

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: P231711

Luminaire Tested: **S121-RDR-LO-27-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231711  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33908)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121-RDR-LO-27-X-0048-1-U-DD-1-W  
Description: DEFINE 1 LED LINEAR REGRESSED DIRECT RECESSED LED LUMINAIRE WITH FLUSH LENS.  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 815.0 lumens  
Efficiency: N/A  
Efficacy: 59.9 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 0.93 / 1.1  
Luminous Opening: Rectangular (W 0.1' x L: 3.92' x H: 0')  
CIE Type: Direct

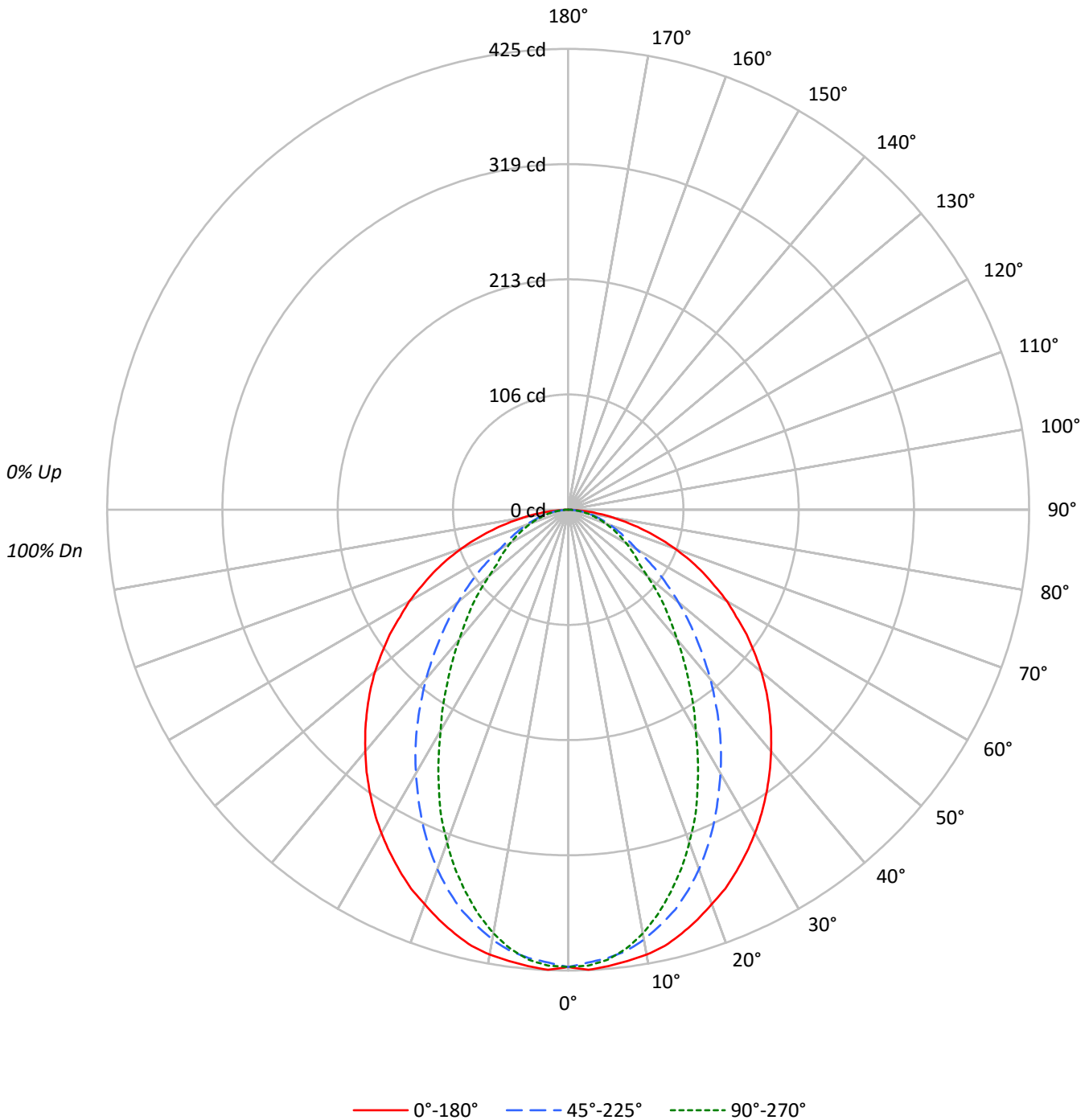
Input Watts (W): 13.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86
2	101	94	88	83	99	92	86	82	89	84	80	85	81	78	82	79	76	74
3	93	84	76	70	91	82	75	70	79	73	69	77	72	67	74	70	66	64
4	86	75	67	61	84	74	66	61	71	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	57	48	43	67	56	48	42	54	47	42	53	47	42	52	46	42	40
8	65	52	44	39	63	51	44	38	50	43	38	49	43	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	35	33
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30

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

	0°	45°	90°
0°	11790	11790	11790
5°	11860	11649	11694
10°	11830	11426	11262
15°	11711	11048	10564
20°	11517	10496	9714
25°	11336	9816	8708
30°	11121	9058	7590
35°	10874	8280	6614
40°	10620	7438	5701
45°	10367	6587	4954
50°	10117	5759	4141
55°	9787	4947	3704
60°	9455	4065	3433
65°	9063	3671	3202
70°	8534	3376	2967
75°	7799	3068	2711
80°	6794	2689	2479
85°	5357	2278	2149



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.5	4.8
10°-20°	107.8	13.2
20°-30°	147.9	18.2
30°-40°	155.8	19.1
40°-50°	138.8	17.0
50°-60°	106.7	13.1
60°-70°	71.4	8.8
70°-80°	37.3	4.6
80°-90°	9.8	1.2
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°	295.3	36.2
0°-40°	451.0	55.3
0°-60°	696.5	85.5
0°-90°	815.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	815.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	422	422	422	422	422	
5°	423	420	415	418	417	40
15°	405	399	382	372	365	114
25°	368	352	318	294	282	169
35°	319	292	243	206	194	199
45°	262	225	167	134	125	202
55°	201	157	102	78	76	179
65°	137	90	56	50	48	135
75°	72	37	28	26	25	77
85°	17	8	7	7	7	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	421.7	421.7	421.7	421.7	421.7
2.5°	424.7	422.2	418.0	421.7	420.9
5°	422.6	420.1	415.1	418.0	416.7
7.5°	419.7	416.3	410.5	411.3	408.4
10°	416.7	412.1	402.5	400.4	396.7
12.5°	412.1	407.1	392.5	386.7	382.1
15°	404.6	399.2	381.7	372.1	365.0
17.5°	396.3	387.9	367.9	354.5	347.0
20°	387.1	377.1	352.8	335.7	326.5
22.5°	378.3	365.0	336.1	315.7	306.1
25°	367.5	352.0	318.2	294.0	282.3
27.5°	356.2	337.4	299.4	272.3	258.9
30°	344.5	322.8	280.6	249.3	235.1
32.5°	332.0	307.3	262.2	227.6	215.0
35°	318.6	292.3	242.6	206.3	193.8
37.5°	305.2	275.2	222.6	186.2	175.0
40°	291.0	258.9	203.8	167.4	156.2
42.5°	276.8	241.8	184.6	150.3	139.9
45°	262.2	225.1	166.6	134.0	125.3
47.5°	247.6	207.9	149.1	118.6	110.2
50°	232.6	190.8	132.4	104.0	95.2
52.5°	216.3	173.7	116.5	89.4	83.1
55°	200.8	156.6	101.5	78.5	76.0
57.5°	183.7	139.5	86.9	71.0	68.5
60°	169.1	122.3	72.7	63.9	61.4
62.5°	152.0	105.6	63.5	56.8	54.7
65°	137.0	89.8	55.5	49.7	48.4
67.5°	121.1	74.3	48.0	43.4	41.8
70°	104.4	59.7	41.3	37.2	36.3
72.5°	88.1	46.3	34.2	31.3	30.9
75°	72.2	36.7	28.4	25.9	25.1
77.5°	56.8	28.0	22.5	20.9	20.5
80°	42.2	20.5	16.7	15.9	15.4
82.5°	28.8	13.8	11.7	10.9	10.9
85°	16.7	7.9	7.1	6.7	6.7
87.5°	6.3	3.3	2.9	2.9	2.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)