

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: P199435

Luminaire Tested: **S122-DIP-ULO-LO-35-X-X0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199435  
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-LO-35-X-X0048-1D-UDD-1-NA-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE  
UPLIGHT LLO-3500K, NO LENS  
DOWNLIGHT LLO-3500K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2935.9 lumens  
Efficiency: N/A  
Efficacy: 109.1 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

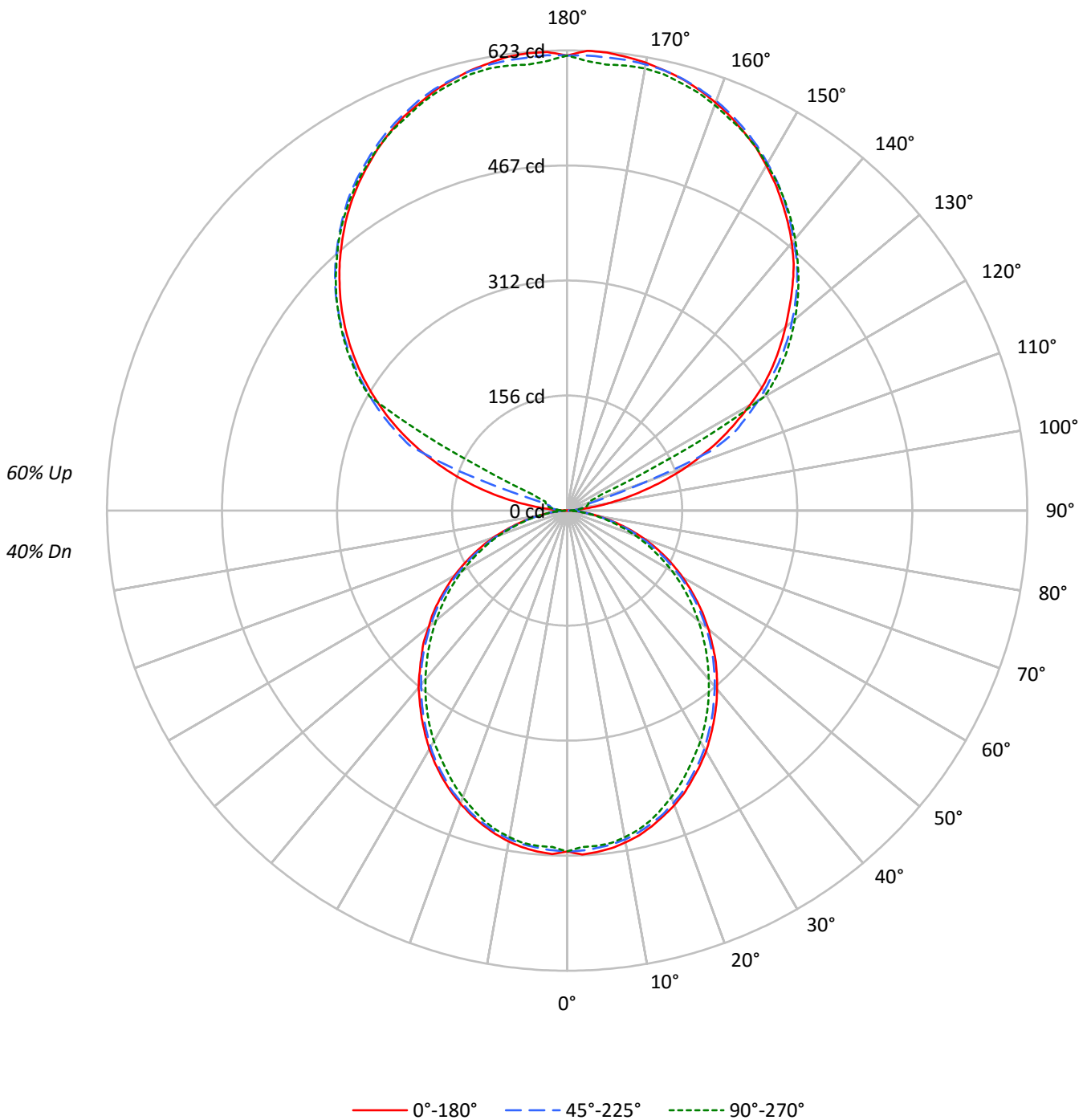
Input Watts (W): 26.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	78	78	78	62	62	62	47	47	47	40
1	96	91	88	84	87	83	80	77	68	66	64	55	53	52	42	41	40	34
2	87	80	74	69	79	73	68	63	60	56	53	48	45	43	37	35	34	29
3	79	70	63	57	72	64	58	53	53	48	45	42	39	37	33	31	29	24
4	73	62	54	48	66	57	50	45	47	42	38	38	34	31	29	27	25	21
5	67	55	47	41	60	51	44	38	42	37	33	34	30	27	26	24	22	18
6	61	49	41	36	56	45	38	33	38	32	28	31	27	24	24	21	19	16
7	57	45	37	31	51	41	34	29	34	29	25	28	24	21	22	19	17	14
8	53	40	33	28	48	37	30	26	31	26	22	25	21	19	20	17	15	13
9	49	37	29	24	44	34	27	23	28	23	20	23	19	17	18	16	14	11
10	46	34	27	22	42	31	25	20	26	21	18	21	18	15	17	14	12	10

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

	0°	90°	180°
0°	7299	7299	7299
5°	7308	6046	7297
10°	7208	5163	7191
15°	7073	4441	7044
20°	6912	3821	6876
25°	6719	3297	6684
30°	6525	2866	6469
35°	6286	2480	6228
40°	6056	2133	6000
45°	5812	1825	5709
50°	5540	1548	5423
55°	5239	1296	5151
60°	4929	1063	4803
65°	4552	835	4396
70°	4084	627	3888
75°	3409	423	3186
80°	2545	246	2306
85°	1576	97	1328



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.5	1.5
10°-20°	123.2	4.2
20°-30°	181.7	6.2
30°-40°	211.8	7.2
40°-50°	212.3	7.2
50°-60°	185.7	6.3
60°-70°	136.6	4.7
70°-80°	74.1	2.5
80°-90°	19.0	0.6
90°-100°	15.3	0.5
100°-110°	69.2	2.4
110°-120°	201.1	6.8
120°-130°	314.2	10.7
130°-140°	338.7	11.5
140°-150°	320.1	10.9
150°-160°	261.0	8.9
160°-170°	169.9	5.8
170°-180°	58.5	2.0
0°-30°	348.3	11.9
0°-40°	560.2	19.1
0°-60°	958.2	32.6
0°-90°	1187.8	40.5
90°-120°	285.6	9.7
90°-150°	1258.6	42.9
90°-180°	1748.0	59.5
0°-180°	2935.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	462	462	462	462	462	
5°	464	459	456	458	463	44
15°	443	439	435	438	441	125
25°	402	398	387	396	399	185
35°	346	342	331	339	343	217
45°	284	279	265	276	279	219
55°	215	211	198	207	211	192
65°	146	140	130	136	141	144
75°	75	71	65	67	70	80
85°	18	17	14	15	15	20
90°	1	2	2	2	0	2
95°	15	12	14	14	26	21
105°	111	24	29	24	131	118
115°	230	249	51	257	246	226
125°	339	350	359	356	348	303
135°	432	440	443	444	436	333
145°	508	512	513	516	510	318
155°	566	569	565	570	566	261
165°	605	605	599	604	603	171
175°	622	616	606	616	621	59
180°	616	616	616	616	616	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	461.5	461.5	461.5	461.5	461.5	461.5	461.5	461.5	461.5
2.5°	466.1	459.7	460.8	459.3	455.8	459.0	460.4	459.3	465.4
5°	464.0	457.5	458.6	456.8	455.8	456.8	458.3	456.8	463.3
7.5°	461.1	454.0	456.1	455.0	454.0	454.7	455.8	453.3	460.0
10°	456.1	449.0	452.2	450.1	449.0	449.7	451.5	447.9	455.0
12.5°	450.4	443.3	446.5	444.0	442.9	442.9	446.1	442.2	448.6
15°	442.6	436.8	439.0	436.5	434.7	435.8	438.3	435.4	440.8
17.5°	433.6	428.6	431.1	427.2	424.0	426.5	430.1	426.9	432.2
20°	424.4	418.6	421.1	415.8	412.9	415.1	419.7	417.2	422.2
22.5°	414.0	408.7	410.8	403.7	400.8	402.6	409.4	406.9	411.5
25°	401.5	397.2	397.6	390.4	387.2	389.4	396.5	395.1	399.4
27.5°	389.4	385.1	385.5	377.2	373.7	376.5	383.7	382.6	386.5
30°	376.2	372.2	371.9	363.7	360.8	362.6	369.7	369.7	373.0
32.5°	361.5	358.3	356.5	349.0	346.2	348.3	354.4	355.5	358.0
35°	346.5	344.4	341.9	334.8	330.8	333.7	339.4	340.8	343.3
37.5°	331.6	329.1	326.2	319.1	314.8	318.4	323.4	325.8	327.6
40°	315.9	314.1	310.9	303.7	298.4	301.9	307.6	310.5	313.0
42.5°	299.8	298.7	294.8	287.3	282.0	285.9	291.9	294.4	295.5
45°	283.7	282.3	278.7	270.9	265.2	269.5	275.9	278.4	278.7
47.5°	265.9	266.2	262.0	254.1	248.4	252.7	258.4	262.0	263.4
50°	249.8	250.2	245.2	237.3	231.6	234.8	241.6	245.2	244.5
52.5°	232.7	233.8	228.4	220.6	214.9	218.1	224.8	228.8	229.1
55°	214.9	216.6	210.9	203.1	198.1	201.3	207.0	211.6	211.3
57.5°	197.7	199.2	193.4	186.3	181.3	184.2	189.2	195.2	193.8
60°	180.6	182.0	176.0	168.8	164.5	166.0	171.7	176.7	176.0
62.5°	163.1	164.5	158.1	151.7	146.7	148.8	153.8	159.9	158.1
65°	145.6	146.7	139.9	134.2	129.9	132.1	135.6	142.0	140.6
67.5°	128.1	128.8	122.8	117.4	113.9	114.9	118.1	123.5	122.8
70°	110.6	111.4	105.6	100.6	97.4	98.5	101.0	106.0	105.3
72.5°	92.8	93.9	88.2	83.5	80.3	81.4	83.2	87.8	86.7
75°	74.9	75.7	71.4	67.8	65.0	65.3	66.7	70.3	70.0
77.5°	58.5	60.3	55.7	52.5	50.3	50.7	52.5	54.2	53.5
80°	42.5	44.6	41.4	38.9	37.1	36.8	38.2	39.6	38.5
82.5°	30.0	30.3	28.2	26.4	24.6	24.6	25.7	26.8	25.7
85°	17.8	18.6	16.8	15.3	14.3	13.9	14.6	15.7	15.0
87.5°	8.6	8.9	7.1	6.4	5.4	5.0	5.4	6.1	6.1
90°	0.7	1.8	1.8	2.1	2.5	2.5	2.1	2.1	0.4
92.5°	2.1	5.0	5.0	6.1	6.4	7.5	8.6	8.9	9.6
95°	15.0	10.7	12.1	13.2	13.9	15.0	14.3	13.2	26.1
97.5°	33.5	13.6	17.1	17.8	18.9	19.3	19.3	15.0	47.5
100°	56.0	15.7	20.3	23.2	23.9	23.9	21.8	33.5	73.2
102.5°	82.4	70.0	22.1	25.7	27.1	26.1	23.2	113.9	101.7
105°	111.0	126.0	23.6	27.1	28.6	27.8	24.3	140.3	130.6
107.5°	141.0	152.8	25.0	28.6	30.0	28.9	29.6	167.4	159.5
110°	171.0	180.9	112.1	29.6	31.1	29.6	155.3	194.9	188.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	199.5	209.9	210.6	31.4	31.8	33.9	230.9	222.7	217.4
115°	229.5	238.1	249.1	144.9	50.7	159.5	257.3	250.2	245.5
117.5°	257.0	265.2	273.7	254.8	194.2	277.3	282.7	277.3	272.7
120°	285.9	294.1	299.4	308.0	308.7	308.7	307.6	303.4	298.4
122.5°	314.4	319.8	324.1	332.6	335.5	332.3	331.6	327.6	323.7
125°	339.4	344.4	350.1	355.8	358.7	355.5	355.8	350.8	348.0
127.5°	363.0	367.2	374.7	378.3	381.2	377.6	379.0	373.7	371.5
130°	385.8	388.7	397.2	400.1	402.6	400.4	401.5	395.8	394.0
132.5°	408.3	412.2	419.4	420.4	423.3	420.1	424.0	416.1	415.4
135°	431.8	435.1	440.4	440.8	442.9	441.1	444.3	437.9	435.8
137.5°	454.0	455.4	460.0	458.6	461.8	459.0	463.6	457.2	455.8
140°	473.2	474.3	477.5	478.2	480.4	477.9	481.5	475.0	474.3
142.5°	491.1	492.5	495.4	495.0	497.5	495.0	499.3	493.6	492.9
145°	507.9	510.0	512.5	511.4	513.2	511.8	516.1	510.0	509.7
147.5°	524.6	525.4	528.9	527.1	528.2	526.4	531.1	526.1	525.4
150°	539.3	540.7	542.8	540.7	541.1	540.0	544.6	540.3	539.6
152.5°	553.9	553.6	556.8	552.5	554.3	552.5	557.8	553.6	553.6
155°	565.7	565.3	569.3	564.6	565.3	563.9	570.0	565.0	566.0
157.5°	577.5	575.7	580.3	575.7	574.3	575.3	580.0	575.3	577.5
160°	587.8	586.0	590.3	585.3	584.2	585.0	590.0	585.7	586.4
162.5°	596.7	594.2	598.2	592.8	592.8	591.7	598.2	593.9	596.0
165°	604.6	601.7	604.9	599.6	598.9	598.2	603.9	601.0	603.2
167.5°	610.3	607.4	610.3	604.2	604.9	603.5	609.2	607.4	609.9
170°	615.7	612.1	613.2	607.8	607.8	606.7	612.8	611.0	614.6
172.5°	619.2	615.3	615.3	609.2	607.8	608.5	614.9	614.6	619.6
175°	622.4	617.1	615.7	609.9	606.0	609.6	615.7	616.7	621.4
177.5°	623.1	618.2	616.7	610.3	609.2	609.6	617.1	617.4	621.4
180°	616.0	616.0	616.0	616.0	616.0	616.0	616.0	616.0	616.0

(END OF REPORT)