

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: P231737

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231737  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33914)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123-RDR-LO-35-X-0048-1-U-DD-1-W  
Description: DEFINE 3 LED LINEAR REGRESSED 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: 1258.8 lumens  
Efficiency: N/A  
Efficacy: 92.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.07 / 1.23  
Luminous Opening: Rectangular (W 0.22' x L: 3.92' x H: 0')  
CIE Type: Direct

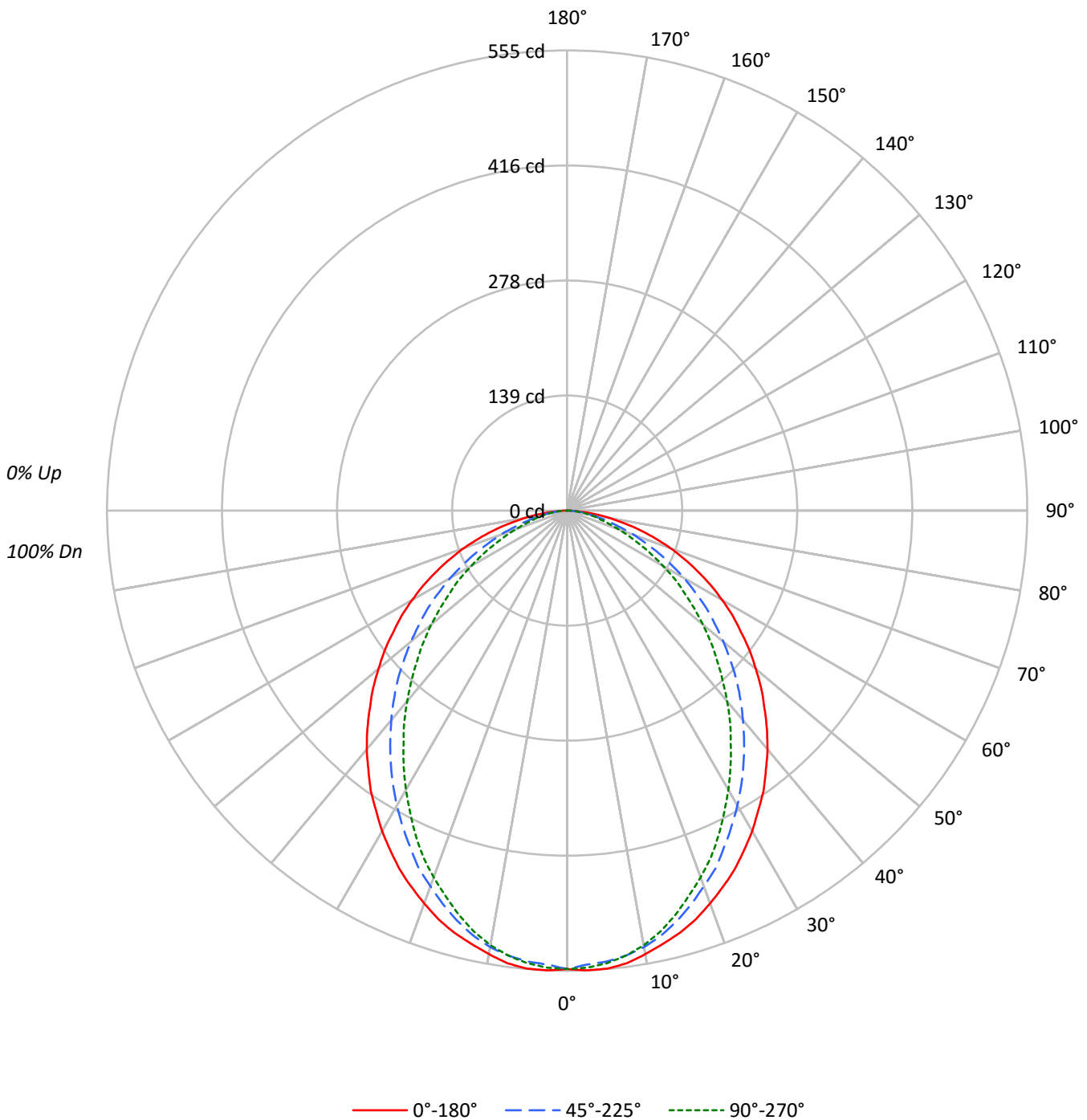
Input Watts (W): 13.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P231737

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

### Luminous Intensity Polar Plot





TEST NUMBER: P231737

CATALOG NUMBER: S123-RDR-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	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	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	90	81	73	68	78	72	67	75	70	65	72	68	64	62					62			
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54					54			
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47					47			
6	72	60	51	45	71	59	51	45	57	50	44	55	49	44	54	48	44	42					42			
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	43	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	33					33			
9	59	46	38	33	57	45	38	32	44	37	32	43	37	32	42	36	32	30					30			
10	55	42	35	30	54	42	35	30	41	34	29	40	34	29	39	33	29	28					28			

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

	0°	45°	90°
0°	6805	6805	6805
5°	6850	6744	6770
10°	6788	6680	6652
15°	6713	6527	6431
20°	6604	6313	6165
25°	6487	6082	5870
30°	6342	5835	5528
35°	6202	5576	5170
40°	6041	5302	4823
45°	5857	5028	4454
50°	5687	4702	4092
55°	5502	4399	3691
60°	5314	4007	3288
65°	5073	3562	2819
70°	4768	3077	2375
75°	4322	2468	1983
80°	3721	1992	1843
85°	2909	1680	1610



TEST NUMBER: P231737

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

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.1	4.1
10°-20°	145.0	11.5
20°-30°	208.3	16.5
30°-40°	234.5	18.6
40°-50°	225.5	17.9
50°-60°	186.9	14.8
60°-70°	127.5	10.1
70°-80°	63.4	5.0
80°-90°	15.7	1.2
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°	405.4	32.2
0°-40°	639.8	50.8
0°-60°	1052.2	83.6
0°-90°	1258.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1258.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	553	553	553	553	553	
5°	554	552	546	550	548	53
15°	527	522	512	511	505	148
25°	478	470	448	439	432	220
35°	413	397	371	353	344	258
45°	336	319	289	265	256	260
55°	256	236	205	181	172	230
65°	174	153	122	103	97	173
75°	91	73	52	43	42	96
85°	21	14	12	12	11	25
90°	0	0	0	0	0	



TEST NUMBER: P231737

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

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	552.9	552.9	552.9	552.9	552.9
2.5°	555.1	552.9	548.0	552.9	551.8
5°	554.5	552.4	545.9	549.6	548.0
7.5°	550.7	548.0	541.5	543.7	541.5
10°	543.2	541.5	534.5	535.6	532.3
12.5°	535.0	532.3	524.8	524.8	519.9
15°	526.9	522.1	512.3	510.7	504.7
17.5°	516.6	513.4	497.7	495.0	487.4
20°	504.2	498.3	482.0	477.2	470.7
22.5°	491.2	484.2	467.4	459.3	452.8
25°	477.7	469.6	447.9	438.7	432.3
27.5°	462.0	452.8	429.5	418.7	410.1
30°	446.3	435.0	410.6	397.6	389.0
32.5°	429.0	417.1	391.1	374.9	366.8
35°	412.8	397.1	371.1	353.3	344.1
37.5°	393.8	378.2	350.6	330.5	323.0
40°	376.0	359.2	330.0	308.9	300.2
42.5°	356.5	338.7	309.4	287.3	277.5
45°	336.5	318.6	288.9	265.1	255.9
47.5°	317.6	298.6	267.2	244.0	235.3
50°	297.0	278.6	245.6	222.3	213.7
52.5°	277.5	257.0	224.5	201.2	192.6
55°	256.4	236.4	205.0	180.7	172.0
57.5°	237.0	215.9	182.9	160.1	154.2
60°	215.9	194.2	162.8	141.2	133.6
62.5°	195.3	172.6	141.7	121.7	115.2
65°	174.2	152.6	122.3	103.3	96.8
67.5°	153.6	132.5	102.2	86.6	80.6
70°	132.5	112.0	85.5	70.3	66.0
72.5°	111.4	92.5	67.6	55.7	52.5
75°	90.9	73.0	51.9	43.3	41.7
77.5°	70.3	55.7	38.4	34.1	33.5
80°	52.5	38.4	28.1	26.0	26.0
82.5°	35.2	23.8	19.5	18.9	18.4
85°	20.6	13.5	11.9	11.9	11.4
87.5°	8.7	5.4	5.4	5.4	4.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)