

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: P231752

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231752  
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-1-30-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: 2759.6 lumens  
Efficiency: N/A  
Efficacy: 98.9 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

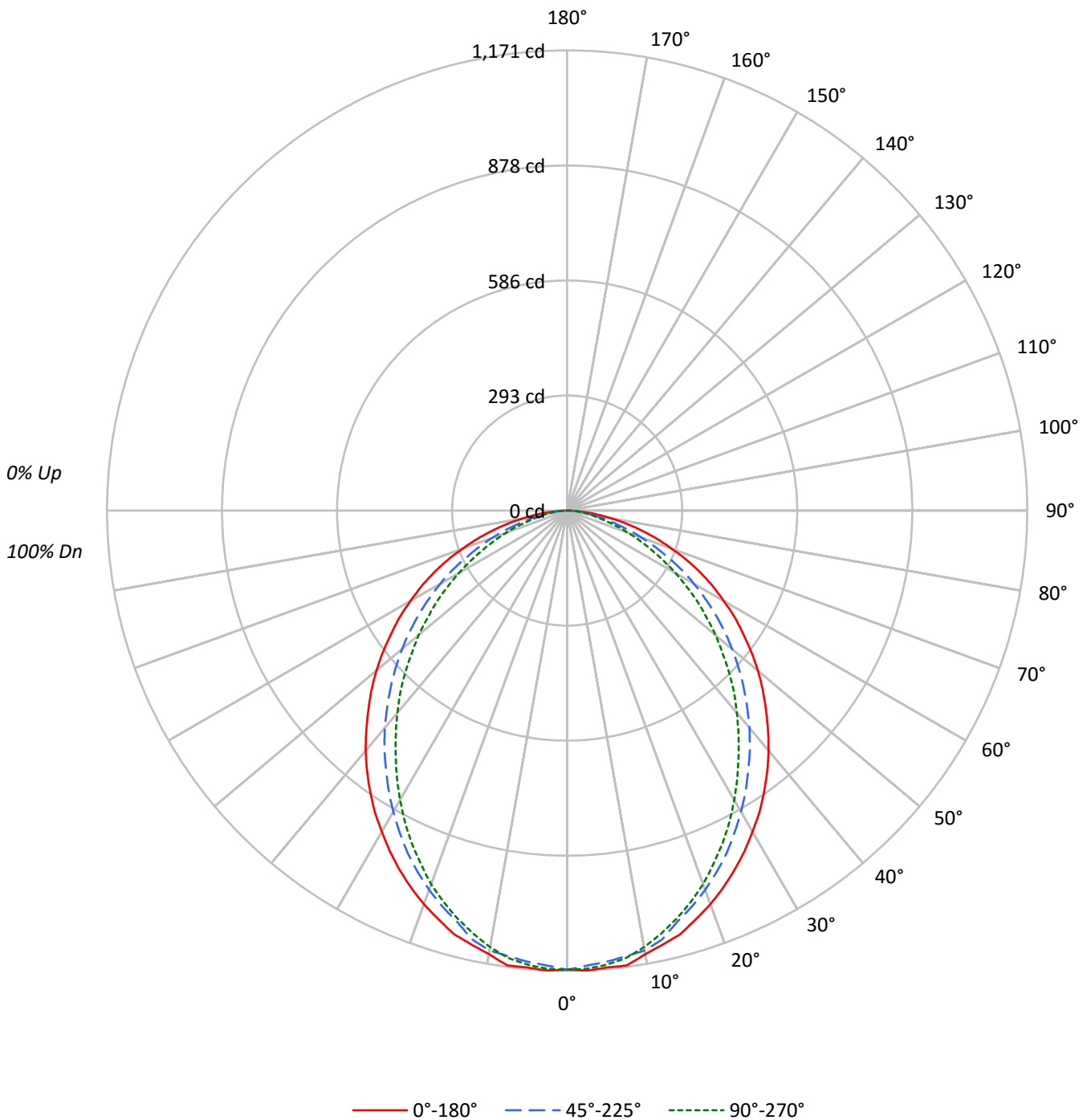
Input Watts (W): 27.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	10468	10468	10468
5°	10499	10366	10432
10°	10428	10342	10264
15°	10347	10044	9975
20°	10163	9790	9649
25°	9973	9503	9242
30°	9760	9159	8798
35°	9555	8793	8319
40°	9329	8438	7858
45°	9062	8044	7389
50°	8835	7642	6877
55°	8531	7194	6336
60°	8253	6683	5697
65°	7951	6024	5040
70°	7417	5313	4318
75°	6803	4390	3438
80°	5888	3380	3055
85°	4781	2930	2714



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.2	4.0
10°-20°	307.7	11.1
20°-30°	445.6	16.1
30°-40°	507.4	18.4
40°-50°	495.1	17.9
50°-60°	418.1	15.1
60°-70°	292.3	10.6
70°-80°	147.0	5.3
80°-90°	36.3	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°	863.4	31.3
0°-40°	1370.8	49.7
0°-60°	2284.0	82.8
0°-90°	2759.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2759.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1168	1168	1168	1168	1168	
5°	1167	1163	1152	1162	1160	111
15°	1115	1107	1083	1083	1075	314
25°	1009	994	961	945	935	465
35°	874	848	804	774	760	546
45°	715	688	635	597	583	552
55°	546	514	460	419	406	490
65°	375	338	284	250	238	370
75°	196	166	127	106	99	208
85°	46	31	28	28	26	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1168.2	1168.2	1168.2	1168.2	1168.2
2.5°	1171.4	1169.3	1158.7	1169.3	1167.2
5°	1167.2	1163.0	1152.4	1161.9	1159.8
7.5°	1167.2	1161.9	1143.9	1150.3	1148.2
10°	1146.1	1149.2	1136.6	1130.2	1128.1
12.5°	1130.2	1124.9	1117.5	1108.0	1102.8
15°	1115.4	1107.0	1082.7	1082.7	1075.3
17.5°	1090.1	1083.7	1056.3	1056.3	1044.7
20°	1065.8	1056.3	1026.7	1026.7	1011.9
22.5°	1038.3	1027.8	995.0	991.8	972.8
25°	1008.7	994.0	961.2	945.4	934.8
27.5°	977.1	959.1	923.2	903.1	893.6
30°	943.3	924.2	885.2	860.9	850.3
32.5°	910.5	888.3	845.0	818.6	805.9
35°	873.5	848.2	803.8	774.3	760.5
37.5°	836.6	811.2	763.7	729.9	716.2
40°	797.5	769.0	721.4	686.6	671.8
42.5°	756.3	727.8	678.1	641.2	628.5
45°	715.1	687.6	634.8	596.8	583.1
47.5°	675.0	644.3	591.5	551.4	535.5
50°	633.8	602.1	548.2	508.1	493.3
52.5°	590.5	558.8	504.9	463.7	446.8
55°	546.1	514.4	460.5	419.3	405.6
57.5°	506.0	470.0	416.2	376.0	361.2
60°	460.5	424.6	372.9	332.7	317.9
62.5°	418.3	381.3	330.6	291.5	276.7
65°	375.0	338.0	284.1	250.3	237.7
67.5°	329.6	294.7	242.9	211.3	199.6
70°	283.1	249.3	202.8	174.3	164.8
72.5°	239.8	207.0	163.7	138.4	132.0
75°	196.5	165.8	126.8	105.6	99.3
77.5°	154.2	126.8	94.0	78.2	76.1
80°	114.1	90.8	65.5	59.2	59.2
82.5°	78.2	57.0	45.4	43.3	43.3
85°	46.5	30.6	28.5	27.5	26.4
87.5°	20.1	13.7	12.7	11.6	11.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)