

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: P231690

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231690  
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-40-X-0048-1-U-DD-1-W  
Description: DEFINE 4 LED LINEAR 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: 1464.9 lumens  
Efficiency: N/A  
Efficacy: 107.7 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

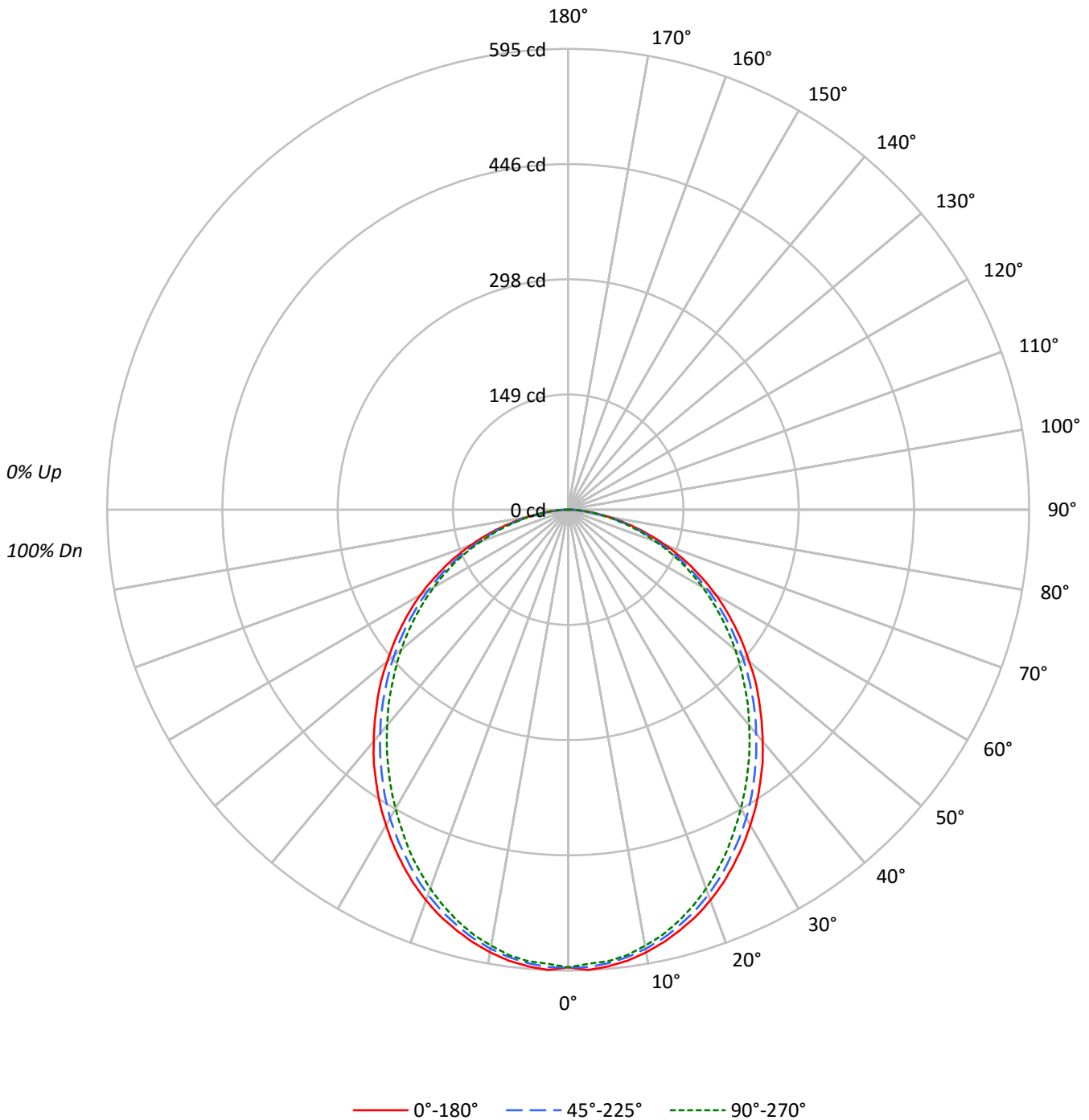
Input Watts (W): 13.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	5294	5294	5294
5°	5323	5287	5265
10°	5279	5238	5202
15°	5206	5154	5103
20°	5117	5044	4963
25°	4998	4898	4799
30°	4866	4757	4612
35°	4722	4584	4431
40°	4568	4416	4251
45°	4414	4249	4083
50°	4248	4086	3926
55°	4101	3913	3756
60°	3950	3742	3590
65°	3746	3543	3405
70°	3498	3262	3131
75°	3147	2953	2867
80°	2694	2565	2539
85°	2272	2169	2118



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.6	3.8
10°-20°	156.1	10.7
20°-30°	227.4	15.5
30°-40°	261.1	17.8
40°-50°	258.2	17.6
50°-60°	224.4	15.3
60°-70°	165.9	11.3
70°-80°	91.4	6.2
80°-90°	24.8	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°	439.1	30.0
0°-40°	700.2	47.8
0°-60°	1182.8	80.7
0°-90°	1464.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1464.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	591	591	591	591	591	
5°	592	585	588	586	585	56
15°	561	555	556	551	550	158
25°	506	498	495	486	485	233
35°	432	425	419	408	405	270
45°	348	343	335	325	322	269
55°	262	258	250	242	240	235
65°	177	174	167	162	161	175
75°	91	88	85	83	83	97
85°	22	22	21	21	21	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	590.8	590.8	590.8	590.8	590.8
2.5°	594.8	588.8	591.3	589.8	586.8
5°	591.8	585.3	587.8	585.8	585.3
7.5°	587.3	580.7	582.8	580.2	580.2
10°	580.2	573.7	575.7	572.2	571.7
12.5°	571.7	564.7	566.7	562.2	562.2
15°	561.2	554.6	555.6	551.1	550.1
17.5°	550.1	542.6	543.1	537.6	536.1
20°	536.6	529.0	529.0	521.5	520.5
22.5°	522.0	514.5	513.0	504.4	503.4
25°	505.5	498.4	495.4	486.4	485.4
27.5°	488.4	481.4	478.3	467.8	465.3
30°	470.3	462.8	459.8	447.7	445.7
32.5°	451.7	444.2	439.7	428.2	425.6
35°	431.7	424.6	419.1	407.6	405.1
37.5°	412.1	405.1	398.5	387.0	384.5
40°	390.5	384.0	377.5	365.9	363.4
42.5°	369.4	363.9	356.9	345.8	343.3
45°	348.3	342.8	335.3	325.3	322.2
47.5°	327.8	321.7	314.2	303.7	301.7
50°	304.7	300.7	293.1	283.6	281.6
52.5°	284.1	279.1	272.1	263.0	261.0
55°	262.5	258.5	250.5	242.4	240.4
57.5°	241.4	237.4	229.9	222.4	220.4
60°	220.4	215.8	208.8	202.3	200.3
62.5°	198.3	194.8	187.7	181.7	180.2
65°	176.7	173.7	167.1	161.6	160.6
67.5°	155.1	151.6	146.6	142.0	140.0
70°	133.5	130.5	124.5	121.0	119.5
72.5°	111.9	108.4	104.9	102.4	101.4
75°	90.9	87.8	85.3	83.3	82.8
77.5°	71.3	68.8	66.8	65.8	65.3
80°	52.2	51.2	49.7	49.2	49.2
82.5°	35.6	35.1	34.6	34.1	34.1
85°	22.1	21.6	21.1	21.1	20.6
87.5°	10.5	10.0	10.5	10.0	10.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)