

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: P199433

Luminaire Tested: **S122-DIW-ULO-LO-30-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199433  
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-DIW-ULO-LO-30-0048-1D-UDD-1-NA-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT WALL LED LUMINAIRE  
UPLIGHT LLO-3000K, NO LENS  
DOWNLIGHT LLO-3000K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

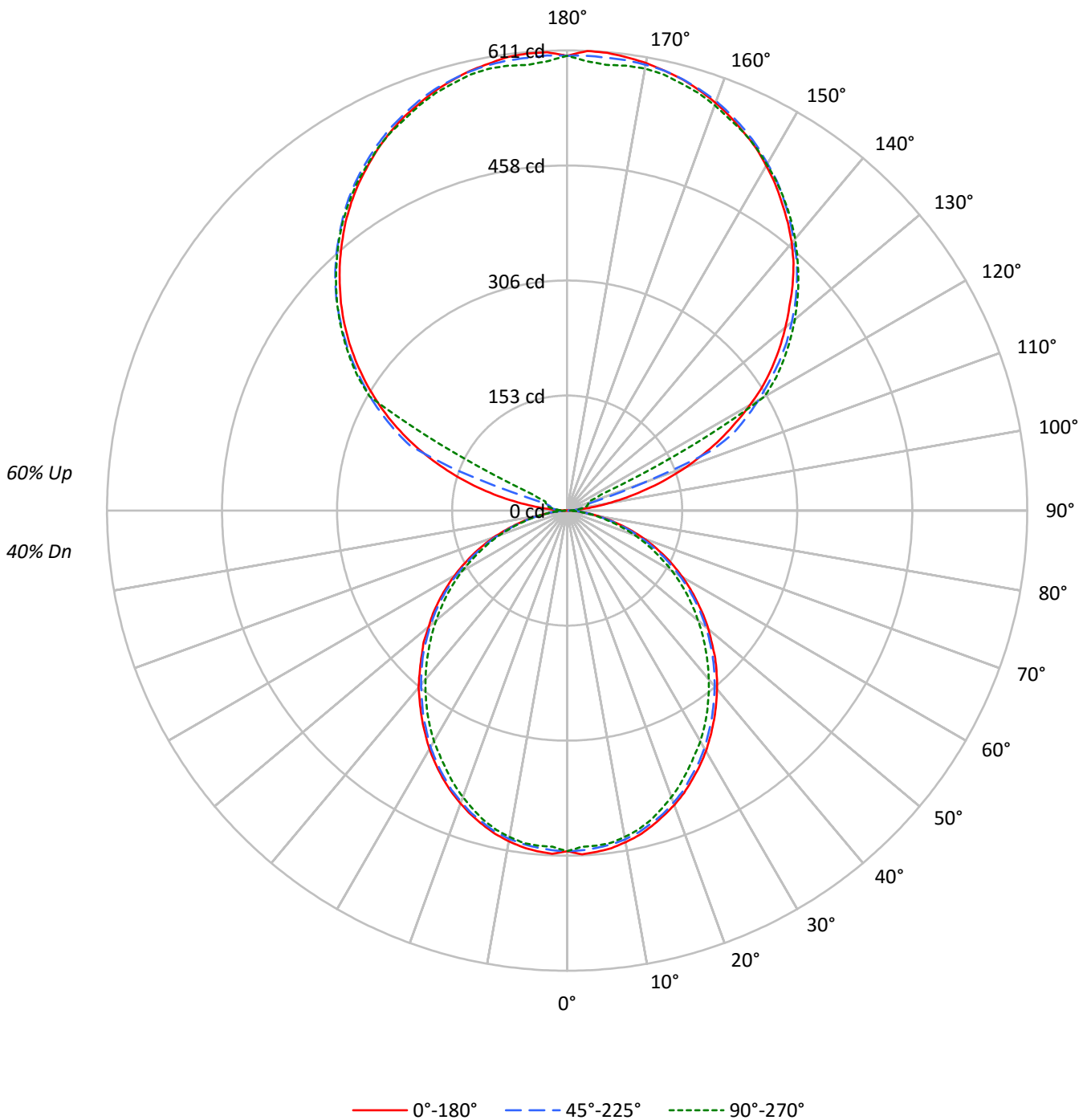
Lumens per Lamp: N/A  
Luminaire Lumens: 2877.8 lumens  
Efficiency: N/A  
Efficacy: 107.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.17 / 1.31  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4.08' x H: 0.38')  
CIE Type: General Diffuse

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°	7154	7154	7154
5°	7163	5926	7152
10°	7066	5060	7049
15°	6932	4353	6905
20°	6775	3746	6741
25°	6587	3233	6552
30°	6394	2810	6341
35°	6163	2431	6105
40°	5935	2091	5881
45°	5697	1789	5597
50°	5431	1517	5314
55°	5134	1271	5049
60°	4831	1042	4708
65°	4462	818	4308
70°	4006	615	3811
75°	3345	414	3122
80°	2491	241	2264
85°	1549	95	1301



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.6	1.5
10°-20°	120.7	4.2
20°-30°	178.1	6.2
30°-40°	207.7	7.2
40°-50°	208.1	7.2
50°-60°	182.0	6.3
60°-70°	133.9	4.7
70°-80°	72.6	2.5
80°-90°	18.6	0.6
90°-100°	15.0	0.5
100°-110°	67.8	2.4
110°-120°	197.1	6.8
120°-130°	308.0	10.7
130°-140°	332.0	11.5
140°-150°	313.8	10.9
150°-160°	255.9	8.9
160°-170°	166.5	5.8
170°-180°	57.4	2.0
0°-30°	341.5	11.9
0°-40°	549.1	19.1
0°-60°	939.2	32.6
0°-90°	1164.3	40.5
90°-120°	279.9	9.7
90°-150°	1233.7	42.9
90°-180°	1713.0	59.5
0°-180°	2877.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	452	452	452	452	452	
5°	455	450	447	449	454	43
15°	434	430	426	430	432	122
25°	394	390	380	389	392	181
35°	340	335	324	333	336	213
45°	278	273	260	270	273	214
55°	211	207	194	203	207	189
65°	143	137	127	133	138	141
75°	74	70	64	65	69	78
85°	18	16	14	14	15	20
90°	1	2	2	2	0	2
95°	15	12	14	14	26	21
105°	109	23	28	24	128	116
115°	225	244	50	252	241	222
125°	333	343	352	349	341	297
135°	423	432	434	436	427	326
145°	498	502	503	506	500	312
155°	554	558	554	559	555	256
165°	593	593	587	592	591	167
175°	610	604	594	604	609	58
180°	604	604	604	604	604	



TEST NUMBER: P199433

CATALOG NUMBER: S122-DIW-ULO-LO-30-0048-1D-UDD-1-NA-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	452.3	452.3	452.3	452.3	452.3	452.3	452.3	452.3	452.3
2.5°	456.9	450.6	451.6	450.2	446.7	449.9	451.3	450.2	456.2
5°	454.8	448.5	449.5	447.8	446.7	447.8	449.2	447.8	454.1
7.5°	452.0	445.0	447.1	446.0	445.0	445.7	446.7	444.3	450.9
10°	447.1	440.1	443.3	441.2	440.1	440.8	442.6	439.1	446.0
12.5°	441.5	434.5	437.7	435.2	434.2	434.2	437.3	433.5	439.8
15°	433.8	428.2	430.3	427.9	426.1	427.2	429.6	426.8	432.1
17.5°	425.1	420.2	422.6	418.8	415.6	418.1	421.6	418.4	423.7
20°	416.0	410.4	412.8	407.6	404.8	406.9	411.4	409.0	413.9
22.5°	405.8	400.6	402.7	395.7	392.9	394.6	401.3	398.8	403.4
25°	393.6	389.4	389.7	382.7	379.6	381.7	388.7	387.3	391.5
27.5°	381.7	377.5	377.8	369.8	366.3	369.1	376.1	375.0	378.9
30°	368.7	364.9	364.5	356.5	353.7	355.4	362.4	362.4	365.6
32.5°	354.4	351.2	349.5	342.1	339.3	341.4	347.4	348.4	350.9
35°	339.7	337.6	335.1	328.2	324.3	327.1	332.7	334.1	336.5
37.5°	325.0	322.6	319.8	312.8	308.6	312.1	317.0	319.4	321.2
40°	309.6	307.9	304.7	297.7	292.5	296.0	301.6	304.4	306.8
42.5°	293.9	292.8	289.0	281.6	276.4	280.2	286.2	288.6	289.7
45°	278.1	276.7	273.2	265.5	259.9	264.1	270.4	272.9	273.2
47.5°	260.6	261.0	256.8	249.1	243.5	247.7	253.3	256.8	258.2
50°	244.9	245.2	240.3	232.6	227.0	230.2	236.8	240.3	239.6
52.5°	228.1	229.1	223.9	216.2	210.6	213.8	220.4	224.2	224.6
55°	210.6	212.4	206.8	199.1	194.2	197.3	202.9	207.5	207.1
57.5°	193.8	195.2	189.6	182.6	177.7	180.5	185.4	191.4	190.0
60°	177.0	178.4	172.5	165.5	161.3	162.7	168.3	173.2	172.5
62.5°	159.9	161.3	155.0	148.7	143.8	145.9	150.8	156.7	155.0
65°	142.7	143.8	137.1	131.5	127.3	129.4	132.9	139.2	137.8
67.5°	125.6	126.3	120.3	115.1	111.6	112.6	115.8	121.0	120.3
70°	108.5	109.2	103.6	98.7	95.5	96.6	99.0	103.9	103.2
72.5°	91.0	92.0	86.4	81.9	78.7	79.8	81.5	86.1	85.0
75°	73.5	74.2	70.0	66.5	63.7	64.0	65.4	68.9	68.6
77.5°	57.4	59.1	54.6	51.4	49.3	49.7	51.4	53.2	52.5
80°	41.6	43.7	40.6	38.1	36.4	36.0	37.4	38.8	37.8
82.5°	29.4	29.7	27.6	25.9	24.1	24.1	25.2	26.2	25.2
85°	17.5	18.2	16.4	15.0	14.0	13.6	14.3	15.4	14.7
87.5°	8.4	8.7	7.0	6.3	5.2	4.9	5.2	5.9	5.9
90°	0.7	1.7	1.7	2.1	2.4	2.4	2.1	2.1	0.3
92.5°	2.1	4.9	4.9	5.9	6.3	7.3	8.4	8.7	9.4
95°	14.7	10.5	11.9	12.9	13.6	14.7	14.0	12.9	25.5
97.5°	32.9	13.3	16.8	17.5	18.5	18.9	18.9	14.7	46.5
100°	54.9	15.4	19.9	22.7	23.4	23.4	21.3	32.9	71.7
102.5°	80.8	68.6	21.7	25.2	26.6	25.5	22.7	111.6	99.7
105°	108.8	123.5	23.1	26.6	28.0	27.3	23.8	137.5	128.0
107.5°	138.2	149.7	24.5	28.0	29.4	28.3	29.0	164.1	156.4
110°	167.6	177.4	109.9	29.0	30.4	29.0	152.2	191.0	184.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	195.6	205.7	206.4	30.8	31.1	33.2	226.3	218.3	213.1
115°	224.9	233.3	244.2	142.0	49.7	156.4	252.2	245.2	240.7
117.5°	251.9	259.9	268.3	249.8	190.3	271.8	277.1	271.8	267.3
120°	280.2	288.3	293.5	301.9	302.6	302.6	301.6	297.4	292.5
122.5°	308.2	313.5	317.7	326.1	328.9	325.7	325.0	321.2	317.3
125°	332.7	337.6	343.2	348.8	351.6	348.4	348.8	343.9	341.1
127.5°	355.8	360.0	367.3	370.8	373.6	370.1	371.5	366.3	364.2
130°	378.2	381.0	389.4	392.2	394.6	392.5	393.6	388.0	386.2
132.5°	400.2	404.1	411.1	412.1	414.9	411.8	415.6	407.9	407.2
135°	423.3	426.5	431.7	432.1	434.2	432.4	435.6	429.3	427.2
137.5°	445.0	446.4	450.9	449.5	452.7	449.9	454.4	448.1	446.7
140°	463.9	464.9	468.1	468.8	470.9	468.4	471.9	465.6	464.9
142.5°	481.4	482.8	485.6	485.2	487.7	485.2	489.4	483.8	483.1
145°	497.8	499.9	502.4	501.3	503.1	501.7	505.9	499.9	499.6
147.5°	514.3	515.0	518.5	516.7	517.8	516.0	520.6	515.7	515.0
150°	528.6	530.0	532.1	530.0	530.4	529.3	533.9	529.7	529.0
152.5°	543.0	542.6	545.8	541.6	543.3	541.6	546.8	542.6	542.6
155°	554.5	554.2	558.0	553.5	554.2	552.8	558.7	553.8	554.9
157.5°	566.0	564.3	568.8	564.3	562.9	563.9	568.5	563.9	566.0
160°	576.2	574.4	578.6	573.7	572.7	573.4	578.3	574.1	574.8
162.5°	584.9	582.5	586.3	581.1	581.1	580.0	586.3	582.1	584.2
165°	592.6	589.8	593.0	587.7	587.0	586.3	591.9	589.1	591.2
167.5°	598.2	595.4	598.2	592.3	593.0	591.6	597.2	595.4	597.9
170°	603.5	600.0	601.0	595.8	595.8	594.7	600.7	598.9	602.4
172.5°	607.0	603.1	603.1	597.2	595.8	596.5	602.8	602.4	607.3
175°	610.1	604.9	603.5	597.9	594.0	597.5	603.5	604.5	609.1
177.5°	610.8	605.9	604.5	598.2	597.2	597.5	604.9	605.2	609.1
180°	603.8	603.8	603.8	603.8	603.8	603.8	603.8	603.8	603.8

(END OF REPORT)