

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: P231691

Luminaire Tested: **S124-DR-1-27-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231691  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29680)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124-DR-1-27-X-0048-1-U-DD-1-W  
Description: DEFINE 4 LED LINEAR 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: 2252.6 lumens  
Efficiency: N/A  
Efficacy: 80.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.13 / 1.27  
Luminous Opening: Rectangular (W 0.31' x L: 3.92' x H: 0')  
CIE Type: Direct

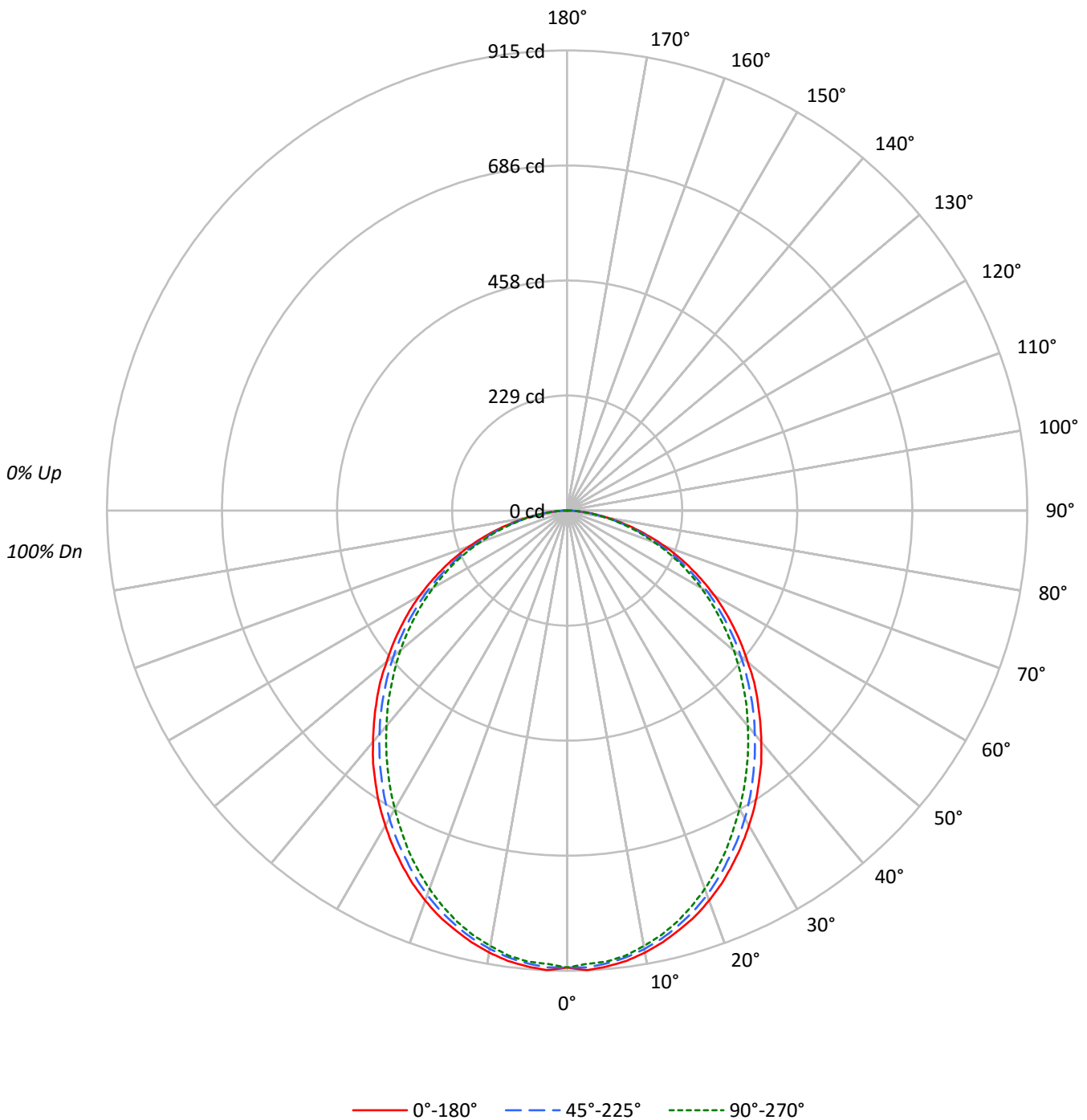
Input Watts (W): 27.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	104	100	97	106	102	98	95	98	95	92	94	92	89	90	88	87	84
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	62	48	40	34	60	48	40	34	46	39	34	45	38	34	44	38	33	32
9	58	44	36	31	56	44	36	31	43	36	31	42	35	30	41	35	30	28
10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26

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

	0°	45°	90°
0°	8141	8141	8141
5°	8185	8130	8095
10°	8119	8055	7999
15°	8005	7926	7848
20°	7868	7757	7632
25°	7685	7532	7380
30°	7483	7315	7092
35°	7261	7050	6814
40°	7024	6789	6536
45°	6788	6534	6279
50°	6531	6284	6036
55°	6307	6018	5776
60°	6072	5754	5520
65°	5761	5449	5237
70°	5379	5014	4813
75°	4837	4542	4411
80°	4144	3942	3901
85°	3496	3331	3249



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.5	3.8
10°-20°	240.0	10.7
20°-30°	349.7	15.5
30°-40°	401.5	17.8
40°-50°	397.1	17.6
50°-60°	345.0	15.3
60°-70°	255.1	11.3
70°-80°	140.5	6.2
80°-90°	38.2	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°	675.2	30.0
0°-40°	1076.7	47.8
0°-60°	1818.8	80.7
0°-90°	2252.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2252.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	908	908	908	908	908	
5°	910	900	904	901	900	86
15°	863	853	854	848	846	243
25°	777	766	762	748	746	358
35°	664	653	644	627	623	415
45°	536	527	516	500	496	413
55°	404	398	385	373	370	361
65°	272	267	257	248	247	269
75°	140	135	131	128	127	149
85°	34	33	32	32	32	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	908.5	908.5	908.5	908.5	908.5
2.5°	914.6	905.4	909.2	906.9	902.3
5°	910.0	900.0	903.8	900.8	900.0
7.5°	903.1	893.0	896.1	892.3	892.3
10°	892.3	882.2	885.3	879.9	879.1
12.5°	879.1	868.3	871.4	864.5	864.5
15°	862.9	852.9	854.4	847.5	846.0
17.5°	846.0	834.4	835.1	826.7	824.3
20°	825.1	813.5	813.5	802.0	800.4
22.5°	802.7	791.2	788.8	775.7	774.2
25°	777.3	766.5	761.8	747.9	746.4
27.5°	751.0	740.2	735.6	719.4	715.5
30°	723.2	711.7	707.0	688.5	685.4
32.5°	694.7	683.1	676.1	658.4	654.5
35°	663.8	653.0	644.5	626.7	622.9
37.5°	633.7	622.9	612.9	595.1	591.2
40°	600.5	590.5	580.4	562.7	558.8
42.5°	568.1	559.6	548.8	531.8	527.9
45°	535.7	527.2	515.6	500.2	495.5
47.5°	504.0	494.8	483.2	467.0	463.9
50°	468.5	462.3	450.8	436.1	433.0
52.5°	436.9	429.2	418.3	404.5	401.4
55°	403.7	397.5	385.2	372.8	369.7
57.5°	371.3	365.1	353.5	341.9	338.8
60°	338.8	331.9	321.1	311.1	308.0
62.5°	304.9	299.5	288.7	279.4	277.1
65°	271.7	267.1	257.0	248.5	247.0
67.5°	238.5	233.1	225.4	218.4	215.3
70°	205.3	200.7	191.4	186.0	183.7
72.5°	172.1	166.7	161.3	157.5	155.9
75°	139.7	135.1	131.2	128.1	127.4
77.5°	109.6	105.7	102.7	101.1	100.3
80°	80.3	78.7	76.4	75.6	75.6
82.5°	54.8	54.0	53.3	52.5	52.5
85°	34.0	33.2	32.4	32.4	31.6
87.5°	16.2	15.4	16.2	15.4	15.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)