

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: P231568

Luminaire Tested: **S124-DR-LO-30-X-0048-1-U-DD-3-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231568
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29681)
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-30-X-0048-1-U-DD-3-W
Description: DEFINE 4 LED LINEAR DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC LENS.
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1490.6 lumens
Efficiency: N/A
Efficacy: 109.6 lumens/watt
Spacing Criteria (0/90/45): 1.39 / 1.24 / 1.51
Luminous Opening: Rectangular (W 3.92' x L: 0.31' x H: 0')
CIE Type: Direct

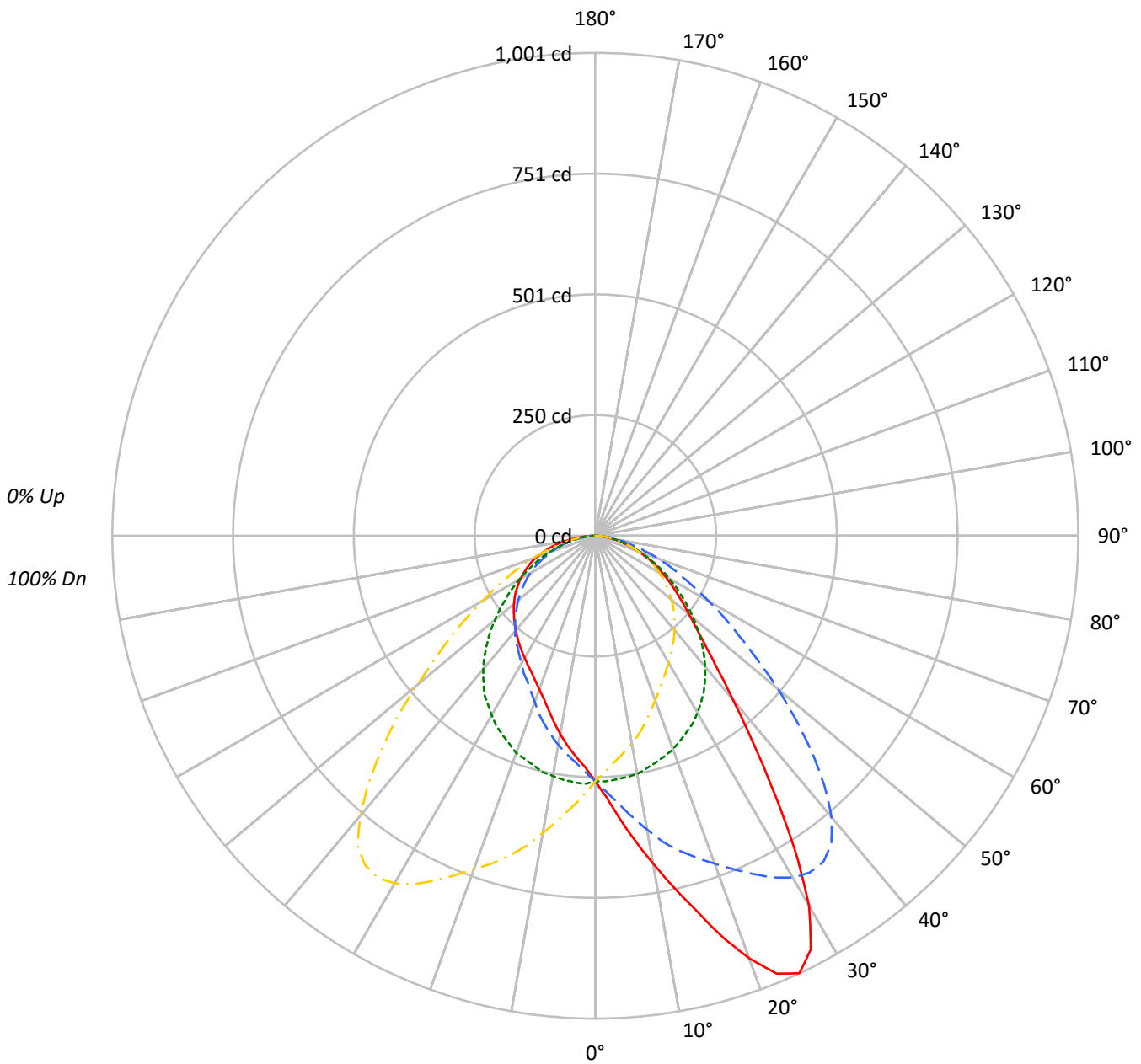
Input Watts (W): 13.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - - - 90°-270° - - - 135°-315°



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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	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					100			
1	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85					85			
2	100	92	86	80	98	90	84	79	87	82	78	84	79	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61					61			
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	55	48	43	53	47	43	41					41			
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	48	43	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	45	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	4561	4561	4561	4561
5°	5302	4561	4131	4613
10°	6277	4563	3801	4601
15°	7445	4511	3466	4572
20°	8886	4488	3233	4569
25°	9893	4433	3090	4500
30°	9162	4380	3027	4444
35°	6982	4295	3004	4388
40°	5178	4143	2997	4226
45°	4092	3942	3019	4026
50°	3525	3690	3070	3782
55°	3210	3424	3137	3521
60°	2978	3165	3208	3276
65°	2761	2892	3303	2981
70°	2507	2617	3398	2704
75°	2230	2278	3393	2344
80°	1883	1858	3277	2002
85°	1367	1316	3023	1655



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.6	3.3
10°-20°	153.3	10.3
20°-30°	254.8	17.1
30°-40°	296.6	19.9
40°-50°	267.0	17.9
50°-60°	214.6	14.4
60°-70°	151.4	10.2
70°-80°	81.7	5.5
80°-90°	21.6	1.4
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°	457.7	30.7
0°-40°	754.3	50.6
0°-60°	1235.9	82.9
0°-90°	1490.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1490.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	509	509	509	509	509	
5°	590	507	459	513	590	59
15°	803	486	374	493	803	232
25°	1001	448	312	455	1001	446
35°	638	393	275	401	638	403
45°	323	311	238	318	323	255
55°	206	219	201	225	206	185
65°	130	136	156	141	130	129
75°	64	66	98	68	64	69
85°	13	13	29	16	13	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	509.0	509.0	509.0	509.0	509.0	509.0	509.0	509.0	509.0	509.0	509.0
2.5°	543.1	538.9	531.3	517.6	509.5	494.4	488.2	483.5	480.2	480.2	489.6
5°	589.5	576.3	557.8	529.4	507.1	482.1	469.7	461.7	459.3	459.3	471.2
7.5°	638.8	619.8	588.1	541.2	504.3	469.7	453.2	442.7	439.4	440.9	456.0
10°	689.9	664.8	618.4	554.5	501.5	459.3	437.1	422.4	417.7	421.0	440.4
12.5°	744.9	710.3	650.6	562.1	493.4	444.6	420.0	400.6	395.4	399.7	423.3
15°	802.6	759.5	676.2	570.1	486.3	431.4	401.1	378.8	373.6	379.3	405.3
17.5°	870.3	812.6	699.9	576.3	478.7	417.7	380.7	359.9	354.7	358.9	387.8
20°	931.9	866.1	723.5	580.1	470.7	403.9	362.7	342.8	339.0	342.8	366.5
22.5°	982.6	917.2	748.2	576.8	459.8	387.3	345.7	329.1	325.3	327.2	349.0
25°	1000.6	956.5	773.7	569.7	448.4	368.9	330.5	317.7	312.5	314.9	332.9
27.5°	966.9	962.7	798.4	559.2	438.0	354.2	316.8	305.0	302.6	304.5	321.1
30°	885.5	929.5	818.3	546.9	423.3	338.6	303.5	294.1	292.6	296.9	305.9
32.5°	767.6	853.8	827.7	531.3	408.2	322.0	291.2	283.2	283.2	284.1	293.1
35°	638.3	749.1	824.4	513.3	392.6	306.8	279.4	273.2	274.6	272.8	281.3
37.5°	530.8	636.4	803.6	496.7	373.6	293.1	267.5	262.8	265.6	263.3	272.3
40°	442.7	533.7	761.4	477.3	354.2	278.0	255.7	252.9	256.2	253.8	258.1
42.5°	374.1	448.4	702.7	457.0	332.9	263.8	243.4	242.4	247.2	243.4	245.8
45°	322.9	379.8	635.0	436.1	311.1	249.5	231.1	232.5	238.2	233.4	233.9
47.5°	283.6	326.7	562.6	412.4	287.4	235.3	218.8	222.1	229.2	223.0	221.1
50°	252.9	285.1	493.4	386.9	264.7	221.1	206.0	210.7	220.2	212.6	208.4
52.5°	227.8	251.4	424.3	359.9	242.0	206.0	193.2	200.3	210.7	202.7	195.6
55°	205.5	223.5	366.0	331.9	219.2	190.8	179.9	189.4	200.8	191.8	182.8
57.5°	185.1	199.4	318.2	303.1	197.9	175.2	167.2	177.1	189.9	180.4	169.5
60°	166.2	176.6	272.3	270.9	176.6	159.6	153.4	164.8	179.0	168.1	155.8
62.5°	147.7	156.3	230.1	238.7	155.8	143.5	139.7	152.0	167.2	155.3	141.6
65°	130.2	136.8	195.6	207.9	136.4	126.9	125.0	138.7	155.8	141.6	126.9
67.5°	112.2	117.4	167.2	178.0	116.0	109.9	109.9	125.0	143.5	127.9	111.8
70°	95.7	98.5	138.3	148.2	99.9	94.2	94.2	109.9	129.7	112.7	97.1
72.5°	79.6	81.9	111.3	119.8	82.4	78.1	80.0	95.7	113.6	98.5	82.4
75°	64.4	65.8	86.2	94.2	65.8	63.0	65.3	81.4	98.0	83.8	68.2
77.5°	50.2	50.7	66.3	71.0	50.2	48.8	51.1	67.7	81.0	68.7	54.0
80°	36.5	36.9	47.4	50.7	36.0	35.5	38.4	53.0	63.5	54.0	40.7
82.5°	23.7	24.6	31.7	32.7	23.2	23.7	26.5	38.4	45.9	39.3	28.9
85°	13.3	13.7	18.0	18.0	12.8	13.7	16.6	23.7	29.4	25.6	18.5
87.5°	5.2	5.2	7.1	7.1	5.2	6.2	7.6	12.8	14.7	13.3	9.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	509.0	509.0	509.0	509.0	509.0	509.0
2.5°	495.8	515.2	522.8	537.9	543.1	543.1
5°	483.9	512.8	535.1	565.4	582.0	589.5
7.5°	471.6	510.0	547.9	595.2	626.9	638.8
10°	459.3	505.7	560.2	625.5	673.8	689.9
12.5°	450.3	502.4	574.9	658.2	721.2	744.9
15°	433.8	492.9	579.6	686.1	769.5	802.6
17.5°	420.5	485.4	587.2	712.7	824.4	870.3
20°	405.3	479.2	590.0	734.9	881.7	931.9
22.5°	391.6	466.4	591.0	761.9	933.8	982.6
25°	372.7	455.1	583.4	788.4	969.8	1000.6
27.5°	355.6	444.2	573.4	814.5	974.0	966.9
30°	341.9	429.5	563.0	832.0	937.1	885.5
32.5°	323.9	414.3	544.1	840.0	851.9	767.6
35°	308.7	401.1	527.5	832.5	742.5	638.3
37.5°	296.4	380.7	510.9	809.7	628.8	530.8
40°	279.9	361.3	491.0	757.2	527.5	442.7
42.5°	265.6	340.0	470.2	695.1	442.7	374.1
45°	251.4	317.7	446.5	624.6	376.0	322.9
47.5°	236.8	295.5	422.4	557.3	323.9	283.6
50°	222.6	271.3	398.7	480.2	283.2	252.9
52.5°	208.4	248.1	370.8	417.2	250.0	227.8
55°	193.7	225.4	339.0	365.6	222.6	205.5
57.5°	178.0	204.6	308.3	315.4	197.9	185.1
60°	162.9	182.8	279.4	267.5	175.7	166.2
62.5°	146.8	160.1	246.2	232.5	155.3	147.7
65°	130.7	140.6	215.0	197.9	135.9	130.2
67.5°	113.6	122.6	184.7	166.7	116.5	112.2
70°	96.6	103.2	154.4	138.7	99.0	95.7
72.5°	81.4	83.8	126.4	111.8	82.4	79.6
75°	65.8	67.7	99.9	89.0	66.3	64.4
77.5°	52.6	53.0	76.7	68.2	51.6	50.2
80°	37.9	38.8	54.9	49.7	37.9	36.5
82.5°	26.5	26.0	36.9	33.6	26.5	23.7
85°	16.1	16.1	21.8	19.9	14.7	13.3
87.5°	8.0	8.0	9.9	9.0	6.2	5.2
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)