

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: P231687

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231687  
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-LO-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: 1109.4 lumens  
Efficiency: N/A  
Efficacy: 81.6 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

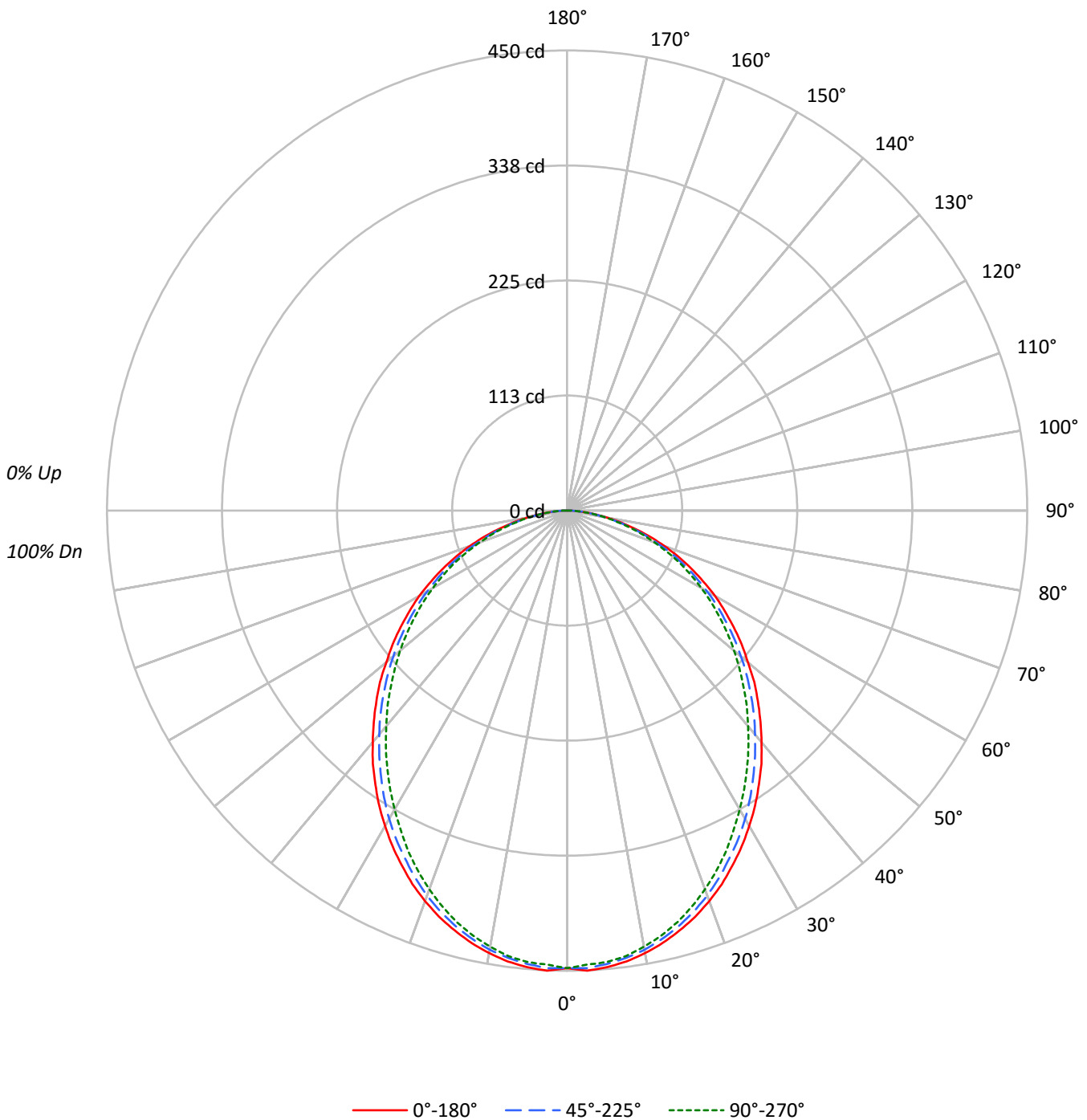
Input Watts (W): 13.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	4009	4009	4009
5°	4031	4004	3986
10°	3998	3967	3940
15°	3943	3904	3865
20°	3874	3820	3759
25°	3785	3710	3634
30°	3686	3603	3492
35°	3576	3472	3356
40°	3459	3343	3219
45°	3343	3217	3092
50°	3216	3095	2972
55°	3106	2964	2845
60°	2991	2833	2719
65°	2837	2684	2578
70°	2649	2471	2371
75°	2382	2237	2171
80°	2038	1940	1925
85°	1717	1645	1604



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.1	3.8
10°-20°	118.2	10.7
20°-30°	172.2	15.5
30°-40°	197.7	17.8
40°-50°	195.6	17.6
50°-60°	169.9	15.3
60°-70°	125.6	11.3
70°-80°	69.2	6.2
80°-90°	18.8	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°	332.5	30.0
0°-40°	530.2	47.8
0°-60°	895.7	80.7
0°-90°	1109.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1109.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	447	447	447	447	447	
5°	448	443	445	444	443	42
15°	425	420	421	417	417	120
25°	383	378	375	368	368	176
35°	327	322	317	309	307	205
45°	264	260	254	246	244	204
55°	199	196	190	184	182	178
65°	134	132	127	122	122	132
75°	69	66	65	63	63	73
85°	17	16	16	16	16	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	447.4	447.4	447.4	447.4	447.4
2.5°	450.4	445.9	447.8	446.6	444.4
5°	448.2	443.2	445.1	443.6	443.2
7.5°	444.7	439.8	441.3	439.4	439.4
10°	439.4	434.5	436.0	433.3	433.0
12.5°	433.0	427.6	429.1	425.7	425.7
15°	425.0	420.0	420.8	417.4	416.6
17.5°	416.6	410.9	411.3	407.1	406.0
20°	406.3	400.6	400.6	394.9	394.2
22.5°	395.3	389.6	388.5	382.0	381.3
25°	382.8	377.5	375.2	368.3	367.6
27.5°	369.9	364.5	362.2	354.3	352.4
30°	356.2	350.5	348.2	339.1	337.5
32.5°	342.1	336.4	333.0	324.2	322.3
35°	326.9	321.6	317.4	308.7	306.8
37.5°	312.1	306.8	301.8	293.1	291.2
40°	295.7	290.8	285.8	277.1	275.2
42.5°	279.8	275.6	270.3	261.9	260.0
45°	263.8	259.6	253.9	246.3	244.0
47.5°	248.2	243.7	238.0	230.0	228.4
50°	230.7	227.7	222.0	214.8	213.2
52.5°	215.1	211.3	206.0	199.2	197.7
55°	198.8	195.8	189.7	183.6	182.1
57.5°	182.8	179.8	174.1	168.4	166.9
60°	166.9	163.4	158.1	153.2	151.7
62.5°	150.1	147.5	142.2	137.6	136.5
65°	133.8	131.5	126.6	122.4	121.6
67.5°	117.5	114.8	111.0	107.6	106.1
70°	101.1	98.8	94.3	91.6	90.5
72.5°	84.8	82.1	79.4	77.5	76.8
75°	68.8	66.5	64.6	63.1	62.7
77.5°	54.0	52.1	50.6	49.8	49.4
80°	39.5	38.8	37.6	37.3	37.3
82.5°	27.0	26.6	26.2	25.8	25.8
85°	16.7	16.3	16.0	16.0	15.6
87.5°	8.0	7.6	8.0	7.6	7.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)