

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: P231748

Luminaire Tested: **S124-RDR-LO-30-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231748  
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-30-X-0048-1-U-DD-1-W  
Description: DEFINE 4 LED LINEAR REGRESSED DIRECT RECESSED LED LUMINAIRE WITH FLUSH LENS.  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1359.0 lumens  
Efficiency: N/A  
Efficacy: 99.9 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

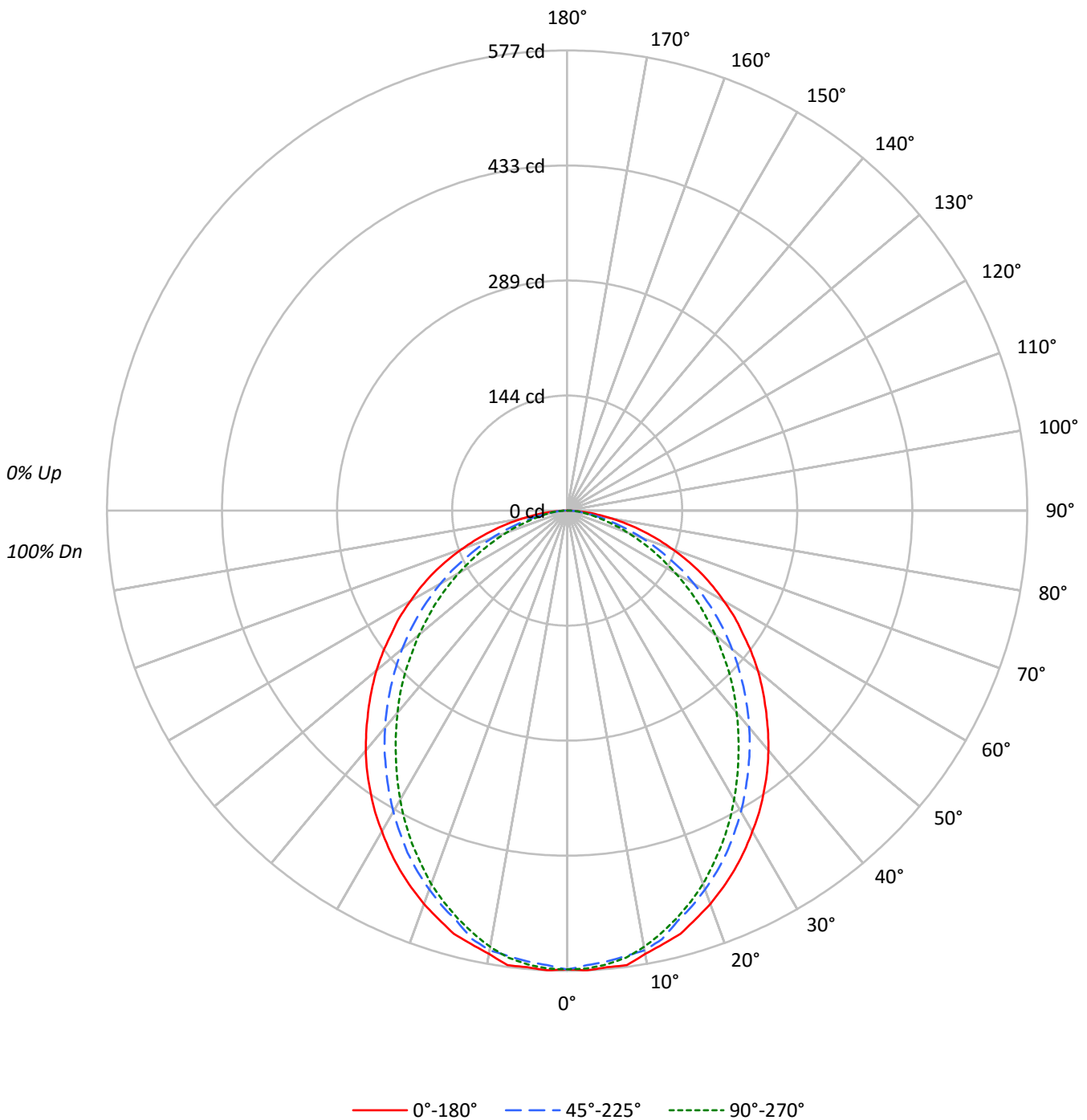
Input Watts (W): 13.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	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°	5155	5155	5155
5°	5170	5105	5138
10°	5135	5093	5055
15°	5096	4946	4912
20°	5005	4821	4752
25°	4912	4680	4552
30°	4806	4510	4332
35°	4706	4331	4097
40°	4593	4156	3869
45°	4463	3961	3638
50°	4351	3764	3386
55°	4201	3543	3121
60°	4065	3290	2806
65°	3916	2966	2481
70°	3652	2617	2125
75°	3351	2160	1693
80°	2900	1667	1502
85°	2354	1439	1337



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.2	4.0
10°-20°	151.5	11.1
20°-30°	219.4	16.1
30°-40°	249.9	18.4
40°-50°	243.8	17.9
50°-60°	205.9	15.2
60°-70°	143.9	10.6
70°-80°	72.4	5.3
80°-90°	17.9	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°	425.2	31.3
0°-40°	675.1	49.7
0°-60°	1124.8	82.8
0°-90°	1359.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1359.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	575	575	575	575	575	
5°	575	573	568	572	571	55
15°	549	545	533	533	530	154
25°	497	490	473	466	460	229
35°	430	418	396	381	374	269
45°	352	339	313	294	287	272
55°	269	253	227	206	200	241
65°	185	166	140	123	117	182
75°	97	82	62	52	49	102
85°	23	15	14	14	13	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	575.3	575.3	575.3	575.3	575.3
2.5°	576.9	575.8	570.6	575.8	574.8
5°	574.8	572.7	567.5	572.2	571.2
7.5°	574.8	572.2	563.4	566.5	565.4
10°	564.4	566.0	559.7	556.6	555.6
12.5°	556.6	554.0	550.4	545.7	543.1
15°	549.3	545.2	533.2	533.2	529.5
17.5°	536.8	533.7	520.2	520.2	514.5
20°	524.9	520.2	505.6	505.6	498.3
22.5°	511.3	506.1	490.0	488.5	479.1
25°	496.8	489.5	473.4	465.6	460.4
27.5°	481.2	472.3	454.6	444.8	440.1
30°	464.5	455.2	435.9	423.9	418.7
32.5°	448.4	437.5	416.1	403.1	396.9
35°	430.2	417.7	395.9	381.3	374.5
37.5°	412.0	399.5	376.1	359.4	352.7
40°	392.7	378.7	355.3	338.1	330.8
42.5°	372.5	358.4	334.0	315.8	309.5
45°	352.2	338.6	312.6	293.9	287.1
47.5°	332.4	317.3	291.3	271.5	263.7
50°	312.1	296.5	270.0	250.2	242.9
52.5°	290.8	275.2	248.6	228.4	220.0
55°	268.9	253.3	226.8	206.5	199.8
57.5°	249.2	231.5	205.0	185.2	177.9
60°	226.8	209.1	183.6	163.9	156.6
62.5°	206.0	187.8	162.8	143.6	136.3
65°	184.7	166.5	139.9	123.3	117.0
67.5°	162.3	145.1	119.6	104.0	98.3
70°	139.4	122.8	99.9	85.8	81.1
72.5°	118.1	102.0	80.6	68.1	65.0
75°	96.8	81.7	62.4	52.0	48.9
77.5°	75.9	62.4	46.3	38.5	37.5
80°	56.2	44.7	32.3	29.1	29.1
82.5°	38.5	28.1	22.4	21.3	21.3
85°	22.9	15.1	14.0	13.5	13.0
87.5°	9.9	6.8	6.2	5.7	5.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)