

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: P231654

Luminaire Tested: **S121-DR-LO-40-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231654  
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-40-X-0048-1-U-DD-1-W  
Description: DEFINE 1 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: 1309.3 lumens  
Efficiency: N/A  
Efficacy: 96.3 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

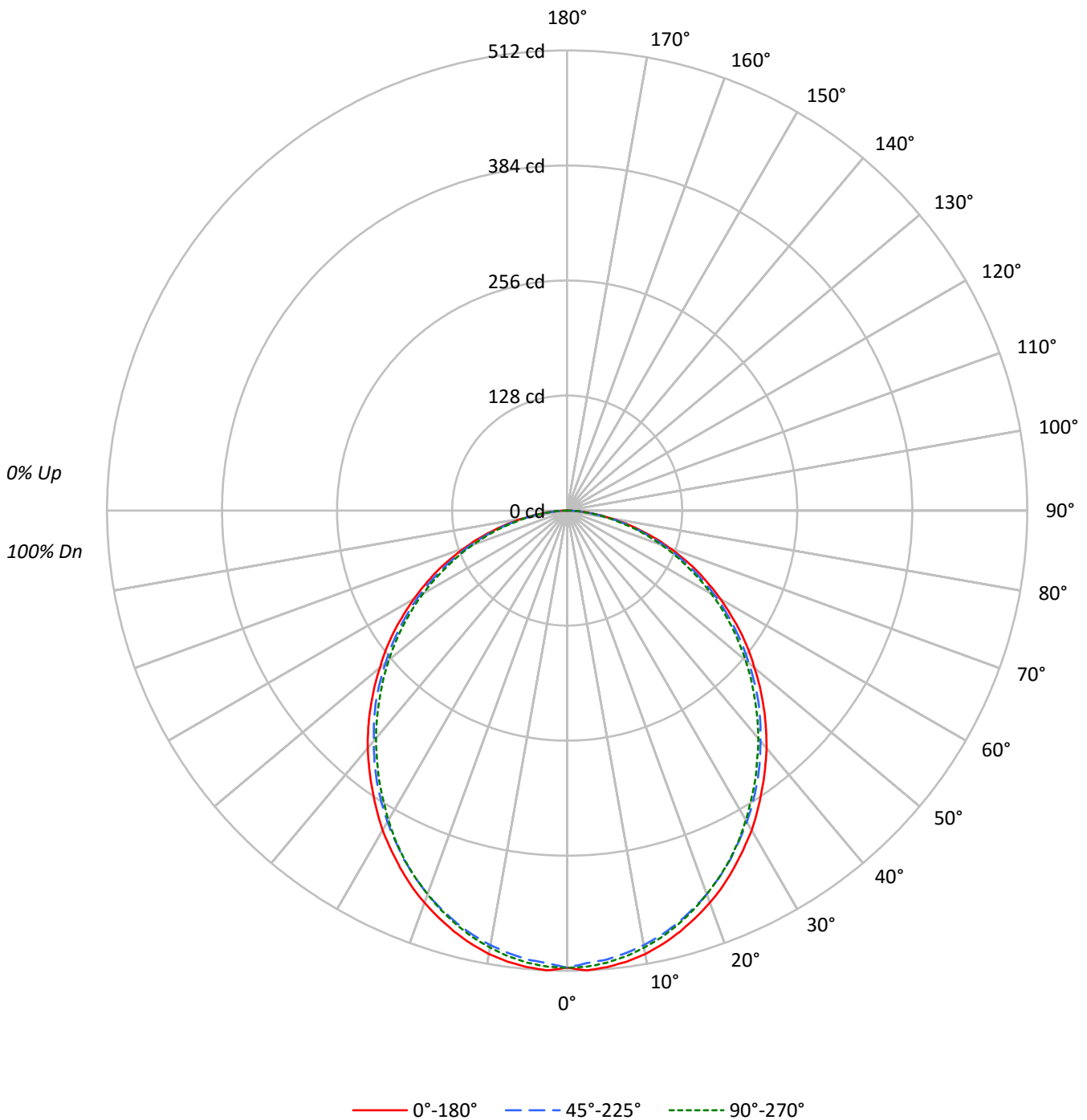
Input Watts (W): 13.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P231654

CATALOG NUMBER: S121-DR-LO-40-X-0048-1-U-DD-1-W

### Luminous Intensity Polar Plot





TEST NUMBER: P231654

CATALOG NUMBER: S121-DR-LO-40-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°	14219	14219	14219
5°	14307	14074	14172
10°	14220	13936	14018
15°	14038	13748	13797
20°	13814	13516	13516
25°	13542	13231	13212
30°	13255	12913	12839
35°	12908	12587	12464
40°	12598	12208	12080
45°	12225	11897	11664
50°	11830	11469	11265
55°	11474	11074	10840
60°	11021	10657	10361
65°	10578	10108	9758
70°	9891	9498	9163
75°	9052	8663	8350
80°	7889	7503	7213
85°	6640	6063	5870



TEST NUMBER: P231654

CATALOG NUMBER: S121-DR-LO-40-X-0048-1-U-DD-1-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.9	3.7
10°-20°	134.9	10.3
20°-30°	198.8	15.2
30°-40°	231.7	17.7
40°-50°	232.4	17.8
50°-60°	204.1	15.6
60°-70°	151.9	11.6
70°-80°	85.1	6.5
80°-90°	22.6	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°	381.6	29.1
0°-40°	613.2	46.8
0°-60°	1049.7	80.2
0°-90°	1309.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1309.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	509	509	509	509	509	
5°	510	507	502	506	505	48
15°	485	481	475	478	477	137
25°	439	434	429	430	428	202
35°	378	374	369	367	365	237
45°	309	306	301	297	295	239
55°	235	232	227	224	222	210
65°	160	157	153	150	148	158
75°	84	82	80	77	77	89
85°	21	20	19	19	18	24
90°	0	0	0	0	0	



TEST NUMBER: P231654

CATALOG NUMBER: S121-DR-LO-40-X-0048-1-U-DD-1-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	508.6	508.6	508.6	508.6	508.6
2.5°	512.1	509.2	503.9	509.2	508.0
5°	509.8	506.8	501.5	506.2	505.0
7.5°	506.2	502.7	496.8	501.5	500.3
10°	500.9	496.2	490.9	494.4	493.8
12.5°	493.8	489.7	483.8	487.3	486.2
15°	485.0	480.9	475.0	478.5	476.7
17.5°	475.0	470.8	464.9	467.9	466.1
20°	464.3	459.6	454.3	456.7	454.3
22.5°	452.5	447.8	441.9	443.7	441.9
25°	439.0	434.2	428.9	429.5	428.3
27.5°	424.8	420.7	414.2	415.4	413.6
30°	410.6	406.5	400.0	399.4	397.7
32.5°	394.7	390.6	384.7	383.5	381.1
35°	378.2	374.1	368.8	367.0	365.2
37.5°	361.7	358.1	352.2	349.9	347.5
40°	345.2	341.0	334.5	332.2	331.0
42.5°	327.5	323.3	318.0	314.5	313.3
45°	309.2	306.2	300.9	296.8	295.0
47.5°	290.9	287.9	282.6	278.5	277.3
50°	272.0	269.6	263.7	260.2	259.0
52.5°	254.3	251.9	246.0	242.5	240.7
55°	235.4	232.5	227.2	224.2	222.4
57.5°	215.9	214.2	208.9	205.9	204.1
60°	197.1	194.7	190.6	186.4	185.3
62.5°	178.2	176.4	171.7	168.2	166.4
65°	159.9	156.9	152.8	149.9	147.5
67.5°	140.4	138.7	134.5	131.6	129.8
70°	121.0	119.2	116.2	113.3	112.1
72.5°	103.3	100.3	97.4	95.6	94.4
75°	83.8	82.0	80.2	77.3	77.3
77.5°	66.7	64.3	63.1	61.4	60.2
80°	49.0	48.4	46.6	46.0	44.8
82.5°	34.8	33.6	31.9	31.3	30.7
85°	20.7	20.1	18.9	18.9	18.3
87.5°	9.4	8.9	7.7	7.1	7.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)