

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: P231750

Luminaire Tested: **S124-RDR-LO-40-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231750  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33917)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124-RDR-LO-40-X-0048-1-U-DD-1-W  
Description: DEFINE 4 LED LINEAR REGRESSED DIRECT RECESSED LED LUMINAIRE WITH FLUSH LENS.  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

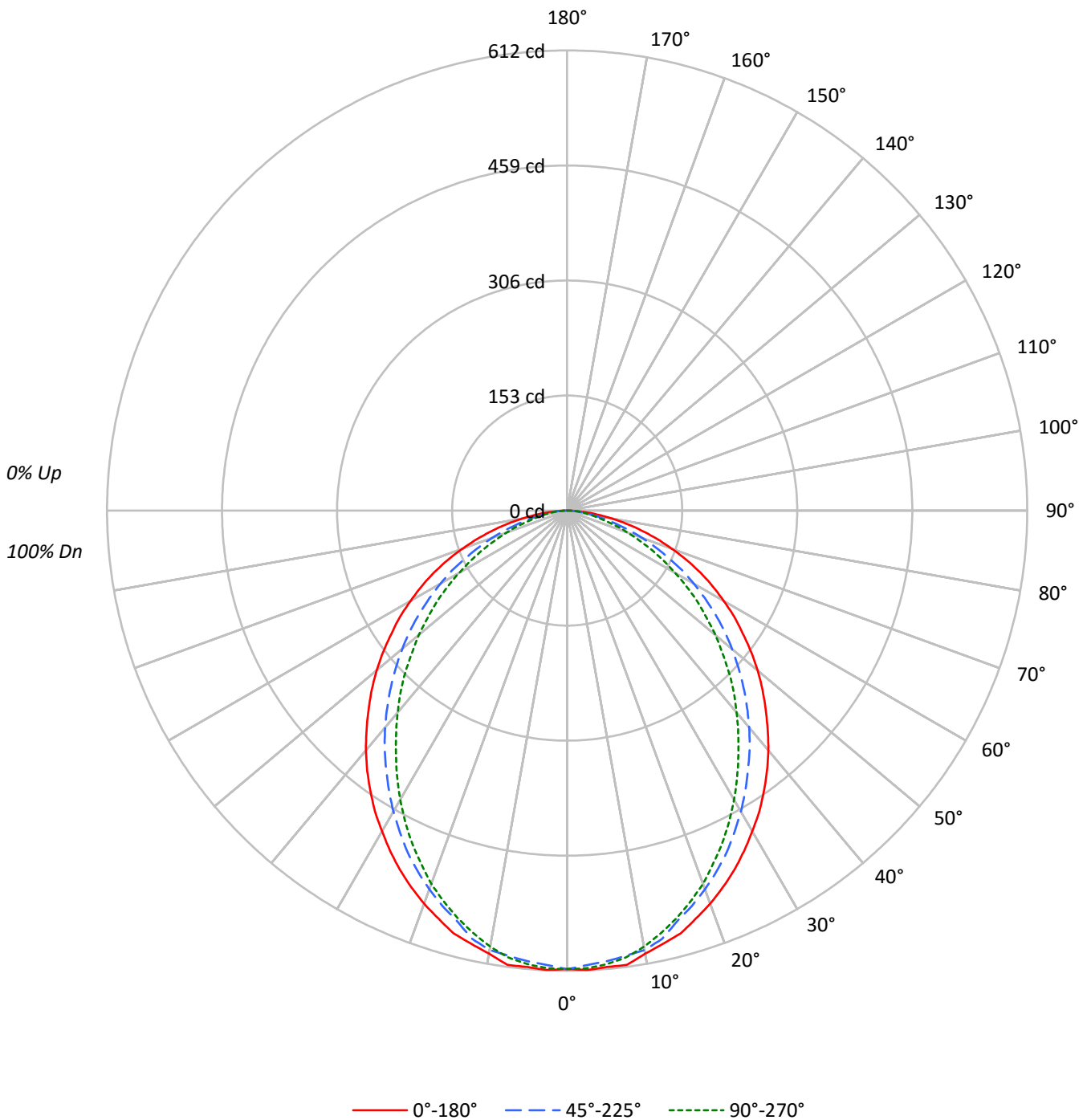
Lumens per Lamp: N/A  
Luminaire Lumens: 1440.6 lumens  
Efficiency: N/A  
Efficacy: 105.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.1 / 1.25  
Luminous Opening: Rectangular (W 0.31' x L: 3.92' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 13.6  
Input Voltage (V): 120  
Input Current (Ain): 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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87					85				
2	100	92	86	80	98	90	85	79	87	82	78	84	80	76	81	77	74					72				
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64					62				
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55					53				
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48					46				
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43					41				
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38					36				
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	35					33				
9	58	45	37	32	57	45	37	32	44	37	32	43	36	31	41	36	31					30				
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29					27				

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

	0°	45°	90°
0°	5464	5464	5464
5°	5481	5411	5445
10°	5444	5398	5358
15°	5402	5243	5207
20°	5306	5111	5037
25°	5206	4961	4825
30°	5095	4781	4593
35°	4988	4590	4343
40°	4870	4405	4102
45°	4731	4200	3857
50°	4611	3990	3590
55°	4454	3756	3307
60°	4308	3487	2975
65°	4149	3144	2631
70°	3872	2774	2253
75°	3552	2292	1793
80°	3075	1765	1594
85°	2498	1532	1419



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.5	4.0
10°-20°	160.6	11.1
20°-30°	232.6	16.1
30°-40°	264.9	18.4
40°-50°	258.5	17.9
50°-60°	218.2	15.1
60°-70°	152.6	10.6
70°-80°	76.7	5.3
80°-90°	19.0	1.3
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°	450.7	31.3
0°-40°	715.6	49.7
0°-60°	1192.3	82.8
0°-90°	1440.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1440.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	610	610	610	610	610	
5°	609	607	602	606	605	58
15°	582	578	565	565	561	164
25°	527	519	502	494	488	242
35°	456	443	420	404	397	285
45°	373	359	331	312	304	288
55°	285	268	240	219	212	256
65°	196	176	148	131	124	193
75°	103	87	66	55	52	109
85°	24	16	15	14	14	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	609.8	609.8	609.8	609.8	609.8
2.5°	611.5	610.4	604.9	610.4	609.3
5°	609.3	607.1	601.6	606.5	605.4
7.5°	609.3	606.5	597.2	600.5	599.4
10°	598.3	599.9	593.3	590.0	588.9
12.5°	590.0	587.2	583.4	578.4	575.7
15°	582.3	577.9	565.2	565.2	561.3
17.5°	569.0	565.7	551.4	551.4	545.3
20°	556.4	551.4	536.0	536.0	528.2
22.5°	542.0	536.5	519.4	517.8	507.8
25°	526.6	518.9	501.8	493.5	488.0
27.5°	510.0	500.7	481.9	471.4	466.5
30°	492.4	482.5	462.1	449.4	443.9
32.5°	475.3	463.7	441.1	427.3	420.7
35°	456.0	442.8	419.6	404.2	397.0
37.5°	436.7	423.5	398.7	381.0	373.8
40°	416.3	401.4	376.6	358.4	350.7
42.5°	394.8	379.9	354.0	334.7	328.1
45°	373.3	359.0	331.4	311.5	304.4
47.5°	352.3	336.4	308.8	287.8	279.6
50°	330.8	314.3	286.2	265.2	257.5
52.5°	308.2	291.7	263.6	242.1	233.2
55°	285.1	268.5	240.4	218.9	211.7
57.5°	264.1	245.4	217.2	196.3	188.6
60°	240.4	221.7	194.6	173.7	166.0
62.5°	218.4	199.1	172.6	152.2	144.5
65°	195.7	176.4	148.3	130.7	124.1
67.5°	172.0	153.8	126.8	110.3	104.2
70°	147.8	130.1	105.9	91.0	86.0
72.5°	125.2	108.1	85.5	72.2	68.9
75°	102.6	86.6	66.2	55.1	51.8
77.5°	80.5	66.2	49.1	40.8	39.7
80°	59.6	47.4	34.2	30.9	30.9
82.5°	40.8	29.8	23.7	22.6	22.6
85°	24.3	16.0	14.9	14.3	13.8
87.5°	10.5	7.2	6.6	6.1	6.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)