

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: P242324

Luminaire Tested: **S122DR-S290D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242324
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-S290D830-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1083.5 lumens
Efficiency: N/A
Efficacy: 93.4 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

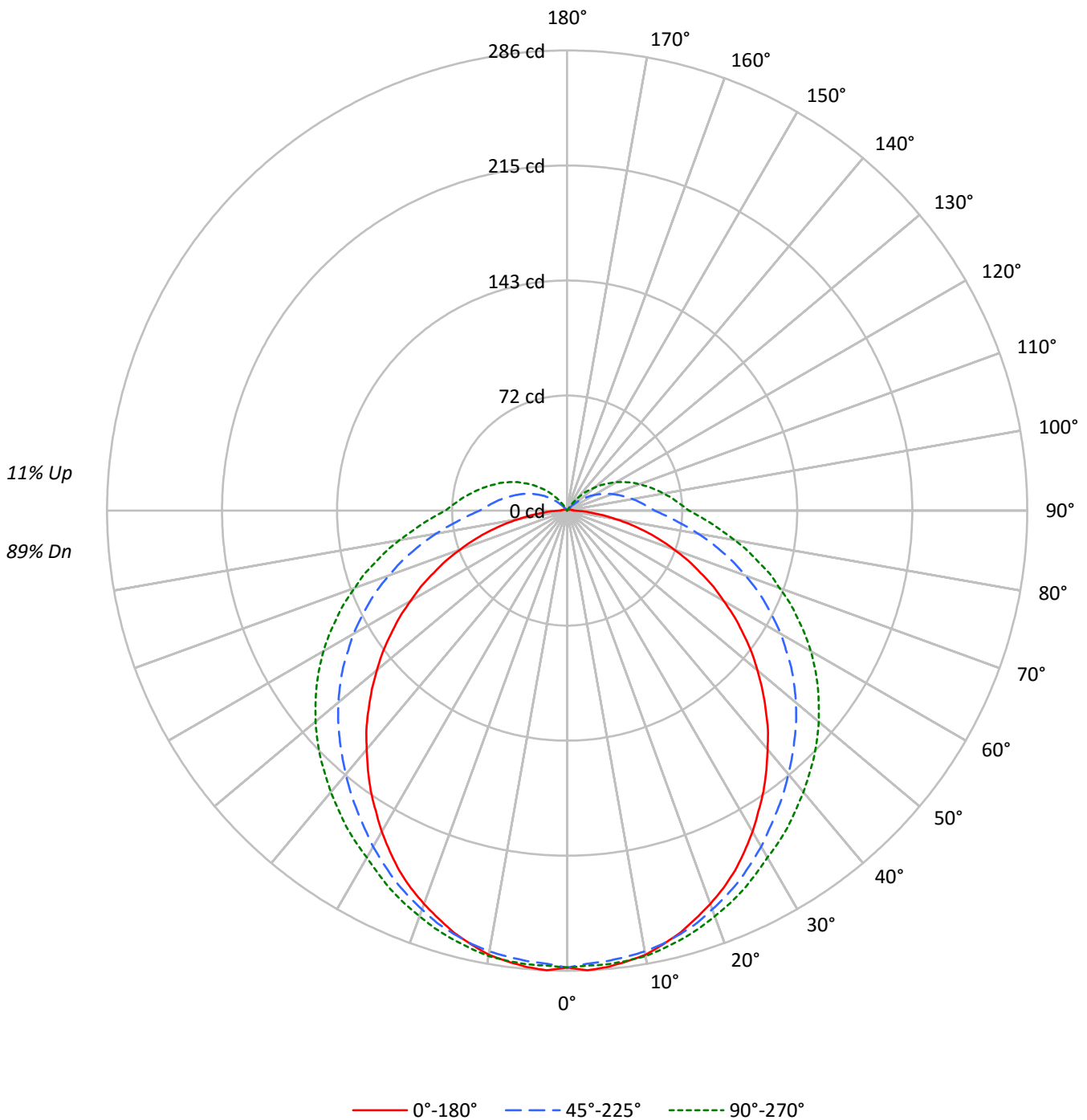
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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°	5410	5410	5410
5°	5435	5185	5155
10°	5401	5010	4939
15°	5325	4829	4715
20°	5231	4639	4502
25°	5138	4457	4310
30°	5008	4271	4118
35°	4875	4091	3978
40°	4733	3936	3839
45°	4602	3796	3718
50°	4458	3667	3598
55°	4308	3531	3476
60°	4124	3388	3349
65°	3938	3223	3200
70°	3723	3046	3040
75°	3447	2870	2890
80°	3021	2686	2737
85°	2596	2517	2603



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.9	2.5
10°-20°	77.2	7.1
20°-30°	117.0	10.8
30°-40°	142.5	13.1
40°-50°	153.3	14.1
50°-60°	148.8	13.7
60°-70°	130.0	12.0
70°-80°	100.0	9.2
80°-90°	67.0	6.2
90°-100°	46.2	4.3
100°-110°	33.8	3.1
110°-120°	22.3	2.1
120°-130°	12.4	1.1
130°-140°	5.2	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°	221.1	20.4
0°-40°	363.6	33.6
0°-60°	665.7	61.4
0°-90°	962.7	88.9
90°-120°	102.3	9.4
90°-150°	120.8	11.1
90°-180°	121.0	11.2
0°-180°	1083.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	284	284	284	284	284	
5°	285	284	281	284	283	27
15°	272	272	272	276	276	77
25°	247	250	254	258	260	114
35°	213	220	228	237	240	133
45°	174	186	200	213	217	135
55°	134	149	170	185	190	120
65°	91	112	136	153	158	91
75°	51	74	100	118	123	54
85°	15	40	67	84	90	16
90°	4	28	54	71	76	3
95°	3	23	47	63	68	3
105°	2	14	35	50	54	2
115°	2	6	25	37	42	1
125°	1	1	14	25	29	1
135°	0	0	4	13	16	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	284.0	284.0	284.0	284.0	284.0
2.5°	286.0	284.8	281.9	284.0	283.1
5°	284.8	283.5	281.1	283.5	283.1
7.5°	282.7	281.9	279.8	282.7	282.3
10°	280.3	279.4	278.2	281.5	281.1
12.5°	276.1	276.6	275.7	279.0	278.6
15°	271.6	272.4	272.4	276.1	275.7
17.5°	265.9	267.5	268.7	272.4	272.4
20°	260.1	262.1	263.8	268.3	268.3
22.5°	253.9	256.4	258.9	263.4	264.2
25°	246.9	249.8	253.5	258.4	259.7
27.5°	238.7	243.2	247.3	253.5	254.3
30°	230.5	235.8	241.2	247.7	249.0
32.5°	221.4	227.6	234.2	242.0	244.5
35°	212.8	219.8	227.6	236.6	239.5
37.5°	203.3	211.1	221.0	230.9	233.8
40°	193.8	202.9	214.0	224.7	228.4
42.5°	184.8	193.8	207.0	218.9	222.6
45°	174.5	185.6	200.0	212.8	216.9
47.5°	164.6	176.5	193.0	206.2	210.7
50°	154.3	167.1	185.6	199.6	204.1
52.5°	144.4	158.0	177.8	192.2	197.1
55°	133.7	148.6	170.0	184.8	190.1
57.5°	123.5	139.9	161.3	177.4	182.7
60°	112.3	130.0	153.5	169.1	174.9
62.5°	102.5	121.0	144.4	161.3	166.7
65°	91.4	111.5	135.8	152.7	158.0
67.5°	81.5	102.5	127.2	144.0	149.8
70°	70.8	92.2	117.7	135.4	140.3
72.5°	60.9	83.1	109.1	126.3	132.5
75°	50.6	73.7	100.0	117.7	123.0
77.5°	40.7	64.6	91.4	109.1	114.8
80°	30.9	56.0	82.7	100.0	105.8
82.5°	22.6	47.3	74.5	91.8	97.1
85°	14.8	40.3	66.7	84.0	89.7
87.5°	9.1	33.7	60.1	77.0	82.3
90°	4.1	28.0	54.3	70.8	75.7
92.5°	3.7	25.5	50.6	66.7	71.6
95°	3.3	22.6	47.3	63.0	67.9
97.5°	2.9	20.6	44.4	59.7	64.6
100°	2.9	18.1	41.2	56.4	60.9
102.5°	2.5	16.0	38.3	53.1	57.6
105°	2.1	14.0	35.4	49.8	54.3
107.5°	2.1	11.9	32.5	46.5	51.0
110°	1.6	9.9	30.0	43.2	47.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	8.2	27.2	40.3	44.9
115°	1.6	6.2	24.7	37.0	41.6
117.5°	1.2	4.5	21.8	34.2	38.3
120°	1.2	2.9	19.3	30.9	35.4
122.5°	1.2	1.6	16.9	28.0	31.7
125°	0.8	0.8	14.0	25.1	28.8
127.5°	0.8	0.4	11.5	21.8	25.5
130°	0.8	0.4	9.1	18.9	22.2
132.5°	0.8	0.4	6.6	16.0	19.3
135°	0.4	0.4	4.5	13.2	16.5
137.5°	0.4	0.4	2.5	10.3	13.2
140°	0.4	0.0	0.8	7.4	9.9
142.5°	0.4	0.0	0.0	4.9	7.0
145°	0.0	0.0	0.0	2.5	4.5
147.5°	0.0	0.0	0.0	0.4	1.6
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)