

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: P231653

Luminaire Tested: **S121-DR-LO-35-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231653  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33906)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121-DR-LO-35-X-0048-1-U-DD-1-W  
Description: DEFINE 1 LED LINEAR DIRECT RECESSED LED LUMINAIRE WITH FLUSH LENS.  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1284.6 lumens  
Efficiency: N/A  
Efficacy: 94.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.1' x L: 3.92' x H: 0')  
CIE Type: Direct

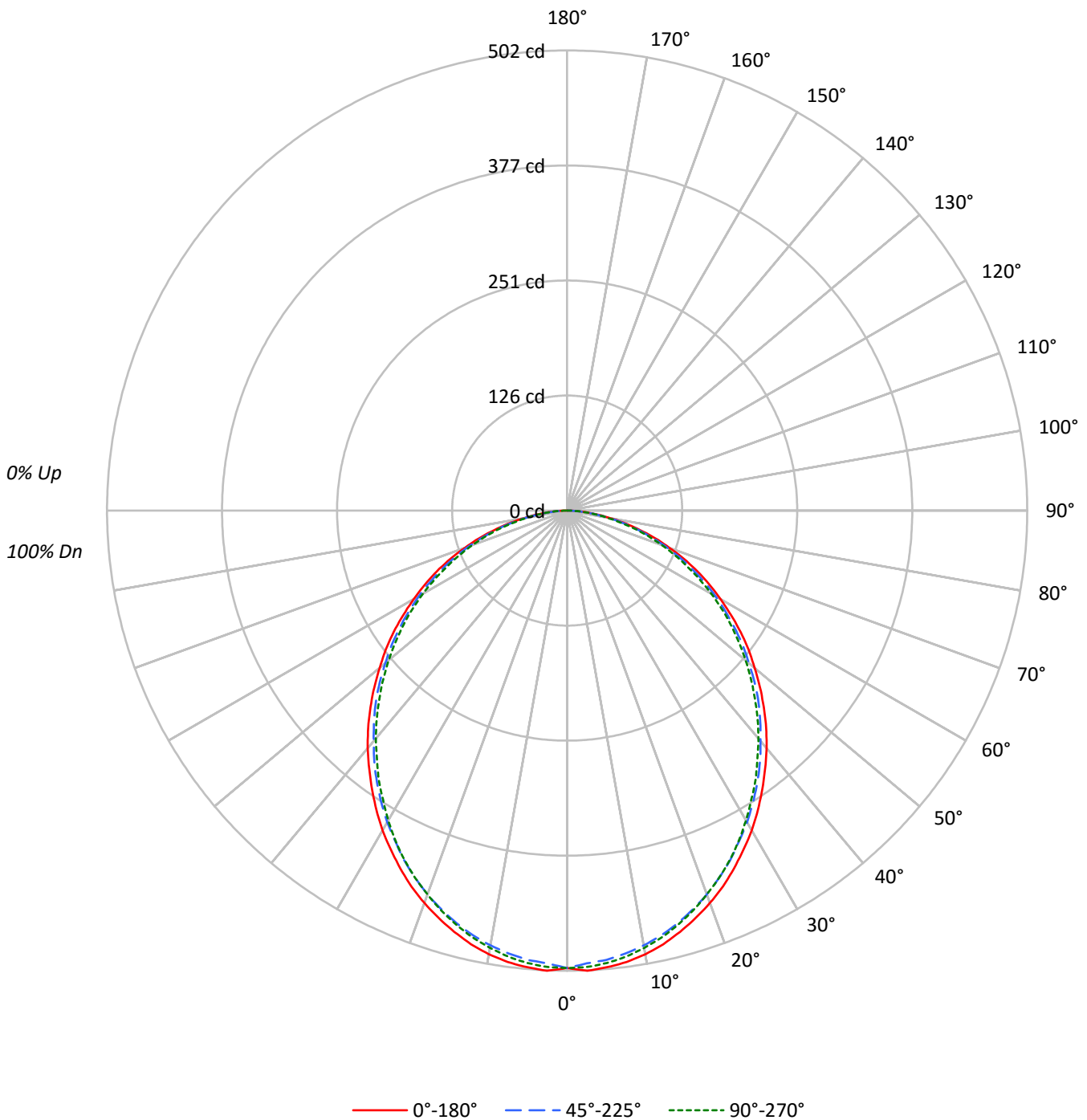
Input Watts (W): 13.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P231653

CATALOG NUMBER: S121-DR-LO-35-X-0048-1-U-DD-1-W

### Luminous Intensity Polar Plot





TEST NUMBER: P231653

CATALOG NUMBER: S121-DR-LO-35-X-0048-1-U-DD-1-W

**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	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	81	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39
7	66	52	44	38	64	51	43	37	50	43	37	48	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25

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

	0°	45°	90°
0°	13951	13951	13951
5°	14035	13808	13906
10°	13953	13672	13754
15°	13771	13488	13537
20°	13555	13260	13260
25°	13286	12981	12965
30°	13007	12671	12597
35°	12666	12348	12229
40°	12357	11978	11850
45°	11992	11672	11442
50°	11609	11256	11052
55°	11259	10865	10636
60°	10808	10456	10165
65°	10379	9916	9572
70°	9703	9319	8992
75°	8879	8501	8188
80°	7728	7358	7084
85°	6512	5934	5742



TEST NUMBER: P231653

CATALOG NUMBER: S121-DR-LO-35-X-0048-1-U-DD-1-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.0	3.7
10°-20°	132.3	10.3
20°-30°	195.0	15.2
30°-40°	227.3	17.7
40°-50°	228.0	17.8
50°-60°	200.2	15.6
60°-70°	149.0	11.6
70°-80°	83.5	6.5
80°-90°	22.2	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°	374.4	29.1
0°-40°	601.7	46.8
0°-60°	1029.9	80.2
0°-90°	1284.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1284.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	499	499	499	499	499	
5°	500	497	492	497	496	47
15°	476	472	466	470	468	134
25°	431	426	421	421	420	198
35°	371	367	362	360	358	232
45°	303	300	295	291	289	234
55°	231	228	223	220	218	206
65°	157	154	150	147	145	155
75°	82	80	79	76	76	88
85°	20	20	18	18	18	24
90°	0	0	0	0	0	



TEST NUMBER: P231653

CATALOG NUMBER: S121-DR-LO-35-X-0048-1-U-DD-1-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	499.0	499.0	499.0	499.0	499.0
2.5°	502.5	499.6	494.4	499.6	498.4
5°	500.1	497.3	492.0	496.7	495.5
7.5°	496.7	493.2	487.4	492.0	490.9
10°	491.5	486.8	481.6	485.1	484.5
12.5°	484.5	480.5	474.7	478.1	477.0
15°	475.8	471.8	466.0	469.5	467.7
17.5°	466.0	461.9	456.2	459.0	457.3
20°	455.6	450.9	445.7	448.0	445.7
22.5°	444.0	439.4	433.6	435.3	433.6
25°	430.7	426.1	420.8	421.4	420.3
27.5°	416.8	412.7	406.4	407.5	405.8
30°	402.9	398.8	392.5	391.9	390.2
32.5°	387.3	383.2	377.4	376.3	374.0
35°	371.1	367.0	361.8	360.1	358.3
37.5°	354.8	351.4	345.6	343.3	341.0
40°	338.6	334.6	328.2	325.9	324.7
42.5°	321.3	317.2	312.0	308.5	307.4
45°	303.3	300.4	295.2	291.2	289.4
47.5°	285.4	282.5	277.3	273.2	272.1
50°	266.9	264.5	258.8	255.3	254.1
52.5°	249.5	247.2	241.4	237.9	236.2
55°	231.0	228.1	222.9	220.0	218.2
57.5°	211.9	210.1	204.9	202.0	200.3
60°	193.3	191.0	187.0	182.9	181.8
62.5°	174.8	173.1	168.5	165.0	163.2
65°	156.9	154.0	149.9	147.0	144.7
67.5°	137.8	136.0	132.0	129.1	127.4
70°	118.7	116.9	114.0	111.1	110.0
72.5°	101.3	98.4	95.5	93.8	92.6
75°	82.2	80.5	78.7	75.8	75.8
77.5°	65.4	63.1	61.9	60.2	59.0
80°	48.0	47.5	45.7	45.2	44.0
82.5°	34.2	33.0	31.3	30.7	30.1
85°	20.3	19.7	18.5	18.5	17.9
87.5°	9.3	8.7	7.5	6.9	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)