

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: P242338

Luminaire Tested: **S122DR-S290D930-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242338
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DR-S290D930-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 937.2 lumens
Efficiency: N/A
Efficacy: 80.8 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

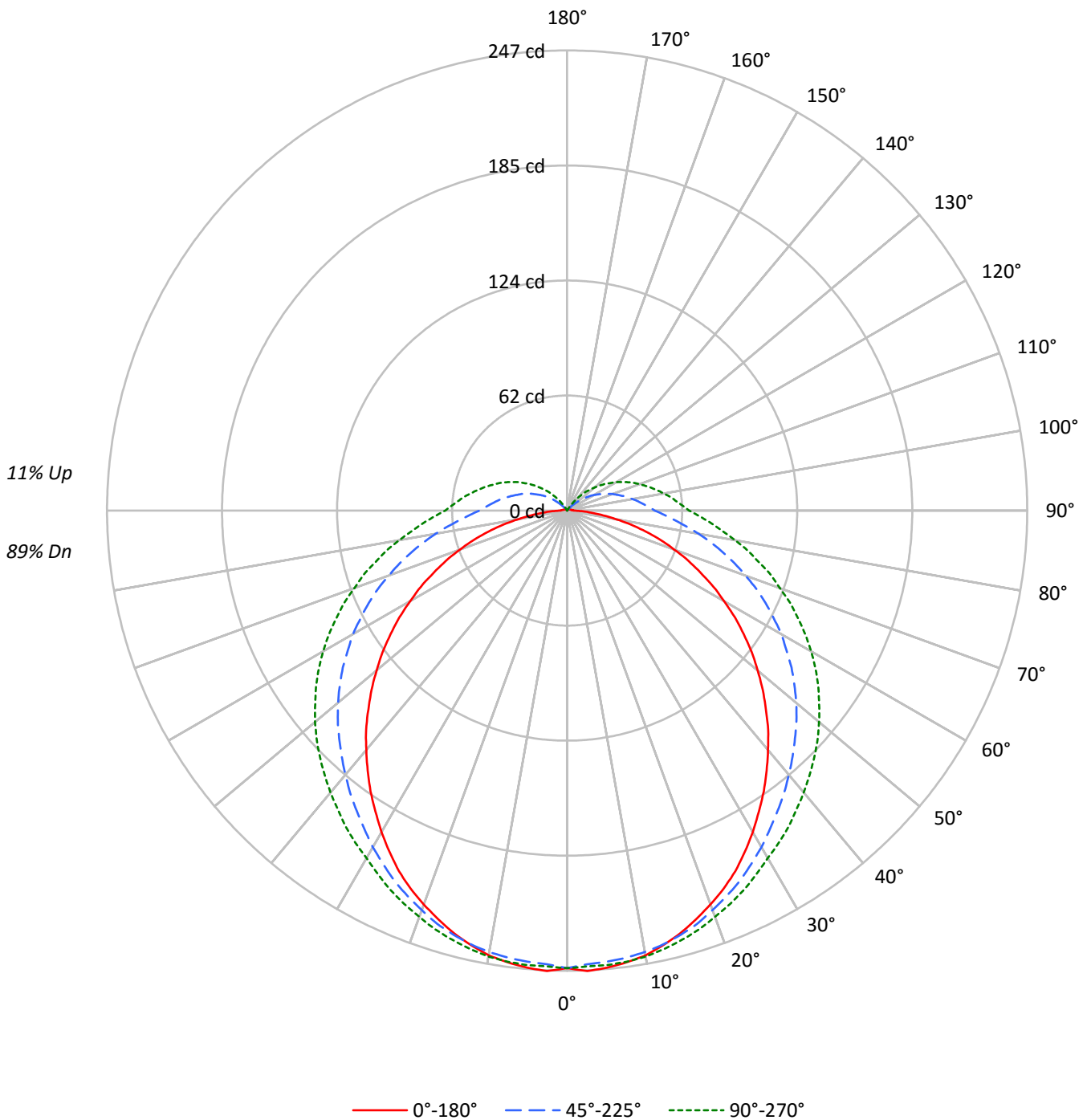
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242338

CATALOG NUMBER: S122DR-S290D930-X4F0-XX-UDD-D-W

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	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	85	81	82	79	77	77	75	72	69				
2	94	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	42	39				
5	71	57	48	41	68	56	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	42	36	31	29				
7	60	46	37	31	58	45	37	31	43	35	30	40	34	29	38	32	28	25				
8	56	42	34	28	54	41	33	27	39	32	26	37	30	25	35	29	25	23				
9	52	39	30	25	50	38	30	24	36	29	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°	4678	4678	4678
5°	4701	4484	4460
10°	4671	4333	4272
15°	4606	4179	4079
20°	4525	4013	3895
25°	4445	3855	3727
30°	4330	3694	3562
35°	4215	3539	3441
40°	4096	3405	3321
45°	3979	3284	3216
50°	3857	3171	3113
55°	3728	3053	3008
60°	3570	2931	2897
65°	3404	2789	2769
70°	3218	2635	2631
75°	2984	2482	2500
80°	2610	2325	2367
85°	2245	2177	2252



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.3	2.5
10°-20°	66.8	7.1
20°-30°	101.2	10.8
30°-40°	123.2	13.1
40°-50°	132.6	14.1
50°-60°	128.7	13.7
60°-70°	112.4	12.0
70°-80°	86.5	9.2
80°-90°	58.0	6.2
90°-100°	40.0	4.3
100°-110°	29.2	3.1
110°-120°	19.3	2.1
120°-130°	10.7	1.1
130°-140°	4.5	0.5
140°-150°	0.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	191.3	20.4
0°-40°	314.5	33.6
0°-60°	575.8	61.4
0°-90°	832.7	88.9
90°-120°	88.5	9.4
90°-150°	104.5	11.1
90°-180°	104.0	11.1
0°-180°	937.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	246	246	246	246	246	
5°	246	245	243	245	245	23
15°	235	236	236	239	238	66
25°	214	216	219	224	225	98
35°	184	190	197	205	207	115
45°	151	160	173	184	188	117
55°	116	128	147	160	164	103
65°	79	96	118	132	137	79
75°	44	64	86	102	106	46
85°	13	35	58	73	78	14
90°	4	24	47	61	66	2
95°	3	20	41	54	59	2
105°	2	12	31	43	47	2
115°	1	5	21	32	36	1
125°	1	1	12	22	25	1
135°	0	0	4	11	14	0
145°	0	0	0	2	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



TEST NUMBER: P242338

CATALOG NUMBER: S122DR-S290D930-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	245.6	245.6	245.6	245.6	245.6
2.5°	247.4	246.3	243.8	245.6	244.9
5°	246.3	245.3	243.1	245.3	244.9
7.5°	244.6	243.8	242.1	244.6	244.2
10°	242.4	241.7	240.6	243.5	243.1
12.5°	238.9	239.2	238.5	241.4	241.0
15°	234.9	235.7	235.7	238.9	238.5
17.5°	230.0	231.4	232.5	235.7	235.7
20°	225.0	226.8	228.2	232.1	232.1
22.5°	219.6	221.8	223.9	227.8	228.5
25°	213.6	216.1	219.3	223.6	224.6
27.5°	206.5	210.4	213.9	219.3	220.0
30°	199.3	204.0	208.6	214.3	215.4
32.5°	191.5	196.9	202.6	209.3	211.5
35°	184.0	190.1	196.9	204.7	207.2
37.5°	175.9	182.6	191.2	199.7	202.2
40°	167.7	175.5	185.1	194.4	197.6
42.5°	159.8	167.7	179.1	189.4	192.6
45°	150.9	160.5	173.0	184.0	187.6
47.5°	142.4	152.7	167.0	178.3	182.3
50°	133.5	144.5	160.5	172.6	176.6
52.5°	124.9	136.7	153.8	166.2	170.5
55°	115.7	128.5	147.0	159.8	164.5
57.5°	106.8	121.0	139.5	153.4	158.1
60°	97.2	112.5	132.8	146.3	151.3
62.5°	88.6	104.7	124.9	139.5	144.2
65°	79.0	96.5	117.5	132.1	136.7
67.5°	70.5	88.6	110.0	124.6	129.6
70°	61.2	79.7	101.8	117.1	121.4
72.5°	52.7	71.9	94.3	109.3	114.6
75°	43.8	63.7	86.5	101.8	106.4
77.5°	35.2	55.9	79.0	94.3	99.3
80°	26.7	48.4	71.6	86.5	91.5
82.5°	19.6	40.9	64.4	79.4	84.0
85°	12.8	34.9	57.7	72.6	77.6
87.5°	7.8	29.2	52.0	66.6	71.2
90°	3.6	24.2	47.0	61.2	65.5
92.5°	3.2	22.1	43.8	57.7	61.9
95°	2.8	19.6	40.9	54.5	58.7
97.5°	2.5	17.8	38.4	51.6	55.9
100°	2.5	15.7	35.6	48.8	52.7
102.5°	2.1	13.9	33.1	45.9	49.8
105°	1.8	12.1	30.6	43.1	47.0
107.5°	1.8	10.3	28.1	40.2	44.1
110°	1.4	8.5	26.0	37.4	41.3



TEST NUMBER: P242338

CATALOG NUMBER: S122DR-S290D930-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.4	7.1	23.5	34.9	38.8
115°	1.4	5.3	21.4	32.0	36.0
117.5°	1.1	3.9	18.9	29.5	33.1
120°	1.1	2.5	16.7	26.7	30.6
122.5°	1.1	1.4	14.6	24.2	27.4
125°	0.7	0.7	12.1	21.7	24.9
127.5°	0.7	0.4	10.0	18.9	22.1
130°	0.7	0.4	7.8	16.4	19.2
132.5°	0.7	0.4	5.7	13.9	16.7
135°	0.4	0.4	3.9	11.4	14.2
137.5°	0.4	0.4	2.1	8.9	11.4
140°	0.4	0.0	0.7	6.4	8.5
142.5°	0.4	0.0	0.0	4.3	6.1
145°	0.0	0.0	0.0	2.1	3.9
147.5°	0.0	0.0	0.0	0.4	1.4
150°	0.0	0.0	0.0	0.0	0.0
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)