

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: P243193

Luminaire Tested: **S122DR-H290D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243193
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-H290D840-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1164.8 lumens
Efficiency: N/A
Efficacy: 104.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

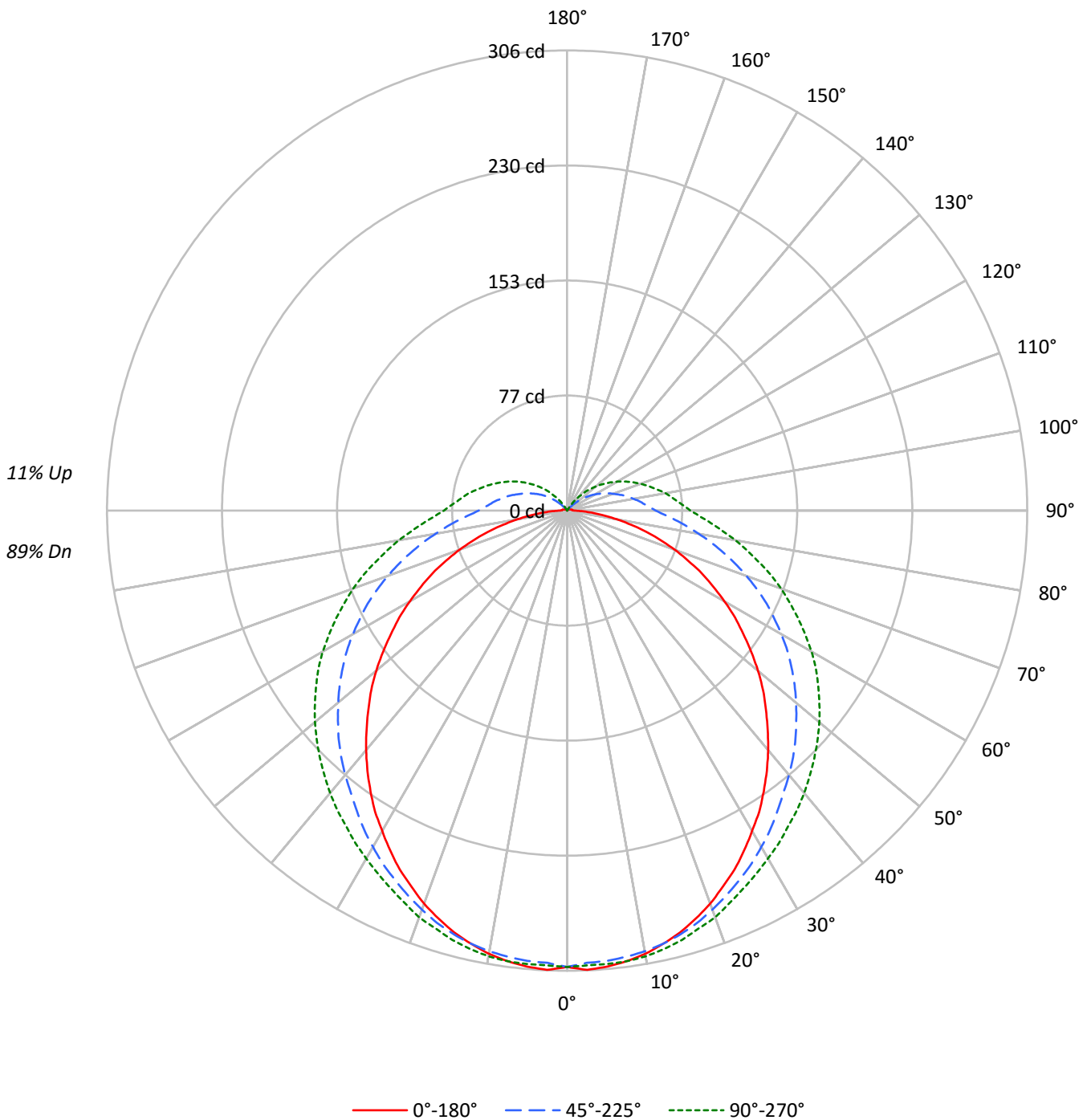
Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	5781	5781	5781
5°	5809	5544	5512
10°	5767	5360	5289
15°	5694	5171	5053
20°	5595	4966	4831
25°	5481	4764	4602
30°	5344	4574	4419
35°	5221	4384	4255
40°	5080	4223	4121
45°	4929	4077	3986
50°	4787	3926	3861
55°	4604	3785	3727
60°	4440	3630	3594
65°	4261	3472	3433
70°	4002	3282	3279
75°	3713	3082	3099
80°	3305	2884	2941
85°	2895	2728	2786



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.8	2.5
10°-20°	82.6	7.1
20°-30°	125.2	10.7
30°-40°	152.7	13.1
40°-50°	164.3	14.1
50°-60°	159.7	13.7
60°-70°	139.6	12.0
70°-80°	107.5	9.2
80°-90°	72.2	6.2
90°-100°	50.0	4.3
100°-110°	36.8	3.2
110°-120°	24.5	2.1
120°-130°	13.8	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°	236.6	20.3
0°-40°	389.2	33.4
0°-60°	713.3	61.2
0°-90°	1032.7	88.7
90°-120°	111.3	9.6
90°-150°	132.2	11.3
90°-180°	132.0	11.3
0°-180°	1164.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	304	304	304	304	304	
5°	304	303	301	303	303	29
15°	290	292	292	296	296	82
25°	263	268	271	277	277	121
35°	228	236	244	253	256	143
45°	187	198	215	228	232	144
55°	143	160	182	199	204	128
65°	99	120	146	164	170	97
75°	54	80	107	126	132	58
85°	16	44	72	90	96	17
90°	5	30	59	76	82	3
95°	3	24	51	68	73	3
105°	2	15	39	54	59	3
115°	2	7	27	41	45	2
125°	1	1	16	28	32	1
135°	0	0	6	15	19	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	303.5	303.5	303.5	303.5	303.5
2.5°	305.7	304.4	301.0	303.5	302.7
5°	304.4	303.1	300.6	303.1	302.7
7.5°	302.3	301.4	299.3	302.7	302.3
10°	299.3	298.9	297.6	301.0	301.0
12.5°	295.1	295.5	295.1	298.9	298.5
15°	290.4	291.7	291.7	295.5	295.5
17.5°	284.5	286.6	287.5	291.7	291.3
20°	278.2	280.7	282.4	287.1	287.9
22.5°	270.6	274.4	276.9	282.0	282.4
25°	263.4	267.6	271.0	276.9	277.3
27.5°	254.9	260.0	265.1	271.0	272.3
30°	246.0	252.4	258.3	265.5	267.2
32.5°	237.6	243.9	251.5	259.2	262.1
35°	227.9	235.5	243.9	253.2	256.2
37.5°	218.1	226.2	236.3	247.3	251.1
40°	208.0	217.3	229.6	241.4	245.2
42.5°	197.4	207.6	222.4	234.6	238.9
45°	186.9	198.3	214.8	227.9	232.5
47.5°	176.7	189.0	206.7	221.5	225.8
50°	165.7	179.3	198.7	213.9	219.0
52.5°	154.3	169.5	190.7	206.3	211.4
55°	142.9	159.8	182.2	198.7	203.8
57.5°	132.3	150.1	173.8	190.2	196.2
60°	120.9	139.9	164.5	181.8	187.7
62.5°	109.5	130.2	155.2	172.9	178.4
65°	98.9	120.1	146.3	164.0	169.5
67.5°	87.1	109.5	136.6	155.2	160.2
70°	76.1	99.8	126.8	145.4	151.3
72.5°	65.1	89.2	117.1	135.7	142.0
75°	54.5	79.5	107.4	126.4	131.9
77.5°	43.5	69.8	98.1	117.1	122.6
80°	33.8	60.0	88.8	107.8	113.7
82.5°	24.1	51.2	80.3	98.9	104.4
85°	16.5	43.5	72.3	90.5	96.0
87.5°	9.7	36.4	64.7	82.9	88.4
90°	4.7	30.4	58.8	76.5	82.0
92.5°	3.8	27.5	54.5	71.9	77.4
95°	3.4	24.5	51.2	68.1	73.1
97.5°	3.4	22.4	48.2	64.7	69.8
100°	3.0	19.9	44.8	60.9	66.4
102.5°	3.0	17.3	41.9	57.5	62.6
105°	2.5	15.2	38.9	54.1	58.8
107.5°	2.1	13.1	35.5	50.7	55.4
110°	2.1	11.0	32.6	47.3	52.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.7	9.3	30.0	44.0	48.6
115°	1.7	7.2	27.1	40.6	45.2
117.5°	1.7	5.1	24.1	37.2	41.9
120°	1.3	3.4	21.6	34.2	38.5
122.5°	1.3	2.1	18.6	30.9	35.1
125°	1.3	0.8	16.1	27.5	31.7
127.5°	0.8	0.8	13.1	24.5	28.3
130°	0.8	0.4	10.6	21.1	24.9
132.5°	0.8	0.4	8.0	18.2	21.6
135°	0.4	0.4	5.5	14.8	18.6
137.5°	0.4	0.4	3.0	11.8	14.8
140°	0.4	0.0	1.3	8.9	11.4
142.5°	0.4	0.0	0.0	5.9	8.5
145°	0.4	0.0	0.0	3.4	5.1
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)