

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: P243204

Luminaire Tested: **S122DR-H485D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243204  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-53)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DR-H485D935-X4F0-XX-UDD-D-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1581.5 lumens  
Efficiency: N/A  
Efficacy: 91.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')  
CIE Type: Semi-Direct

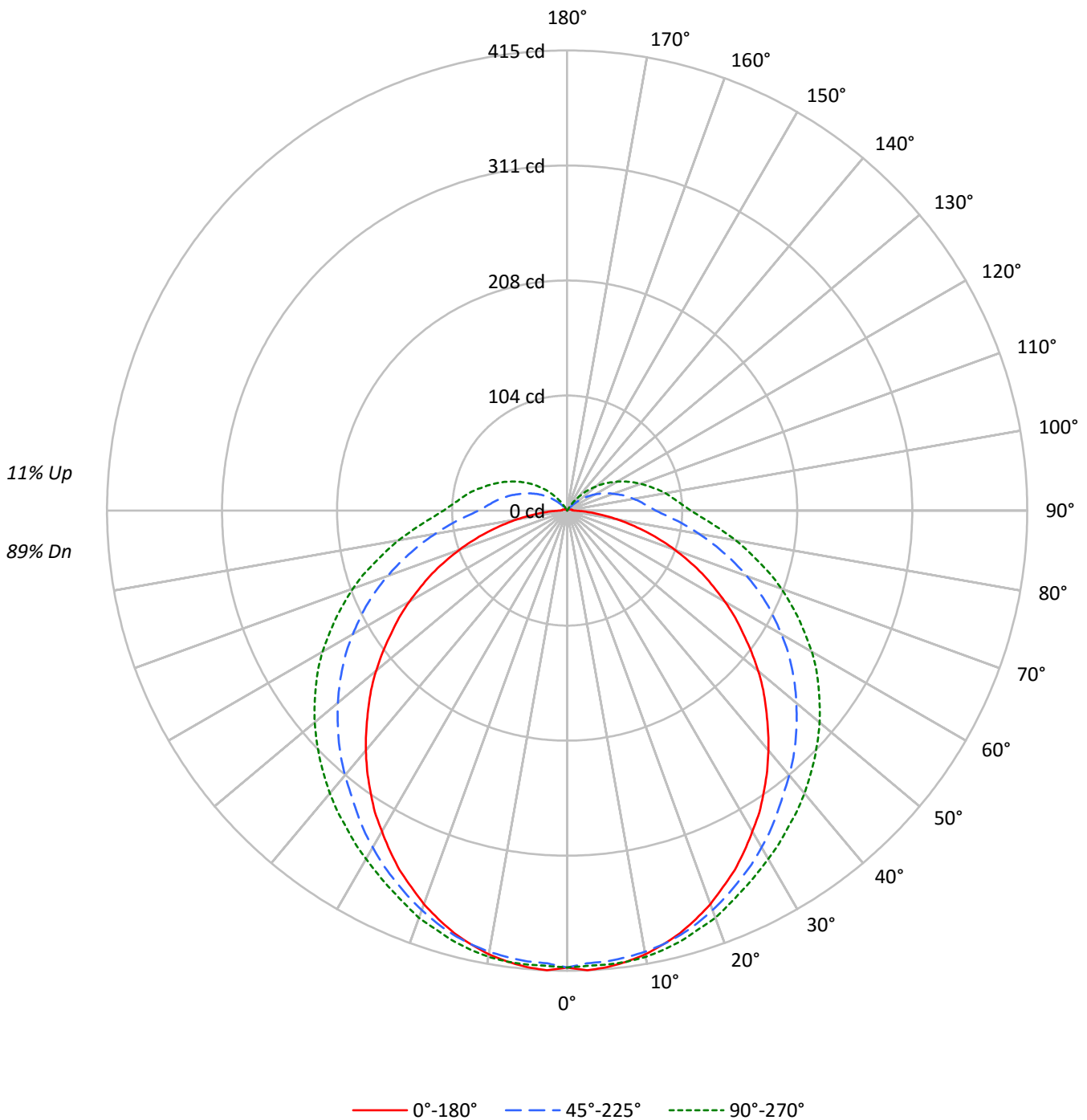
Input Watts (W): 17.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P243204

CATALOG NUMBER: S122DR-H485D935-X4F0-XX-UDD-D-W

### Luminous Intensity Polar Plot





TEST NUMBER: P243204

CATALOG NUMBER: S122DR-H485D935-X4F0-XX-UDD-D-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	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	104	98	93	88	100	95	90	86	88	84	81	82	79	76	77	74	72	69
2	93	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59	56
3	85	73	64	57	81	71	63	56	66	59	54	62	56	51	58	53	49	46
4	77	64	55	48	74	62	54	47	58	51	45	55	48	43	51	46	41	39
5	71	57	48	41	68	55	47	40	52	44	39	49	42	37	46	40	36	33
6	65	51	42	35	63	50	41	35	47	39	34	44	37	32	41	36	31	29
7	60	46	37	31	58	45	37	30	42	35	29	40	33	28	38	32	28	25
8	56	42	33	27	54	41	33	27	39	31	26	37	30	25	35	29	25	22
9	52	39	30	25	50	38	30	24	36	28	24	34	27	23	32	26	22	20
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20	18

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

	0°	45°	90°
0°	7850	7850	7850
5°	7888	7527	7484
10°	7831	7278	7181
15°	7731	7022	6861
20°	7597	6743	6559
25°	7441	6468	6250
30°	7258	6210	6000
35°	7088	5954	5778
40°	6897	5733	5595
45°	6690	5535	5412
50°	6501	5331	5241
55°	6251	5139	5060
60°	6031	4928	4880
65°	5786	4713	4662
70°	5432	4457	4453
75°	5041	4184	4208
80°	4488	3913	3994
85°	3930	3705	3781



TEST NUMBER: P243204

CATALOG NUMBER: S122DR-H485D935-X4F0-XX-UDD-D-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.1	2.5
10°-20°	112.2	7.1
20°-30°	169.9	10.7
30°-40°	207.3	13.1
40°-50°	223.1	14.1
50°-60°	216.9	13.7
60°-70°	189.6	12.0
70°-80°	146.0	9.2
80°-90°	98.1	6.2
90°-100°	67.9	4.3
100°-110°	49.9	3.2
110°-120°	33.2	2.1
120°-130°	18.8	1.2
130°-140°	8.1	0.5
140°-150°	1.5	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	321.2	20.3
0°-40°	528.5	33.4
0°-60°	968.5	61.2
0°-90°	1402.1	88.7
90°-120°	151.0	9.5
90°-150°	179.4	11.3
90°-180°	179.0	11.3
0°-180°	1581.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	412	412	412	412	412	
5°	413	412	408	412	411	39
15°	394	396	396	401	401	111
25°	358	363	368	376	377	165
35°	309	320	331	344	348	194
45°	254	269	292	309	316	196
55°	194	217	247	270	277	174
65°	134	163	199	223	230	132
75°	74	108	146	172	179	78
85°	22	59	98	123	130	23
90°	6	41	80	104	111	4
95°	5	33	70	92	99	4
105°	3	21	53	74	80	4
115°	2	10	37	55	61	2
125°	2	1	22	37	43	1
135°	1	1	8	20	25	1
145°	1	0	0	5	7	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P243204

CATALOG NUMBER: S122DR-H485D935-X4F0-XX-UDD-D-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	412.1	412.1	412.1	412.1	412.1
2.5°	415.0	413.3	408.7	412.1	411.0
5°	413.3	411.6	408.1	411.6	411.0
7.5°	410.4	409.3	406.4	411.0	410.4
10°	406.4	405.8	404.1	408.7	408.7
12.5°	400.7	401.2	400.7	405.8	405.3
15°	394.3	396.1	396.1	401.2	401.2
17.5°	386.3	389.2	390.3	396.1	395.5
20°	377.7	381.1	383.4	389.8	390.9
22.5°	367.4	372.5	376.0	382.9	383.4
25°	357.6	363.4	367.9	376.0	376.6
27.5°	346.1	353.0	359.9	367.9	369.7
30°	334.1	342.7	350.7	360.5	362.8
32.5°	322.6	331.2	341.5	351.9	355.9
35°	309.4	319.7	331.2	343.8	347.9
37.5°	296.2	307.1	320.9	335.8	341.0
40°	282.4	295.0	311.7	327.8	332.9
42.5°	268.1	281.8	301.9	318.6	324.3
45°	253.7	269.2	291.6	309.4	315.7
47.5°	239.9	256.6	280.7	300.8	306.5
50°	225.0	243.4	269.8	290.5	297.3
52.5°	209.5	230.2	258.9	280.1	287.0
55°	194.0	217.0	247.4	269.8	276.7
57.5°	179.7	203.8	235.9	258.3	266.3
60°	164.2	190.0	223.3	246.8	254.9
62.5°	148.7	176.8	210.7	234.8	242.2
65°	134.3	163.0	198.6	222.7	230.2
67.5°	118.2	148.7	185.4	210.7	217.6
70°	103.3	135.5	172.2	197.5	205.5
72.5°	88.4	121.1	159.0	184.3	192.9
75°	74.0	107.9	145.8	171.6	179.1
77.5°	59.1	94.7	133.2	159.0	166.5
80°	45.9	81.5	120.5	146.4	154.4
82.5°	32.7	69.5	109.1	134.3	141.8
85°	22.4	59.1	98.2	122.8	130.3
87.5°	13.2	49.4	87.8	112.5	120.0
90°	6.3	41.3	79.8	103.9	111.4
92.5°	5.2	37.3	74.0	97.6	105.0
95°	4.6	33.3	69.5	92.4	99.3
97.5°	4.6	30.4	65.4	87.8	94.7
100°	4.0	27.0	60.8	82.7	90.1
102.5°	4.0	23.5	56.8	78.1	85.0
105°	3.4	20.7	52.8	73.5	79.8
107.5°	2.9	17.8	48.2	68.9	75.2
110°	2.9	14.9	44.2	64.3	70.6



TEST NUMBER: P243204

CATALOG NUMBER: S122DR-H485D935-X4F0-XX-UDD-D-W

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.3	12.6	40.8	59.7	66.0
115°	2.3	9.8	36.7	55.1	61.4
117.5°	2.3	6.9	32.7	50.5	56.8
120°	1.7	4.6	29.3	46.5	52.2
122.5°	1.7	2.9	25.3	41.9	47.6
125°	1.7	1.1	21.8	37.3	43.1
127.5°	1.1	1.1	17.8	33.3	38.5
130°	1.1	0.6	14.4	28.7	33.9
132.5°	1.1	0.6	10.9	24.7	29.3
135°	0.6	0.6	7.5	20.1	25.3
137.5°	0.6	0.6	4.0	16.1	20.1
140°	0.6	0.0	1.7	12.1	15.5
142.5°	0.6	0.0	0.0	8.0	11.5
145°	0.6	0.0	0.0	4.6	6.9
147.5°	0.0	0.0	0.0	1.1	3.4
150°	0.0	0.0	0.0	0.0	0.6
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)