

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: P243124

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243124  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-48)  
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-F-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

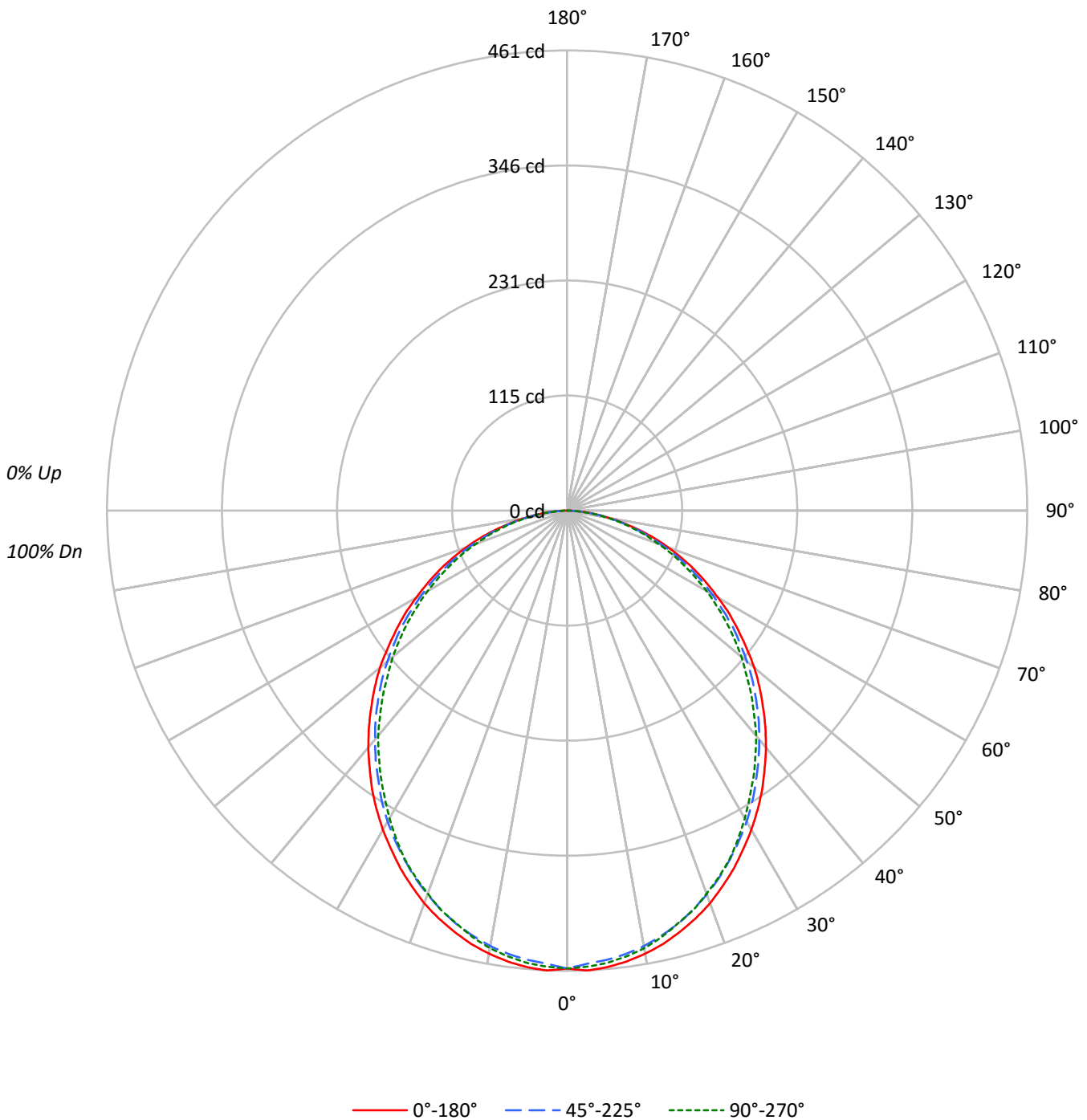
Lumens per Lamp: N/A  
Luminaire Lumens: 1167.2 lumens  
Efficiency: N/A  
Efficacy: 104.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8737	8737	8737
5°	8778	8641	8698
10°	8717	8570	8611
15°	8612	8454	8446
20°	8483	8295	8278
25°	8308	8104	8094
30°	8118	7914	7830
35°	7922	7669	7569
40°	7706	7442	7328
45°	7470	7208	7025
50°	7254	6967	6753
55°	6951	6711	6459
60°	6651	6392	6152
65°	6364	6058	5792
70°	5981	5675	5391
75°	5446	5225	4975
80°	4728	4596	4410
85°	4065	3606	3322



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.2	3.7
10°-20°	121.6	10.4
20°-30°	178.7	15.3
30°-40°	207.5	17.8
40°-50°	207.3	17.8
50°-60°	180.5	15.5
60°-70°	133.5	11.4
70°-80°	75.3	6.4
80°-90°	19.6	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	343.5	29.4
0°-40°	551.0	47.2
0°-60°	938.8	80.4
0°-90°	1167.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1167.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	459	459	459	459	459	
5°	459	457	452	456	455	44
15°	437	435	429	430	428	123
25°	395	392	386	385	385	182
35°	341	337	330	327	326	213
45°	277	274	268	263	261	214
55°	209	208	202	197	194	187
65°	141	139	134	130	128	140
75°	74	74	71	68	68	79
85°	19	18	16	16	15	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	458.7	458.7	458.7	458.7	458.7
2.5°	461.2	459.1	454.5	458.3	457.4
5°	459.1	457.0	451.9	455.7	454.9
7.5°	455.7	453.6	448.1	451.9	450.7
10°	450.7	448.1	443.1	445.6	445.2
12.5°	444.7	442.2	436.3	438.4	437.6
15°	436.7	434.6	428.7	430.4	428.3
17.5°	428.3	424.9	419.4	421.1	419.8
20°	418.5	415.2	409.2	410.1	408.4
22.5°	407.1	403.7	398.2	398.2	397.4
25°	395.3	391.9	385.6	385.1	385.1
27.5°	382.2	379.2	372.9	371.6	370.8
30°	369.1	366.5	359.8	357.2	356.0
32.5°	355.1	351.7	345.4	342.4	340.3
35°	340.7	336.9	329.8	326.8	325.5
37.5°	325.1	321.3	315.0	312.4	309.9
40°	309.9	306.5	299.3	295.5	294.7
42.5°	293.8	290.4	284.1	279.9	277.3
45°	277.3	274.4	267.6	263.4	260.8
47.5°	261.3	257.9	252.0	246.9	243.5
50°	244.8	241.4	235.1	229.1	227.9
52.5°	226.6	224.5	218.1	212.6	211.0
55°	209.3	207.6	202.1	196.6	194.5
57.5°	192.8	190.7	184.3	180.1	177.6
60°	174.6	173.3	167.8	163.2	161.5
62.5°	157.7	156.0	151.3	146.7	144.6
65°	141.2	139.1	134.4	130.2	128.5
67.5°	124.3	122.2	118.4	115.0	113.3
70°	107.4	105.7	101.9	98.9	96.8
72.5°	90.9	89.2	85.8	82.9	82.4
75°	74.0	73.6	71.0	68.5	67.6
77.5°	58.3	57.9	56.2	55.0	54.1
80°	43.1	43.1	41.9	40.6	40.2
82.5°	29.6	30.0	28.7	27.9	27.9
85°	18.6	17.8	16.5	15.6	15.2
87.5°	7.6	6.3	5.9	4.7	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)