

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: P243203

Luminaire Tested: **S122DR-H290D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243203  
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-H290D935-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: 993.1 lumens  
Efficiency: N/A  
Efficacy: 88.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')  
CIE Type: Semi-Direct

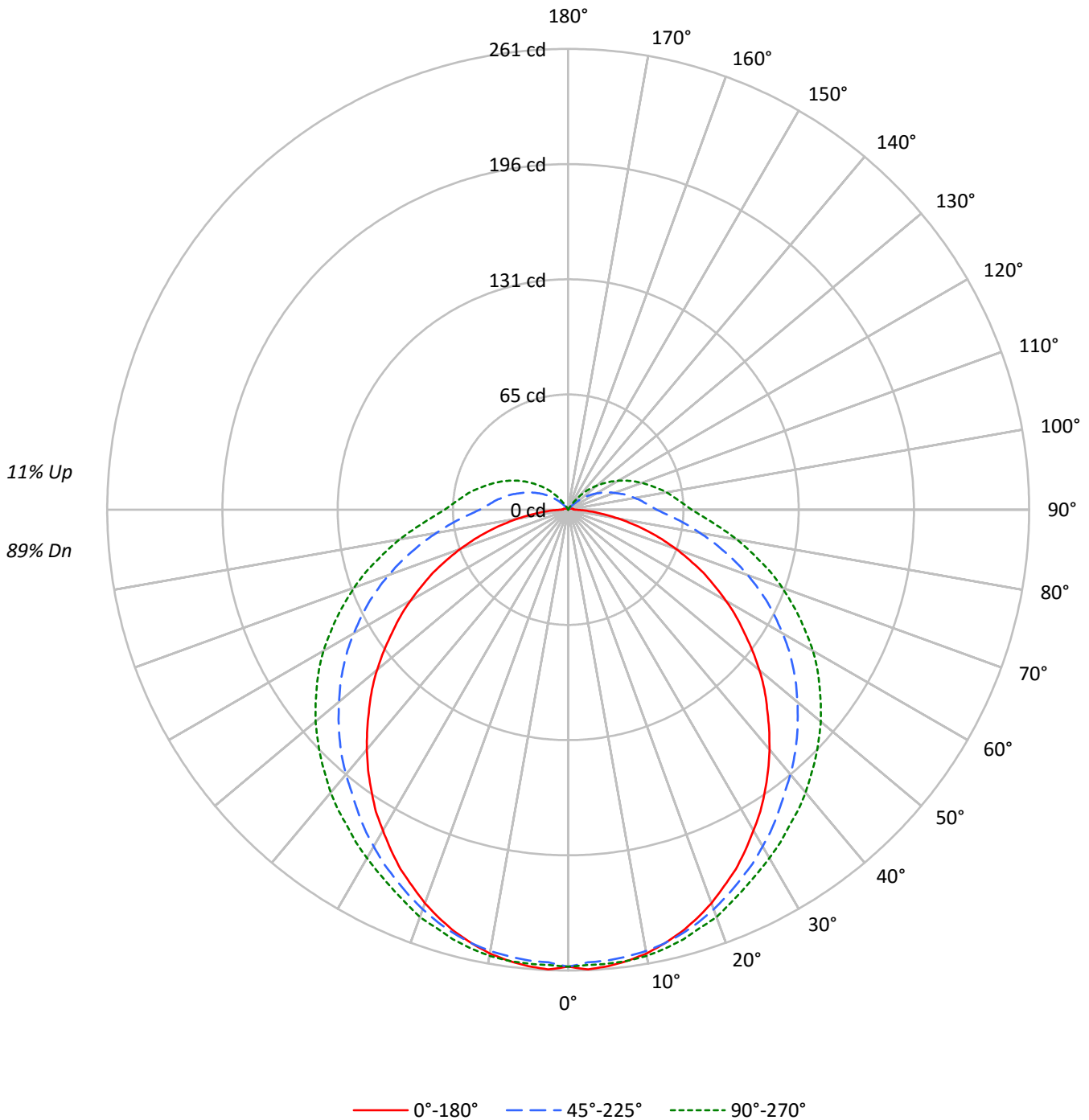
Input Watts (W): 11.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	4930	4930	4930
5°	4952	4727	4700
10°	4917	4571	4509
15°	4855	4409	4308
20°	4771	4235	4120
25°	4674	4061	3923
30°	4558	3899	3767
35°	4451	3739	3627
40°	4330	3600	3514
45°	4201	3475	3398
50°	4083	3347	3291
55°	3924	3228	3176
60°	3787	3094	3063
65°	3632	2959	2927
70°	3413	2798	2796
75°	3168	2629	2643
80°	2816	2458	2509
85°	2474	2324	2374



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.5	2.5
10°-20°	70.4	7.1
20°-30°	106.7	10.7
30°-40°	130.2	13.1
40°-50°	140.1	14.1
50°-60°	136.2	13.7
60°-70°	119.1	12.0
70°-80°	91.7	9.2
80°-90°	61.6	6.2
90°-100°	42.6	4.3
100°-110°	31.4	3.2
110°-120°	20.9	2.1
120°-130°	11.8	1.2
130°-140°	5.1	0.5
140°-150°	0.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	201.7	20.3
0°-40°	331.9	33.4
0°-60°	608.1	61.2
0°-90°	880.4	88.7
90°-120°	94.8	9.6
90°-150°	112.7	11.3
90°-180°	113.0	11.4
0°-180°	993.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	259	259	259	259	259	
5°	260	258	256	258	258	25
15°	248	249	249	252	252	70
25°	225	228	231	236	236	103
35°	194	201	208	216	218	122
45°	159	169	183	194	198	123
55°	122	136	155	169	174	109
65°	84	102	125	140	144	83
75°	46	68	92	108	112	49
85°	14	37	62	77	82	14
90°	4	26	50	65	70	3
95°	3	21	44	58	62	2
105°	2	13	33	46	50	2
115°	1	6	23	35	39	1
125°	1	1	14	23	27	1
135°	0	0	5	13	16	0
145°	0	0	0	3	4	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



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	258.8	258.8	258.8	258.8	258.8
2.5°	260.6	259.5	256.6	258.8	258.1
5°	259.5	258.4	256.3	258.4	258.1
7.5°	257.7	257.0	255.2	258.1	257.7
10°	255.2	254.8	253.8	256.6	256.6
12.5°	251.6	251.9	251.6	254.8	254.5
15°	247.6	248.7	248.7	251.9	251.9
17.5°	242.6	244.4	245.1	248.7	248.3
20°	237.2	239.3	240.8	244.7	245.5
22.5°	230.7	233.9	236.1	240.4	240.8
25°	224.6	228.2	231.0	236.1	236.4
27.5°	217.3	221.7	226.0	231.0	232.1
30°	209.8	215.2	220.2	226.4	227.8
32.5°	202.6	208.0	214.5	221.0	223.5
35°	194.3	200.8	208.0	215.9	218.4
37.5°	186.0	192.8	201.5	210.9	214.1
40°	177.3	185.3	195.7	205.8	209.1
42.5°	168.3	177.0	189.6	200.0	203.6
45°	159.3	169.0	183.1	194.3	198.2
47.5°	150.7	161.1	176.3	188.9	192.5
50°	141.3	152.8	169.4	182.4	186.7
52.5°	131.6	144.5	162.6	175.9	180.2
55°	121.8	136.2	155.4	169.4	173.7
57.5°	112.8	128.0	148.1	162.2	167.2
60°	103.1	119.3	140.2	155.0	160.0
62.5°	93.4	111.0	132.3	147.4	152.1
65°	84.3	102.4	124.7	139.9	144.5
67.5°	74.3	93.4	116.4	132.3	136.6
70°	64.9	85.1	108.1	124.0	129.0
72.5°	55.5	76.1	99.8	115.7	121.1
75°	46.5	67.8	91.6	107.8	112.5
77.5°	37.1	59.5	83.6	99.8	104.5
80°	28.8	51.2	75.7	91.9	97.0
82.5°	20.5	43.6	68.5	84.3	89.0
85°	14.1	37.1	61.6	77.1	81.8
87.5°	8.3	31.0	55.1	70.6	75.3
90°	4.0	26.0	50.1	65.2	69.9
92.5°	3.2	23.4	46.5	61.3	66.0
95°	2.9	20.9	43.6	58.0	62.4
97.5°	2.9	19.1	41.1	55.1	59.5
100°	2.5	16.9	38.2	51.9	56.6
102.5°	2.5	14.8	35.7	49.0	53.3
105°	2.2	13.0	33.2	46.1	50.1
107.5°	1.8	11.2	30.3	43.3	47.2
110°	1.8	9.4	27.8	40.4	44.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.4	7.9	25.6	37.5	41.5
115°	1.4	6.1	23.1	34.6	38.6
117.5°	1.4	4.3	20.5	31.7	35.7
120°	1.1	2.9	18.4	29.2	32.8
122.5°	1.1	1.8	15.9	26.3	29.9
125°	1.1	0.7	13.7	23.4	27.0
127.5°	0.7	0.7	11.2	20.9	24.1
130°	0.7	0.4	9.0	18.0	21.3
132.5°	0.7	0.4	6.8	15.5	18.4
135°	0.4	0.4	4.7	12.6	15.9
137.5°	0.4	0.4	2.5	10.1	12.6
140°	0.4	0.0	1.1	7.6	9.7
142.5°	0.4	0.0	0.0	5.0	7.2
145°	0.4	0.0	0.0	2.9	4.3
147.5°	0.0	0.0	0.0	0.7	2.2
150°	0.0	0.0	0.0	0.0	0.4
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)