

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: P231677

Luminaire Tested: **S123-DR-LO-35-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231677  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29683)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123-DR-LO-35-X-0048-1-U-DD-1-W  
Description: DEFINE 3 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: 1427.7 lumens  
Efficiency: N/A  
Efficacy: 105.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.22' x L: 3.92' x H: 0')  
CIE Type: Direct

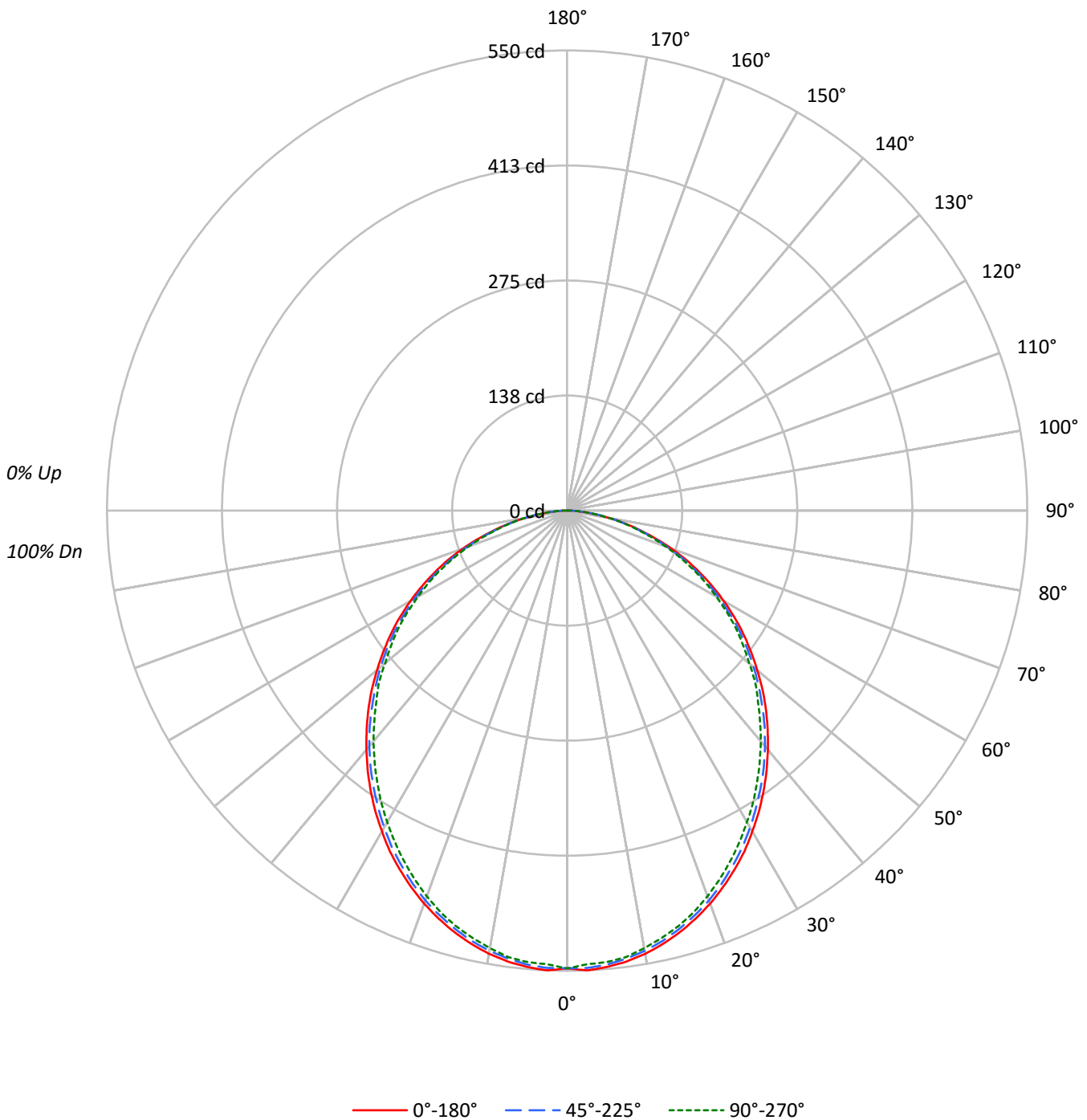
Input Watts (W): 13.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P231677

CATALOG NUMBER: S123-DR-LO-35-X-0048-1-U-DD-1-W

### Luminous Intensity Polar Plot





TEST NUMBER: P231677

CATALOG NUMBER: S123-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	80	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	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	57	53	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

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

	0°	45°	90°
0°	6733	6733	6733
5°	6765	6729	6692
10°	6721	6677	6635
15°	6645	6595	6550
20°	6547	6495	6424
25°	6427	6359	6272
30°	6291	6215	6109
35°	6148	6059	5948
40°	5997	5911	5784
45°	5846	5735	5615
50°	5677	5572	5441
55°	5517	5401	5293
60°	5322	5189	5056
65°	5090	4933	4834
70°	4768	4606	4502
75°	4261	4170	4075
80°	3629	3629	3629
85°	2923	3064	3064



TEST NUMBER: P231677

CATALOG NUMBER: S123-DR-LO-35-X-0048-1-U-DD-1-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.6	3.6
10°-20°	145.6	10.2
20°-30°	214.9	15.1
30°-40°	251.4	17.6
40°-50°	253.7	17.8
50°-60°	224.4	15.7
60°-70°	167.9	11.8
70°-80°	93.3	6.5
80°-90°	25.1	1.8
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°	412.1	28.9
0°-40°	663.4	46.5
0°-60°	1141.5	80.0
0°-90°	1427.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1427.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	547	547	547	547	547	
5°	548	542	545	543	542	52
15°	522	516	518	516	514	147
25°	473	467	468	463	462	218
35°	409	404	403	397	396	256
45°	336	331	330	324	323	259
55°	257	255	252	247	247	230
65°	175	172	169	167	166	173
75°	90	89	88	86	86	95
85°	21	22	22	21	22	25
90°	0	0	0	0	0	



TEST NUMBER: P231677

CATALOG NUMBER: S123-DR-LO-35-X-0048-1-U-DD-1-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	547.1	547.1	547.1	547.1	547.1
2.5°	550.1	544.2	547.1	545.7	542.7
5°	547.6	542.2	544.7	542.7	541.7
7.5°	543.7	537.8	540.2	538.3	538.3
10°	537.8	531.9	534.3	531.9	530.9
12.5°	530.4	524.5	526.9	524.0	523.0
15°	521.5	515.6	517.6	515.6	514.1
17.5°	511.2	505.8	507.2	504.8	503.3
20°	499.9	493.9	495.9	492.0	490.5
22.5°	487.1	481.1	482.6	477.7	476.7
25°	473.3	467.4	468.3	463.4	461.9
27.5°	459.0	452.6	453.6	448.1	446.2
30°	442.7	436.8	437.3	431.9	429.9
32.5°	426.5	420.6	420.6	414.7	413.7
35°	409.2	403.8	403.3	397.4	395.9
37.5°	391.5	386.6	386.1	379.7	378.2
40°	373.3	368.9	367.9	361.5	360.0
42.5°	354.6	350.1	349.2	342.8	341.3
45°	335.9	331.4	329.5	324.0	322.6
47.5°	316.7	313.2	310.3	305.3	305.3
50°	296.5	293.5	291.0	286.1	284.2
52.5°	276.8	274.3	271.4	266.9	265.4
55°	257.1	254.6	251.7	246.7	246.7
57.5°	236.9	233.9	231.0	227.5	226.5
60°	216.2	213.7	210.8	207.3	205.4
62.5°	195.5	193.5	190.6	187.6	186.6
65°	174.8	172.4	169.4	166.9	166.0
67.5°	154.1	151.2	148.7	146.3	145.8
70°	132.5	130.0	128.0	125.1	125.1
72.5°	110.3	108.3	107.4	105.9	105.4
75°	89.6	88.6	87.7	86.2	85.7
77.5°	69.9	69.9	68.9	68.5	68.5
80°	51.2	52.2	51.2	51.2	51.2
82.5°	34.5	35.0	35.5	35.5	35.0
85°	20.7	21.7	21.7	21.2	21.7
87.5°	9.8	9.8	9.8	9.8	9.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)