	4.9
130°-140°	259.0	5.5
140°-150°	253.3	5.4
150°-160°	213.1	4.5
160°-170°	141.6	3.0
170°-180°	49.3	1.0
0°-30°	956.7	20.2
0°-40°	1538.5	32.5
0°-60°	2631.6	55.6
0°-90°	3262.4	68.9
90°-120°	320.7	6.8
90°-150°	1065.4	22.5
90°-180°	1469.0	31.0
0°-180°	4731.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1267	1267	1267	1267	1267	
5°	1274	1260	1252	1259	1272	121
15°	1216	1206	1194	1204	1211	343
25°	1103	1092	1064	1089	1097	508
35°	952	939	909	932	943	596
45°	779	766	728	758	766	600
55°	590	579	544	568	580	528
65°	400	384	357	372	386	396
75°	206	196	178	183	192	219
85°	49	46	39	40	41	55
90°	2	5	7	6	1	6
95°	30	35	34	32	28	31
105°	99	104	102	99	93	105
115°	180	183	180	178	174	178
125°	259	263	260	258	253	232
135°	334	341	336	337	328	258
145°	404	411	406	406	397	253
155°	463	468	463	463	457	213
165°	505	506	501	503	501	142
175°	525	520	511	520	524	50
180°	521	521	521	521	521	



TEST NUMBER: P199426

CATALOG NUMBER: S122-DIW-ULO-2-30-0048-1D-UDD-1-5-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1267.4	1267.4	1267.4	1267.4	1267.4	1267.4	1267.4	1267.4	1267.4
2.5°	1280.2	1262.5	1265.5	1261.6	1251.7	1260.6	1264.5	1261.6	1278.2
5°	1274.3	1256.7	1259.6	1254.7	1251.7	1254.7	1258.6	1254.7	1272.3
7.5°	1266.5	1246.8	1252.7	1249.8	1246.8	1248.8	1251.7	1244.9	1263.5
10°	1252.7	1233.1	1241.9	1236.1	1233.1	1235.1	1240.0	1230.2	1249.8
12.5°	1237.0	1217.4	1226.3	1219.4	1216.5	1216.5	1225.3	1214.5	1232.1
15°	1215.5	1199.8	1205.7	1198.8	1193.9	1196.9	1203.7	1195.9	1210.6
17.5°	1191.0	1177.3	1184.1	1173.3	1164.5	1171.4	1181.2	1172.4	1187.1
20°	1165.5	1149.8	1156.7	1142.0	1134.1	1140.0	1152.7	1145.9	1159.6
22.5°	1137.1	1122.4	1128.2	1108.6	1100.8	1105.7	1124.3	1117.5	1130.2
25°	1102.8	1091.0	1092.0	1072.4	1063.5	1069.4	1089.0	1085.1	1096.9
27.5°	1069.4	1057.7	1058.6	1036.1	1026.3	1034.1	1053.7	1050.8	1061.6
30°	1033.2	1022.4	1021.4	998.9	991.0	995.9	1015.5	1015.5	1024.3
32.5°	993.0	984.1	979.2	958.7	950.8	956.7	973.4	976.3	983.2
35°	951.8	945.9	939.1	919.5	908.7	916.5	932.2	936.1	943.0
37.5°	910.6	903.8	895.9	876.3	864.6	874.4	888.1	894.9	899.8
40°	867.5	862.6	853.8	834.2	819.5	829.3	845.0	852.8	859.7
42.5°	823.4	820.4	809.7	789.1	774.4	785.2	801.8	808.7	811.6
45°	779.3	775.4	765.6	744.0	728.3	740.1	757.7	764.6	765.6
47.5°	730.3	731.2	719.5	697.9	682.2	694.0	709.7	719.5	723.4
50°	686.2	687.1	673.4	651.9	636.2	645.0	663.6	673.4	671.5
52.5°	639.1	642.0	627.3	605.8	590.1	598.9	617.5	628.3	629.3
55°	590.1	595.0	579.3	557.7	544.0	552.8	568.5	581.3	580.3
57.5°	543.0	547.0	531.3	511.7	498.0	505.8	519.5	536.2	532.3
60°	496.0	499.9	483.3	463.6	451.9	455.8	471.5	485.2	483.3
62.5°	448.0	451.9	434.2	416.6	402.9	408.8	422.5	439.1	434.2
65°	399.9	402.9	384.2	368.6	356.8	362.7	372.5	390.1	386.2
67.5°	351.9	353.9	337.2	322.5	312.7	315.6	324.5	339.2	337.2
70°	303.9	305.8	290.1	276.4	267.6	270.5	277.4	291.1	289.2
72.5°	254.9	257.8	242.1	229.4	220.6	223.5	228.4	241.1	238.2
75°	205.8	207.8	196.0	186.2	178.4	179.4	183.3	193.1	192.1
77.5°	160.8	165.7	152.9	144.1	138.2	139.2	144.1	149.0	147.0
80°	116.6	122.5	113.7	106.8	101.9	101.0	104.9	108.8	105.9
82.5°	82.3	83.3	77.4	72.5	67.6	67.6	70.6	73.5	70.6
85°	49.0	51.0	46.1	42.1	39.2	38.2	40.2	43.1	41.2
87.5°	23.5	24.5	19.6	17.6	14.7	13.7	14.7	16.7	16.7
90°	2.0	4.9	4.9	5.9	6.9	6.9	5.9	5.9	1.0
92.5°	18.9	21.0	22.0	21.3	21.0	19.9	19.9	18.9	16.8
95°	30.1	33.2	34.6	34.3	34.3	32.9	32.5	31.5	28.3
97.5°	44.4	47.9	49.0	49.3	49.0	47.2	46.2	45.1	41.6
100°	60.9	64.4	65.4	65.4	65.1	63.3	61.9	60.5	56.7
102.5°	79.1	82.6	83.6	82.9	82.9	80.5	79.1	78.0	73.8
105°	99.4	102.9	103.6	102.5	102.2	99.7	98.7	97.3	93.4
107.5°	118.9	122.4	122.1	121.7	120.3	118.6	117.9	115.8	110.9
110°	139.2	143.8	142.0	141.3	139.9	138.2	137.5	136.8	132.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	159.5	164.4	162.3	161.6	159.9	157.8	157.8	157.4	153.6
115°	180.2	185.1	183.0	181.6	180.2	178.1	177.7	178.1	173.9
117.5°	200.1	205.7	203.3	201.5	200.1	197.7	198.0	198.7	194.2
120°	220.1	226.3	223.5	221.5	220.4	217.6	218.0	219.4	214.1
122.5°	239.6	245.9	243.5	241.4	240.3	237.2	237.9	238.6	233.7
125°	259.2	265.5	263.4	261.0	259.9	257.8	258.2	258.2	253.3
127.5°	278.5	284.8	283.4	280.6	279.2	276.4	277.8	276.7	272.5
130°	297.4	303.3	302.6	299.5	298.4	296.7	297.7	294.6	291.4
132.5°	315.9	321.9	322.2	318.7	317.3	315.6	317.7	314.2	310.0
135°	334.4	339.7	341.1	337.2	335.5	334.1	336.9	331.3	327.8
137.5°	352.3	356.5	359.6	355.1	353.7	351.2	354.7	349.1	346.0
140°	370.5	374.0	376.8	373.3	371.5	369.4	372.2	366.6	363.5
142.5°	387.3	391.1	393.9	390.4	388.3	386.6	389.4	383.4	380.6
145°	404.1	407.2	410.7	407.6	405.5	403.7	406.2	400.2	397.4
147.5°	419.8	422.6	426.8	423.3	421.2	419.8	421.6	415.6	413.2
150°	435.2	436.6	440.8	438.7	435.9	434.5	435.9	430.7	428.6
152.5°	449.5	450.6	454.4	452.0	450.6	448.1	449.9	444.6	443.3
155°	462.8	463.2	467.7	464.9	463.2	461.4	462.8	458.6	456.9
157.5°	475.4	475.4	478.6	477.2	474.4	473.7	474.7	470.2	469.8
160°	486.3	485.6	489.4	487.0	484.5	483.8	485.6	481.4	481.0
162.5°	496.4	495.0	498.5	495.4	493.3	492.6	495.0	491.2	491.5
165°	504.8	503.1	505.9	502.7	500.6	500.3	503.1	499.2	500.6
167.5°	512.2	509.4	511.8	508.7	506.9	506.6	509.7	506.2	508.3
170°	517.8	514.3	516.4	512.2	511.5	510.8	514.6	511.5	515.0
172.5°	522.3	518.5	519.2	514.6	512.2	513.6	517.8	516.0	519.9
175°	525.1	520.9	520.2	515.3	511.1	514.3	519.5	519.2	523.7
177.5°	526.2	522.3	521.3	515.7	514.3	515.0	520.9	521.3	525.5
180°	520.6	520.6	520.6	520.6	520.6	520.6	520.6	520.6	520.6

(END OF REPORT)