

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: P242319

Luminaire Tested: **S122DR-S290D927-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242319
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-S290D927-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 910.6 lumens
Efficiency: N/A
Efficacy: 78.5 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

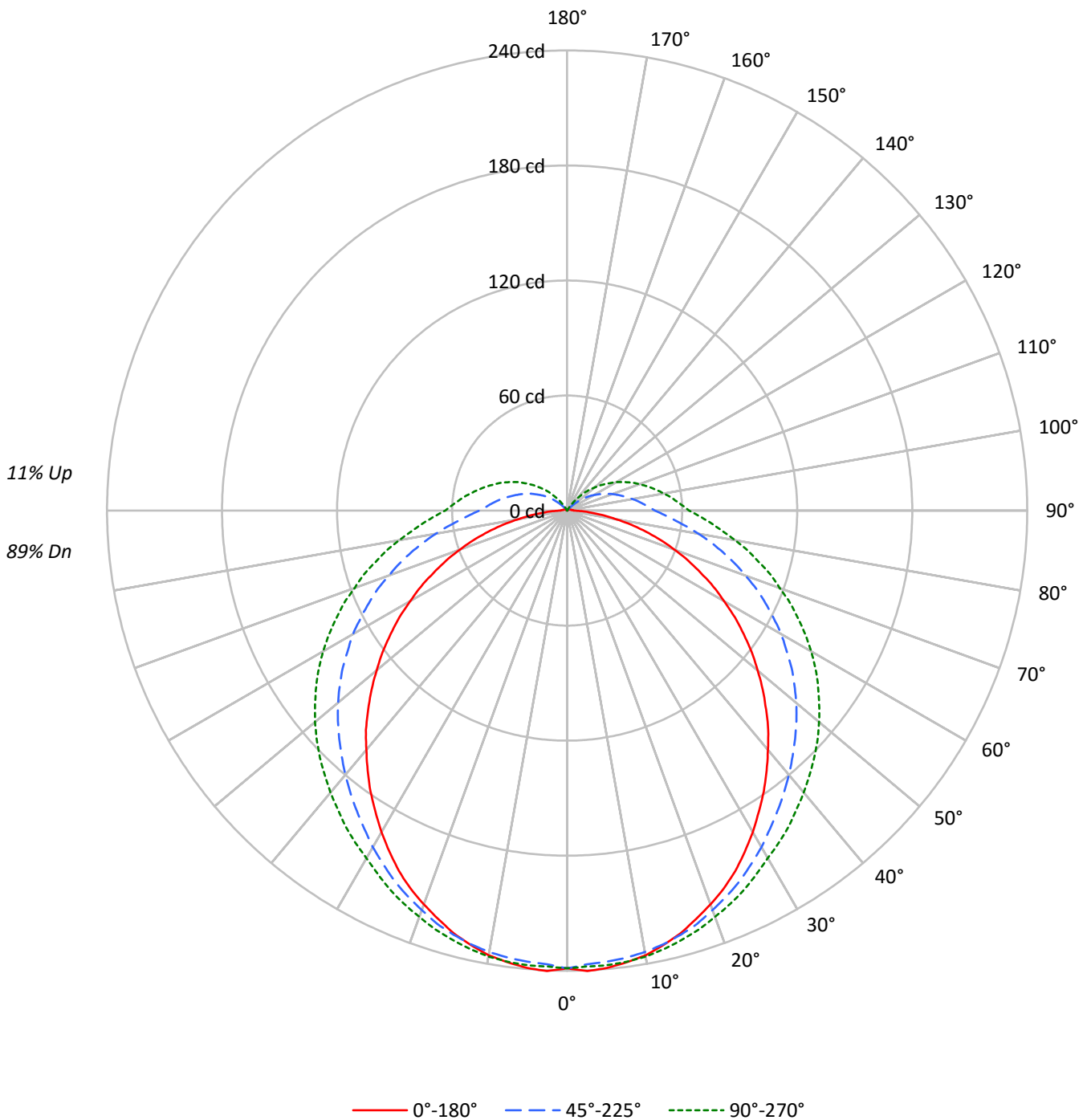
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
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	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°	4547	4547	4547
5°	4569	4356	4334
10°	4538	4211	4150
15°	4476	4060	3962
20°	4397	3899	3784
25°	4318	3746	3623
30°	4208	3589	3461
35°	4096	3439	3343
40°	3979	3309	3227
45°	3869	3191	3125
50°	3747	3083	3025
55°	3621	2968	2922
60°	3467	2847	2814
65°	3309	2708	2690
70°	3129	2560	2555
75°	2895	2413	2429
80°	2532	2257	2300
85°	2193	2113	2188



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.6	2.5
10°-20°	64.9	7.1
20°-30°	98.3	10.8
30°-40°	119.7	13.1
40°-50°	128.8	14.1
50°-60°	125.1	13.7
60°-70°	109.2	12.0
70°-80°	84.1	9.2
80°-90°	56.3	6.2
90°-100°	38.9	4.3
100°-110°	28.4	3.1
110°-120°	18.7	2.1
120°-130°	10.4	1.1
130°-140°	4.4	0.5
140°-150°	0.7	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	185.8	20.4
0°-40°	305.6	33.6
0°-60°	559.5	61.4
0°-90°	809.2	88.9
90°-120°	86.0	9.4
90°-150°	101.5	11.1
90°-180°	101.0	11.1
0°-180°	910.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	239	239	239	239	239	
5°	239	238	236	238	238	23
15°	228	229	229	232	232	64
25°	208	210	213	217	218	95
35°	179	185	191	199	201	112
45°	147	156	168	179	182	113
55°	112	125	143	155	160	101
65°	77	94	114	128	133	76
75°	42	62	84	99	103	45
85°	12	34	56	71	75	13
90°	4	24	46	60	64	2
95°	3	19	40	53	57	2
105°	2	12	30	42	46	2
115°	1	5	21	31	35	1
125°	1	1	12	21	24	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	238.7	238.7	238.7	238.7	238.7
2.5°	240.4	239.4	236.9	238.7	238.0
5°	239.4	238.3	236.2	238.3	238.0
7.5°	237.6	236.9	235.2	237.6	237.3
10°	235.5	234.9	233.8	236.6	236.2
12.5°	232.1	232.4	231.7	234.5	234.2
15°	228.3	229.0	229.0	232.1	231.7
17.5°	223.4	224.8	225.9	229.0	229.0
20°	218.6	220.3	221.7	225.5	225.5
22.5°	213.4	215.5	217.6	221.4	222.1
25°	207.5	210.0	213.1	217.2	218.3
27.5°	200.6	204.4	207.9	213.1	213.8
30°	193.7	198.2	202.7	208.2	209.3
32.5°	186.1	191.3	196.8	203.4	205.5
35°	178.8	184.7	191.3	198.9	201.3
37.5°	170.9	177.4	185.7	194.0	196.5
40°	162.9	170.5	179.9	188.9	192.0
42.5°	155.3	162.9	174.0	184.0	187.1
45°	146.7	156.0	168.1	178.8	182.3
47.5°	138.4	148.4	162.2	173.3	177.1
50°	129.7	140.4	156.0	167.8	171.6
52.5°	121.4	132.8	149.4	161.5	165.7
55°	112.4	124.9	142.9	155.3	159.8
57.5°	103.8	117.6	135.6	149.1	153.6
60°	94.4	109.3	129.0	142.2	147.0
62.5°	86.1	101.7	121.4	135.6	140.1
65°	76.8	93.7	114.1	128.3	132.8
67.5°	68.5	86.1	106.9	121.1	125.9
70°	59.5	77.5	98.9	113.8	117.9
72.5°	51.2	69.9	91.7	106.2	111.4
75°	42.5	61.9	84.1	98.9	103.4
77.5°	34.2	54.3	76.8	91.7	96.5
80°	25.9	47.0	69.5	84.1	88.9
82.5°	19.0	39.8	62.6	77.1	81.6
85°	12.5	33.9	56.0	70.6	75.4
87.5°	7.6	28.4	50.5	64.7	69.2
90°	3.5	23.5	45.7	59.5	63.6
92.5°	3.1	21.4	42.5	56.0	60.2
95°	2.8	19.0	39.8	52.9	57.1
97.5°	2.4	17.3	37.4	50.2	54.3
100°	2.4	15.2	34.6	47.4	51.2
102.5°	2.1	13.5	32.2	44.6	48.4
105°	1.7	11.8	29.7	41.9	45.7
107.5°	1.7	10.0	27.3	39.1	42.9
110°	1.4	8.3	25.2	36.3	40.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.4	6.9	22.8	33.9	37.7
115°	1.4	5.2	20.8	31.1	34.9
117.5°	1.0	3.8	18.3	28.7	32.2
120°	1.0	2.4	16.3	25.9	29.7
122.5°	1.0	1.4	14.2	23.5	26.6
125°	0.7	0.7	11.8	21.1	24.2
127.5°	0.7	0.3	9.7	18.3	21.4
130°	0.7	0.3	7.6	15.9	18.7
132.5°	0.7	0.3	5.5	13.5	16.3
135°	0.3	0.3	3.8	11.1	13.8
137.5°	0.3	0.3	2.1	8.6	11.1
140°	0.3	0.0	0.7	6.2	8.3
142.5°	0.3	0.0	0.0	4.2	5.9
145°	0.0	0.0	0.0	2.1	3.8
147.5°	0.0	0.0	0.0	0.3	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)