

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: P199425

Luminaire Tested: **S122-DIP-ULO-1-40-X-X0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199425  
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-DIP-ULO-1-40-X-X0048-1D-UDD-1-NA-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE  
UPLIGHT LLO-4000K, NO LENS  
DOWNLIGHT LL1-4000K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4191.0 lumens  
Efficiency: N/A  
Efficacy: 104.5 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

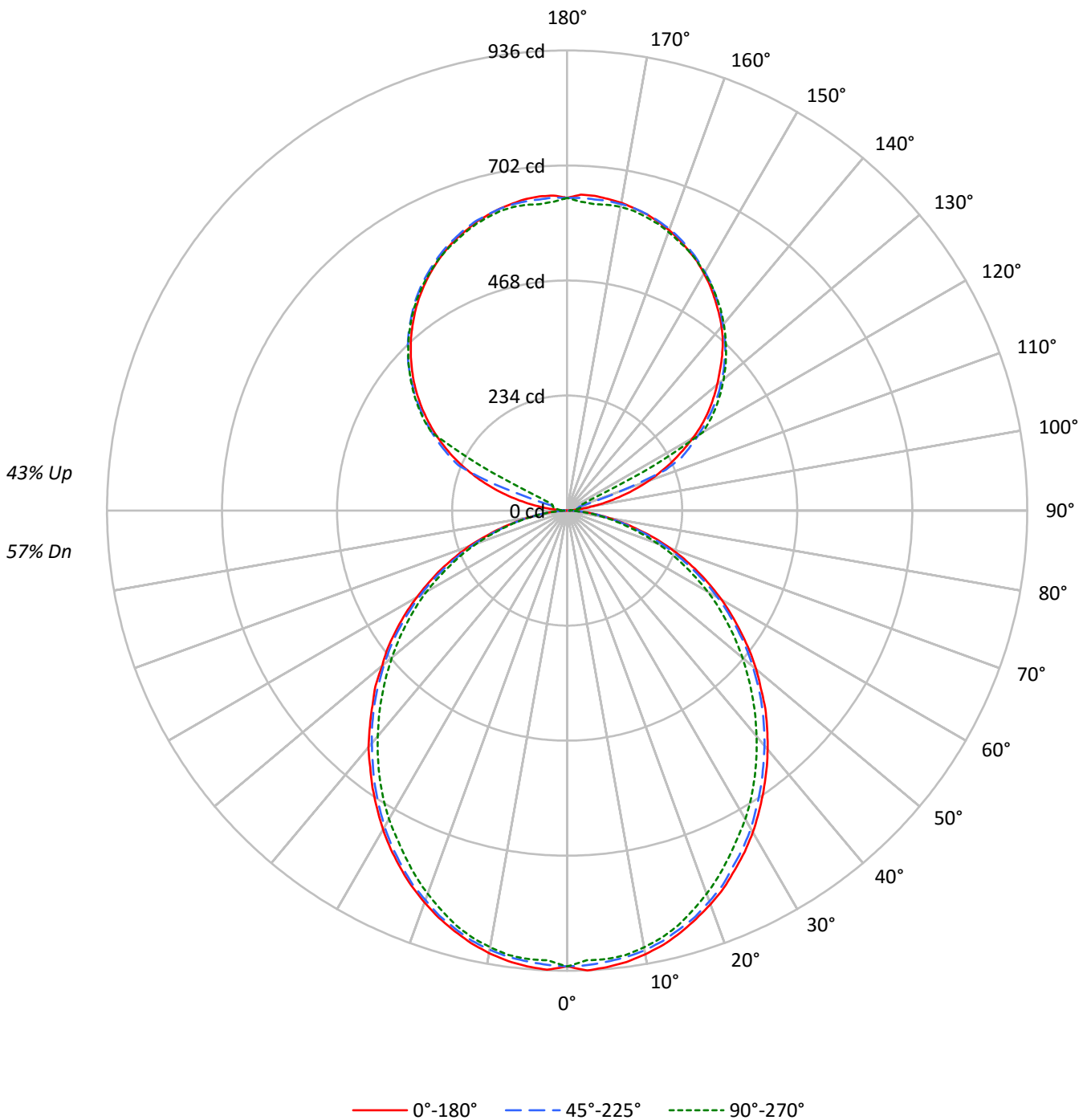
Input Watts (W): 40.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20										
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	50	30	10	0														
RCR																																						
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	57																				
1	99	95	91	88	92	89	85	82	77	74	72	66	64	62	55	54	53	48																				
2	91	83	77	72	84	78	72	67	67	63	59	58	55	52	49	47	45	40																				
3	83	73	66	60	77	68	62	56	59	54	50	51	47	44	43	40	38	34																				
4	76	65	57	51	70	61	53	48	53	47	43	45	41	38	39	35	33	29																				
5	69	58	49	43	64	54	47	41	47	41	37	41	36	33	35	31	29	25																				
6	64	52	44	38	59	49	41	36	43	37	32	37	32	29	32	28	25	22																				
7	59	47	39	33	55	44	37	31	39	33	28	34	29	25	29	25	22	20																				
8	55	42	35	29	51	40	33	28	35	29	25	31	26	23	26	23	20	18																				
9	51	39	31	26	48	37	30	25	32	27	23	28	24	20	24	21	18	16																				
10	48	36	28	23	45	34	27	22	30	24	20	26	22	18	23	19	16	15																				

**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



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.4	2.1
10°-20°	247.4	5.9
20°-30°	364.9	8.7
30°-40°	425.6	10.2
40°-50°	426.5	10.2
50°-60°	373.1	8.9
60°-70°	274.5	6.5
70°-80°	148.8	3.5
80°-90°	38.1	0.9
90°-100°	16.0	0.4
100°-110°	71.4	1.7
110°-120°	207.6	5.0
120°-130°	324.3	7.7
130°-140°	349.7	8.3
140°-150°	330.5	7.9
150°-160°	269.5	6.4
160°-170°	175.4	4.2
170°-180°	60.4	1.4
0°-30°	699.8	16.7
0°-40°	1125.4	26.9
0°-60°	1924.9	45.9
0°-90°	2386.3	56.9
90°-120°	295.0	7.0
90°-150°	1299.5	31.0
90°-180°	1805.0	43.1
0°-180°	4191.0	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	3
95°	16	12	14	15	27	22
105°	115	24	30	25	135	122
115°	237	257	52	266	254	233
125°	350	361	370	367	359	312
135°	446	455	457	459	450	344
145°	524	529	530	533	526	328
155°	584	588	584	588	584	269
165°	624	624	618	623	623	176
175°	642	636	626	636	641	61
180°	636	636	636	636	636	



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CATALOG NUMBER: S122-DIP-ULO-1-40-X-X0048-1D-UDD-1-NA-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°	2.2	5.2	5.2	6.3	6.6	7.7	8.8	9.2	9.9
95°	15.5	11.1	12.5	13.6	14.4	15.5	14.7	13.6	26.9
97.5°	34.6	14.0	17.7	18.4	19.5	19.9	19.9	15.5	49.0
100°	57.8	16.2	21.0	23.9	24.7	24.7	22.5	34.6	75.5
102.5°	85.1	72.2	22.8	26.5	28.0	26.9	23.9	117.5	105.0
105°	114.6	130.1	24.3	28.0	29.5	28.7	25.1	144.8	134.8
107.5°	145.5	157.7	25.8	29.5	30.9	29.8	30.6	172.8	164.7
110°	176.5	186.8	115.7	30.6	32.1	30.6	160.3	201.2	194.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	205.9	216.6	217.4	32.4	32.8	35.0	238.4	229.9	224.4
115°	236.9	245.7	257.2	149.6	52.3	164.7	265.6	258.3	253.5
117.5°	265.3	273.7	282.6	263.1	200.4	286.3	291.8	286.3	281.5
120°	295.1	303.6	309.1	317.9	318.7	318.7	317.6	313.2	308.0
122.5°	324.6	330.1	334.5	343.4	346.3	343.0	342.3	338.2	334.2
125°	350.4	355.5	361.4	367.3	370.3	366.9	367.3	362.2	359.2
127.5°	374.7	379.1	386.8	390.5	393.5	389.8	391.3	385.7	383.5
130°	398.3	401.2	410.1	413.0	415.6	413.4	414.5	408.6	406.7
132.5°	421.5	425.5	432.9	434.0	436.9	433.6	437.7	429.6	428.8
135°	445.8	449.1	454.6	455.0	457.2	455.4	458.7	452.1	449.8
137.5°	468.6	470.1	474.9	473.4	476.7	473.8	478.6	471.9	470.5
140°	488.5	489.6	492.9	493.7	495.9	493.3	497.0	490.4	489.6
142.5°	506.9	508.4	511.4	511.0	513.6	511.0	515.4	509.5	508.8
145°	524.3	526.5	529.1	527.9	529.8	528.3	532.7	526.5	526.1
147.5°	541.6	542.3	546.0	544.2	545.3	543.4	548.2	543.1	542.3
150°	556.7	558.2	560.4	558.2	558.5	557.4	562.2	557.8	557.1
152.5°	571.8	571.4	574.7	570.3	572.2	570.3	575.8	571.4	571.4
155°	583.9	583.6	587.6	582.8	583.6	582.1	588.4	583.2	584.3
157.5°	596.1	594.3	599.1	594.3	592.8	593.9	598.7	593.9	596.1
160°	606.8	604.9	609.4	604.2	603.1	603.8	609.0	604.6	605.3
162.5°	616.0	613.4	617.5	611.9	611.9	610.8	617.5	613.1	615.3
165°	624.1	621.2	624.5	618.9	618.2	617.5	623.4	620.4	622.6
167.5°	630.0	627.1	630.0	623.7	624.5	623.0	628.9	627.1	629.6
170°	635.5	631.8	632.9	627.4	627.4	626.3	632.6	630.7	634.4
172.5°	639.2	635.2	635.2	628.9	627.4	628.2	634.8	634.4	639.6
175°	642.5	637.0	635.5	629.6	625.6	629.3	635.5	636.6	641.4
177.5°	643.3	638.1	636.6	630.0	628.9	629.3	637.0	637.4	641.4
180°	635.9	635.9	635.9	635.9	635.9	635.9	635.9	635.9	635.9

(END OF REPORT)