

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: P243189

Luminaire Tested: **S122DR-H290D835-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243189  
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-H290D835-X4F0-XX-UDD-D-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1153.4 lumens  
Efficiency: N/A  
Efficacy: 103.0 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

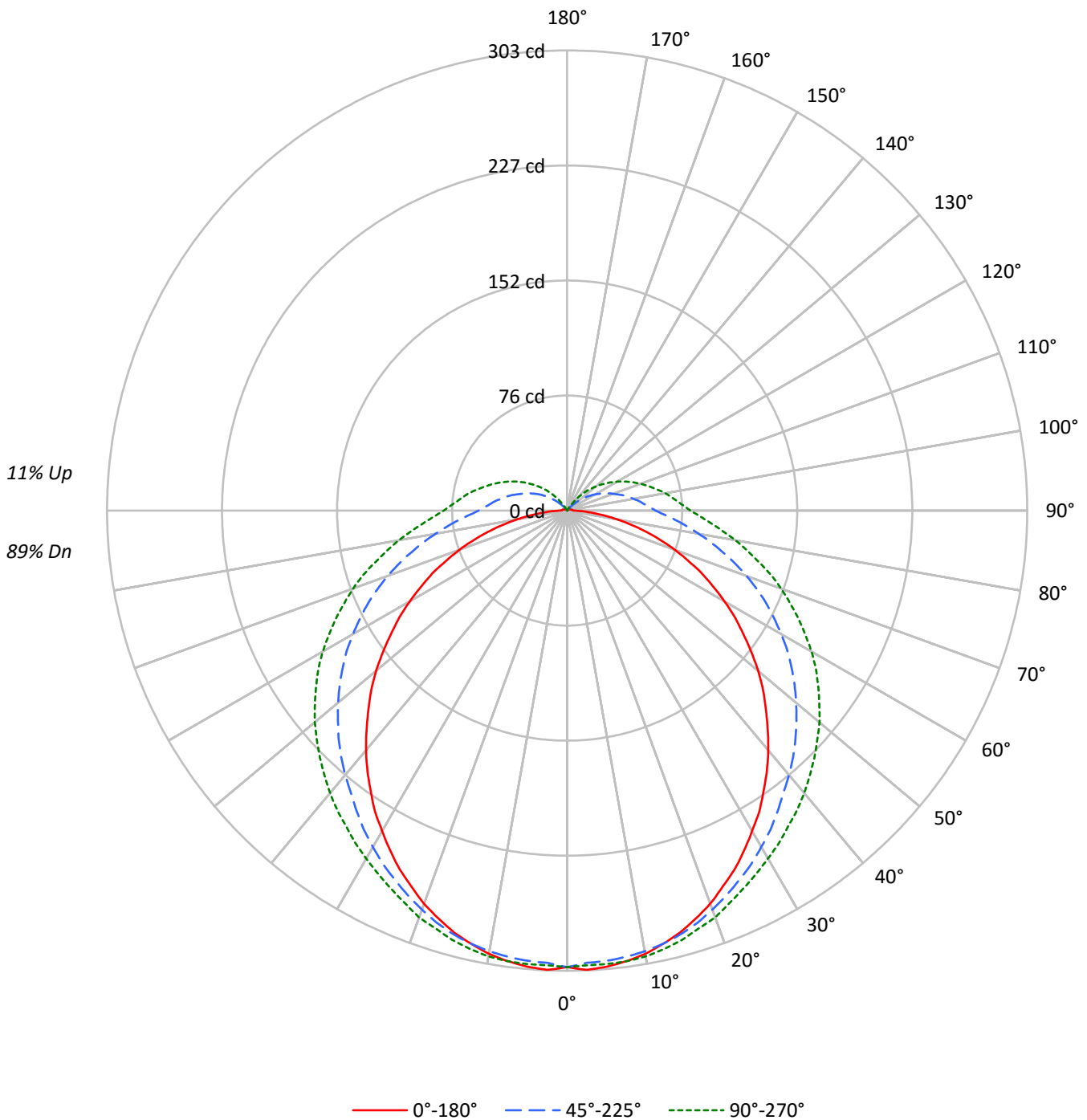
Input Watts (W): 11.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P243189

CATALOG NUMBER: S122DR-H290D835-X4F0-XX-UDD-D-W

### Luminous Intensity Polar Plot





TEST NUMBER: P243189

CATALOG NUMBER: S122DR-H290D835-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°	5726	5726	5726
5°	5752	5489	5458
10°	5711	5308	5238
15°	5639	5122	5004
20°	5541	4917	4784
25°	5427	4717	4557
30°	5292	4530	4376
35°	5168	4343	4213
40°	5031	4181	4081
45°	4879	4037	3946
50°	4741	3889	3824
55°	4559	3747	3690
60°	4396	3593	3559
65°	4222	3437	3400
70°	3965	3251	3248
75°	3679	3050	3068
80°	3275	2855	2913
85°	2859	2702	2757



TEST NUMBER: P243189

CATALOG NUMBER: S122DR-H290D835-X4F0-XX-UDD-D-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.5	2.5
10°-20°	81.8	7.1
20°-30°	123.9	10.7
30°-40°	151.2	13.1
40°-50°	162.7	14.1
50°-60°	158.2	13.7
60°-70°	138.3	12.0
70°-80°	106.5	9.2
80°-90°	71.5	6.2
90°-100°	49.5	4.3
100°-110°	36.4	3.2
110°-120°	24.2	2.1
120°-130°	13.7	1.2
130°-140°	5.9	0.5
140°-150°	1.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	234.3	20.3
0°-40°	385.4	33.4
0°-60°	706.3	61.2
0°-90°	1022.6	88.7
90°-120°	110.2	9.6
90°-150°	130.8	11.3
90°-180°	131.0	11.4
0°-180°	1153.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	301	301	301	301	301	
5°	301	300	298	300	300	29
15°	288	289	289	293	293	81
25°	261	265	268	274	275	120
35°	226	233	242	251	254	141
45°	185	196	213	226	230	143
55°	142	158	180	197	202	127
65°	98	119	145	162	168	97
75°	54	79	106	125	131	57
85°	16	43	72	90	95	17
90°	5	30	58	76	81	3
95°	3	24	51	67	72	3
105°	2	15	38	54	58	3
115°	2	7	27	40	45	2
125°	1	1	16	27	31	1
135°	0	0	5	15	18	0
145°	0	0	0	3	5	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: P243189

CATALOG NUMBER: S122DR-H290D835-X4F0-XX-UDD-D-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	300.6	300.6	300.6	300.6	300.6
2.5°	302.7	301.4	298.1	300.6	299.7
5°	301.4	300.2	297.6	300.2	299.7
7.5°	299.3	298.5	296.4	299.7	299.3
10°	296.4	296.0	294.7	298.1	298.1
12.5°	292.2	292.6	292.2	296.0	295.6
15°	287.6	288.9	288.9	292.6	292.6
17.5°	281.7	283.8	284.7	288.9	288.4
20°	275.5	278.0	279.6	284.3	285.1
22.5°	267.9	271.7	274.2	279.2	279.6
25°	260.8	265.0	268.3	274.2	274.6
27.5°	252.4	257.5	262.5	268.3	269.6
30°	243.6	249.9	255.8	262.9	264.6
32.5°	235.3	241.6	249.1	256.6	259.6
35°	225.6	233.2	241.6	250.8	253.7
37.5°	216.0	224.0	234.0	244.9	248.7
40°	206.0	215.2	227.3	239.0	242.8
42.5°	195.5	205.5	220.2	232.3	236.5
45°	185.0	196.3	212.7	225.6	230.2
47.5°	175.0	187.1	204.7	219.4	223.5
50°	164.1	177.5	196.8	211.8	216.9
52.5°	152.8	167.9	188.8	204.3	209.3
55°	141.5	158.2	180.4	196.8	201.8
57.5°	131.0	148.6	172.1	188.4	194.2
60°	119.7	138.6	162.8	180.0	185.9
62.5°	108.4	128.9	153.6	171.2	176.7
65°	98.0	118.9	144.8	162.4	167.9
67.5°	86.2	108.4	135.2	153.6	158.7
70°	75.4	98.8	125.6	144.0	149.9
72.5°	64.5	88.3	116.0	134.4	140.7
75°	54.0	78.7	106.3	125.2	130.6
77.5°	43.1	69.1	97.1	116.0	121.4
80°	33.5	59.4	87.9	106.8	112.6
82.5°	23.9	50.7	79.5	98.0	103.4
85°	16.3	43.1	71.6	89.6	95.0
87.5°	9.6	36.0	64.1	82.1	87.5
90°	4.6	30.1	58.2	75.8	81.2
92.5°	3.8	27.2	54.0	71.2	76.6
95°	3.3	24.3	50.7	67.4	72.4
97.5°	3.3	22.2	47.7	64.1	69.1
100°	2.9	19.7	44.4	60.3	65.7
102.5°	2.9	17.2	41.4	56.9	62.0
105°	2.5	15.1	38.5	53.6	58.2
107.5°	2.1	13.0	35.2	50.2	54.8
110°	2.1	10.9	32.2	46.9	51.5



TEST NUMBER: P243189

CATALOG NUMBER: S122DR-H290D835-X4F0-XX-UDD-D-W

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.7	9.2	29.7	43.5	48.1
115°	1.7	7.1	26.8	40.2	44.8
117.5°	1.7	5.0	23.9	36.8	41.4
120°	1.3	3.3	21.4	33.9	38.1
122.5°	1.3	2.1	18.4	30.6	34.7
125°	1.3	0.8	15.9	27.2	31.4
127.5°	0.8	0.8	13.0	24.3	28.0
130°	0.8	0.4	10.5	20.9	24.7
132.5°	0.8	0.4	8.0	18.0	21.4
135°	0.4	0.4	5.4	14.7	18.4
137.5°	0.4	0.4	2.9	11.7	14.7
140°	0.4	0.0	1.3	8.8	11.3
142.5°	0.4	0.0	0.0	5.9	8.4
145°	0.4	0.0	0.0	3.3	5.0
147.5°	0.0	0.0	0.0	0.8	2.5
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)