

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: P231569

Luminaire Tested: **S124-DR-LO-35-X-0048-1-U-DD-3-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231569
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-35-X-0048-1-U-DD-3-W
Description: DEFINE 4 LED LINEAR DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC LENS.
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1550.2 lumens
Efficiency: N/A
Efficacy: 114.0 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

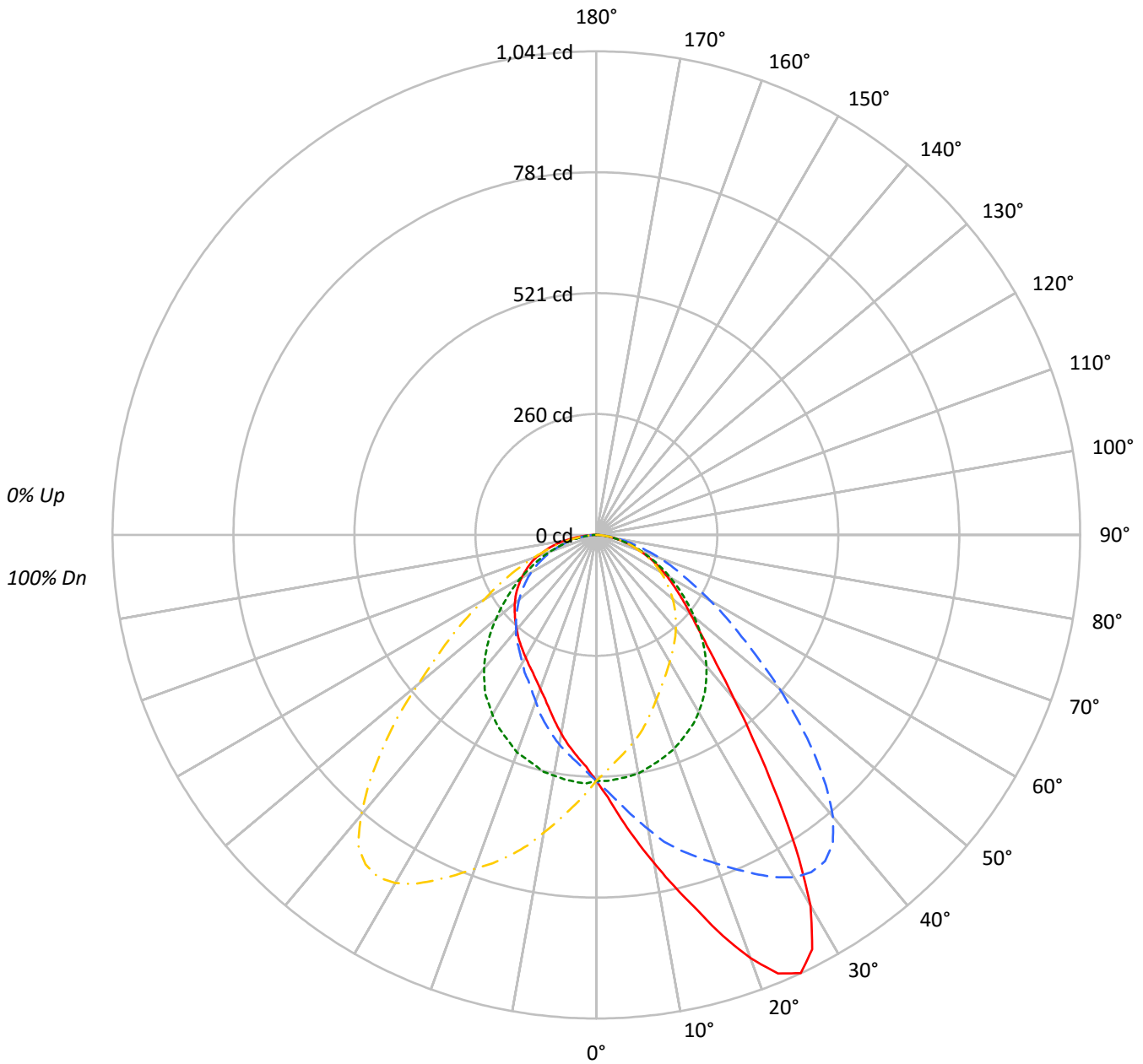
Input Watts (W): 13.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4744	4744	4744	4744
5°	5515	4744	4297	4797
10°	6528	4745	3953	4786
15°	7743	4692	3605	4756
20°	9242	4668	3362	4753
25°	10288	4611	3213	4679
30°	9528	4556	3149	4622
35°	7261	4466	3124	4563
40°	5387	4309	3116	4396
45°	4257	4101	3139	4187
50°	3666	3838	3192	3934
55°	3338	3562	3262	3662
60°	3099	3292	3337	3407
65°	2871	3007	3435	3102
70°	2607	2722	3534	2814
75°	2320	2372	3528	2437
80°	1956	1930	3406	2085
85°	1419	1367	3136	1717



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.6	3.3
10°-20°	159.5	10.3
20°-30°	265.0	17.1
30°-40°	308.4	19.9
40°-50°	277.7	17.9
50°-60°	223.2	14.4
60°-70°	157.5	10.2
70°-80°	84.9	5.5
80°-90°	22.5	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°	476.0	30.7
0°-40°	784.4	50.6
0°-60°	1285.4	82.9
0°-90°	1550.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1550.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	529	529	529	529	529	
5°	613	527	478	533	613	62
15°	835	506	389	513	835	242
25°	1041	466	325	473	1041	464
35°	664	408	286	417	664	419
45°	336	324	248	330	336	265
55°	214	228	209	234	214	192
65°	135	142	162	146	135	134
75°	67	68	102	70	67	71
85°	14	13	30	17	14	17
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°	529.4	529.4	529.4	529.4	529.4	529.4	529.4	529.4	529.4	529.4	529.4
2.5°	564.9	560.4	552.5	538.3	529.9	514.1	507.7	502.8	499.4	499.4	509.2
5°	613.1	599.3	580.1	550.6	527.4	501.3	488.5	480.2	477.7	477.7	490.0
7.5°	664.3	644.6	611.6	562.9	524.5	488.5	471.3	460.5	457.0	458.5	474.2
10°	717.5	691.4	643.2	576.7	521.5	477.7	454.5	439.3	434.4	437.8	458.0
12.5°	774.7	738.7	676.7	584.6	513.2	462.4	436.8	416.6	411.2	415.6	440.3
15°	834.7	789.9	703.2	592.9	505.8	448.6	417.1	394.0	388.6	394.5	421.6
17.5°	905.2	845.1	727.9	599.3	497.9	434.4	395.9	374.3	368.9	373.3	403.3
20°	969.2	900.7	752.5	603.3	489.5	420.1	377.2	356.5	352.6	356.5	381.2
22.5°	1021.9	953.9	778.1	599.8	478.2	402.8	359.5	342.3	338.3	340.3	362.9
25°	1040.6	994.8	804.7	592.4	466.4	383.6	343.7	330.4	325.0	327.5	346.2
27.5°	1005.6	1001.2	830.3	581.6	455.5	368.4	329.5	317.1	314.7	316.7	333.9
30°	920.9	966.7	851.0	568.8	440.3	352.1	315.7	305.8	304.3	308.8	318.1
32.5°	798.3	887.9	860.8	552.5	424.5	334.9	302.9	294.5	294.5	295.5	304.8
35°	663.8	779.1	857.4	533.8	408.3	319.1	290.6	284.2	285.6	283.7	292.5
37.5°	552.1	661.9	835.7	516.6	388.6	304.8	278.2	273.3	276.3	273.8	283.2
40°	460.5	555.0	791.9	496.4	368.4	289.1	265.9	263.0	266.4	264.0	268.4
42.5°	389.0	466.4	730.8	475.2	346.2	274.3	253.1	252.1	257.1	253.1	255.6
45°	335.9	395.0	660.4	453.6	323.6	259.5	240.3	241.8	247.7	242.8	243.3
47.5°	295.0	339.8	585.1	428.9	298.9	244.8	227.5	231.0	238.4	232.0	230.0
50°	263.0	296.5	513.2	402.3	275.3	230.0	214.2	219.1	229.0	221.1	216.7
52.5°	236.9	261.5	441.3	374.3	251.7	214.2	200.9	208.3	219.1	210.8	203.4
55°	213.7	232.4	380.7	345.2	228.0	198.5	187.1	197.0	208.8	199.4	190.1
57.5°	192.6	207.3	330.9	315.2	205.9	182.2	173.8	184.2	197.5	187.6	176.3
60°	172.9	183.7	283.2	281.7	183.7	166.0	159.6	171.4	186.2	174.8	162.0
62.5°	153.7	162.5	239.3	248.2	162.0	149.2	145.3	158.1	173.8	161.5	147.2
65°	135.4	142.3	203.4	216.2	141.8	132.0	130.0	144.3	162.0	147.2	132.0
67.5°	116.7	122.1	173.8	185.2	120.7	114.3	114.3	130.0	149.2	133.0	116.2
70°	99.5	102.4	143.8	154.1	103.9	98.0	98.0	114.3	134.9	117.2	101.0
72.5°	82.7	85.2	115.7	124.6	85.7	81.3	83.2	99.5	118.2	102.4	85.7
75°	67.0	68.5	89.6	98.0	68.5	65.5	68.0	84.7	101.9	87.2	70.9
77.5°	52.2	52.7	68.9	73.9	52.2	50.7	53.2	70.4	84.2	71.4	56.1
80°	37.9	38.4	49.2	52.7	37.4	36.9	39.9	55.2	66.0	56.1	42.4
82.5°	24.6	25.6	33.0	34.0	24.1	24.6	27.6	39.9	47.8	40.9	30.0
85°	13.8	14.3	18.7	18.7	13.3	14.3	17.2	24.6	30.5	26.6	19.2
87.5°	5.4	5.4	7.4	7.4	5.4	6.4	7.9	13.3	15.3	13.8	9.8
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°	529.4	529.4	529.4	529.4	529.4	529.4
2.5°	515.6	535.8	543.7	559.4	564.9	564.9
5°	503.3	533.3	556.5	588.0	605.2	613.1
7.5°	490.5	530.4	569.8	619.0	652.0	664.3
10°	477.7	526.0	582.6	650.6	700.8	717.5
12.5°	468.3	522.5	597.9	684.5	750.0	774.7
15°	451.1	512.7	602.8	713.6	800.3	834.7
17.5°	437.3	504.8	610.7	741.2	857.4	905.2
20°	421.6	498.4	613.6	764.3	917.0	969.2
22.5°	407.3	485.1	614.6	792.4	971.1	1021.9
25°	387.6	473.3	606.7	820.0	1008.6	1040.6
27.5°	369.8	461.9	596.4	847.0	1013.0	1005.6
30°	355.6	446.7	585.5	865.3	974.6	920.9
32.5°	336.8	430.9	565.8	873.6	886.0	798.3
35°	321.1	417.1	548.6	865.8	772.2	663.8
37.5°	308.3	395.9	531.4	842.1	654.0	552.1
40°	291.0	375.8	510.7	787.5	548.6	460.5
42.5°	276.3	353.6	489.0	722.9	460.5	389.0
45°	261.5	330.4	464.4	649.6	391.0	335.9
47.5°	246.2	307.3	439.3	579.6	336.8	295.0
50°	231.5	282.2	414.7	499.4	294.5	263.0
52.5°	216.7	258.1	385.6	433.9	260.0	236.9
55°	201.4	234.4	352.6	380.2	231.5	213.7
57.5°	185.2	212.7	320.6	328.0	205.9	192.6
60°	169.4	190.1	290.6	278.2	182.7	172.9
62.5°	152.7	166.5	256.1	241.8	161.5	153.7
65°	135.9	146.3	223.6	205.9	141.3	135.4
67.5°	118.2	127.5	192.1	173.3	121.1	116.7
70°	100.5	107.4	160.5	144.3	102.9	99.5
72.5°	84.7	87.2	131.5	116.2	85.7	82.7
75°	68.5	70.4	103.9	92.6	68.9	67.0
77.5°	54.7	55.2	79.8	70.9	53.7	52.2
80°	39.4	40.4	57.1	51.7	39.4	37.9
82.5°	27.6	27.1	38.4	35.0	27.6	24.6
85°	16.7	16.7	22.7	20.7	15.3	13.8
87.5°	8.4	8.4	10.3	9.4	6.4	5.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)