

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: P243208

Luminaire Tested: **S122DR-H290D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243208
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-H290D940-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1028.6 lumens
Efficiency: N/A
Efficacy: 91.8 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

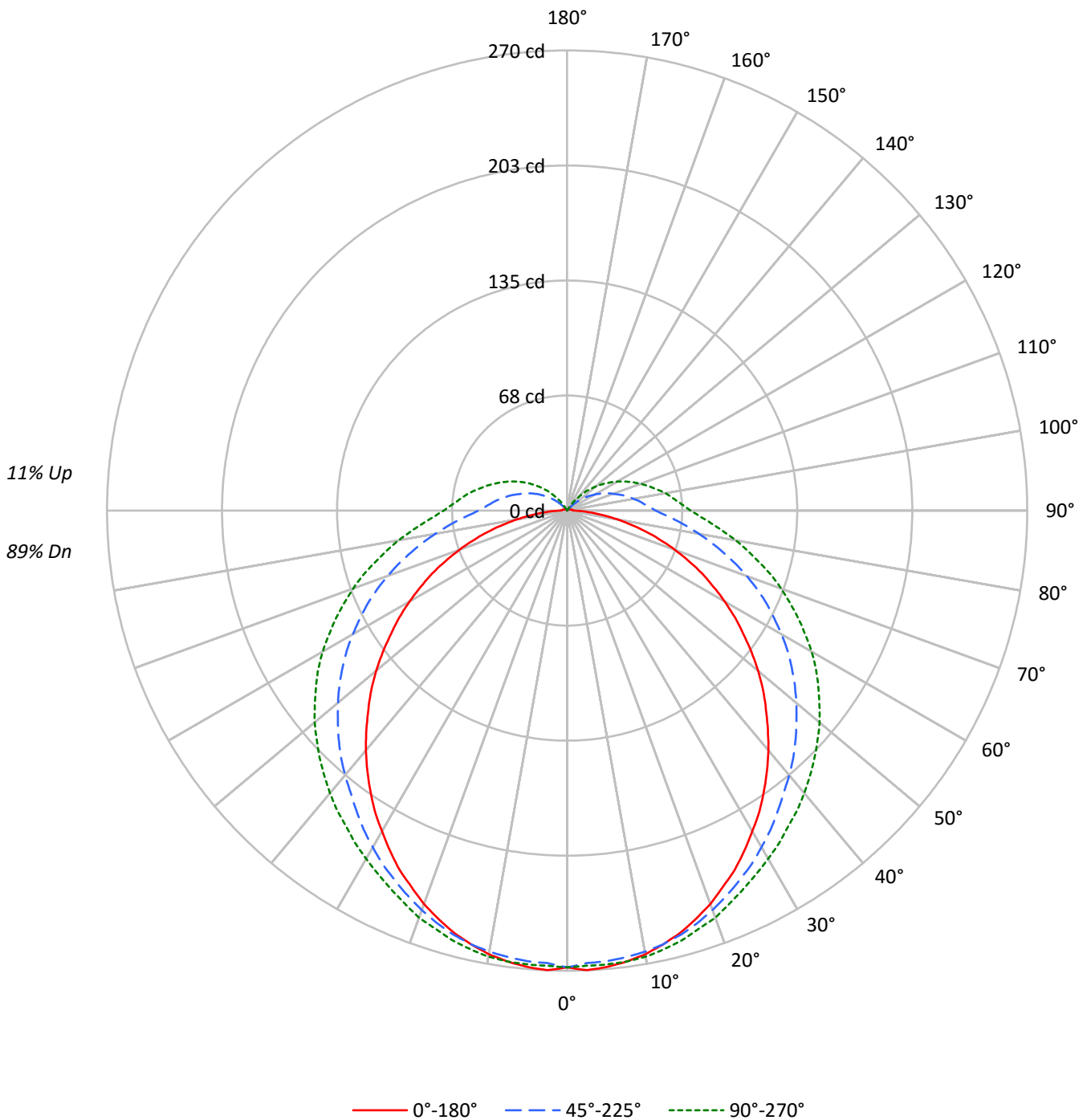
Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	5105	5105	5105
5°	5130	4895	4868
10°	5093	4733	4670
15°	5029	4567	4462
20°	4940	4386	4266
25°	4840	4207	4064
30°	4721	4039	3901
35°	4609	3872	3757
40°	4487	3728	3639
45°	4351	3599	3519
50°	4227	3468	3409
55°	4066	3342	3290
60°	3922	3204	3173
65°	3766	3066	3032
70°	3534	2899	2895
75°	3284	2720	2737
80°	2923	2546	2597
85°	2561	2407	2458



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.4	2.5
10°-20°	73.0	7.1
20°-30°	110.5	10.7
30°-40°	134.8	13.1
40°-50°	145.1	14.1
50°-60°	141.0	13.7
60°-70°	123.3	12.0
70°-80°	94.9	9.2
80°-90°	63.8	6.2
90°-100°	44.2	4.3
100°-110°	32.5	3.2
110°-120°	21.6	2.1
120°-130°	12.2	1.2
130°-140°	5.3	0.5
140°-150°	1.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	208.9	20.3
0°-40°	343.7	33.4
0°-60°	629.8	61.2
0°-90°	911.8	88.7
90°-120°	98.2	9.6
90°-150°	116.7	11.3
90°-180°	117.0	11.4
0°-180°	1028.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	268	268	268	268	268	
5°	269	268	265	268	267	26
15°	256	258	258	261	261	72
25°	233	236	239	244	245	107
35°	201	208	215	224	226	126
45°	165	175	190	201	205	127
55°	126	141	161	176	180	113
65°	87	106	129	145	150	86
75°	48	70	95	112	116	51
85°	15	38	64	80	85	15
90°	4	27	52	68	72	3
95°	3	22	45	60	65	2
105°	2	13	34	48	52	2
115°	2	6	24	36	40	1
125°	1	1	14	24	28	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°	268.0	268.0	268.0	268.0	268.0
2.5°	269.9	268.8	265.8	268.0	267.3
5°	268.8	267.7	265.4	267.7	267.3
7.5°	266.9	266.2	264.3	267.3	266.9
10°	264.3	263.9	262.8	265.8	265.8
12.5°	260.6	260.9	260.6	263.9	263.5
15°	256.5	257.6	257.6	260.9	260.9
17.5°	251.2	253.1	253.8	257.6	257.2
20°	245.6	247.9	249.4	253.5	254.2
22.5°	238.9	242.3	244.5	249.0	249.4
25°	232.6	236.3	239.3	244.5	244.9
27.5°	225.1	229.6	234.1	239.3	240.4
30°	217.3	222.9	228.1	234.4	235.9
32.5°	209.8	215.4	222.1	228.8	231.4
35°	201.2	207.9	215.4	223.6	226.2
37.5°	192.6	199.7	208.7	218.4	221.7
40°	183.7	191.9	202.7	213.2	216.5
42.5°	174.3	183.3	196.4	207.2	210.9
45°	165.0	175.1	189.6	201.2	205.3
47.5°	156.0	166.9	182.5	195.6	199.3
50°	146.3	158.3	175.5	188.9	193.4
52.5°	136.3	149.7	168.4	182.2	186.6
55°	126.2	141.1	160.9	175.5	179.9
57.5°	116.8	132.5	153.4	168.0	173.2
60°	106.8	123.6	145.2	160.5	165.7
62.5°	96.7	115.0	137.0	152.7	157.5
65°	87.4	106.0	129.2	144.8	149.7
67.5°	76.9	96.7	120.6	137.0	141.5
70°	67.2	88.1	112.0	128.4	133.6
72.5°	57.5	78.8	103.4	119.8	125.4
75°	48.2	70.2	94.8	111.6	116.5
77.5°	38.4	61.6	86.6	103.4	108.3
80°	29.9	53.0	78.4	95.2	100.4
82.5°	21.3	45.2	70.9	87.4	92.2
85°	14.6	38.4	63.8	79.9	84.7
87.5°	8.6	32.1	57.1	73.2	78.0
90°	4.1	26.9	51.9	67.6	72.4
92.5°	3.4	24.3	48.2	63.5	68.3
95°	3.0	21.7	45.2	60.1	64.6
97.5°	3.0	19.8	42.6	57.1	61.6
100°	2.6	17.5	39.6	53.8	58.6
102.5°	2.6	15.3	37.0	50.8	55.2
105°	2.2	13.4	34.3	47.8	51.9
107.5°	1.9	11.6	31.4	44.8	48.9
110°	1.9	9.7	28.7	41.8	45.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.5	8.2	26.5	38.8	42.9
115°	1.5	6.3	23.9	35.8	39.9
117.5°	1.5	4.5	21.3	32.9	37.0
120°	1.1	3.0	19.0	30.2	34.0
122.5°	1.1	1.9	16.4	27.3	31.0
125°	1.1	0.7	14.2	24.3	28.0
127.5°	0.7	0.7	11.6	21.7	25.0
130°	0.7	0.4	9.3	18.7	22.0
132.5°	0.7	0.4	7.1	16.1	19.0
135°	0.4	0.4	4.9	13.1	16.4
137.5°	0.4	0.4	2.6	10.5	13.1
140°	0.4	0.0	1.1	7.8	10.1
142.5°	0.4	0.0	0.0	5.2	7.5
145°	0.4	0.0	0.0	3.0	4.5
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)