

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: P231738

Luminaire Tested: **S123-RDR-LO-40-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231738  
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-40-X-0048-1-U-DD-1-W  
Description: DEFINE 3 LED LINEAR REGRESSED 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: 1283.1 lumens  
Efficiency: N/A  
Efficacy: 94.3 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

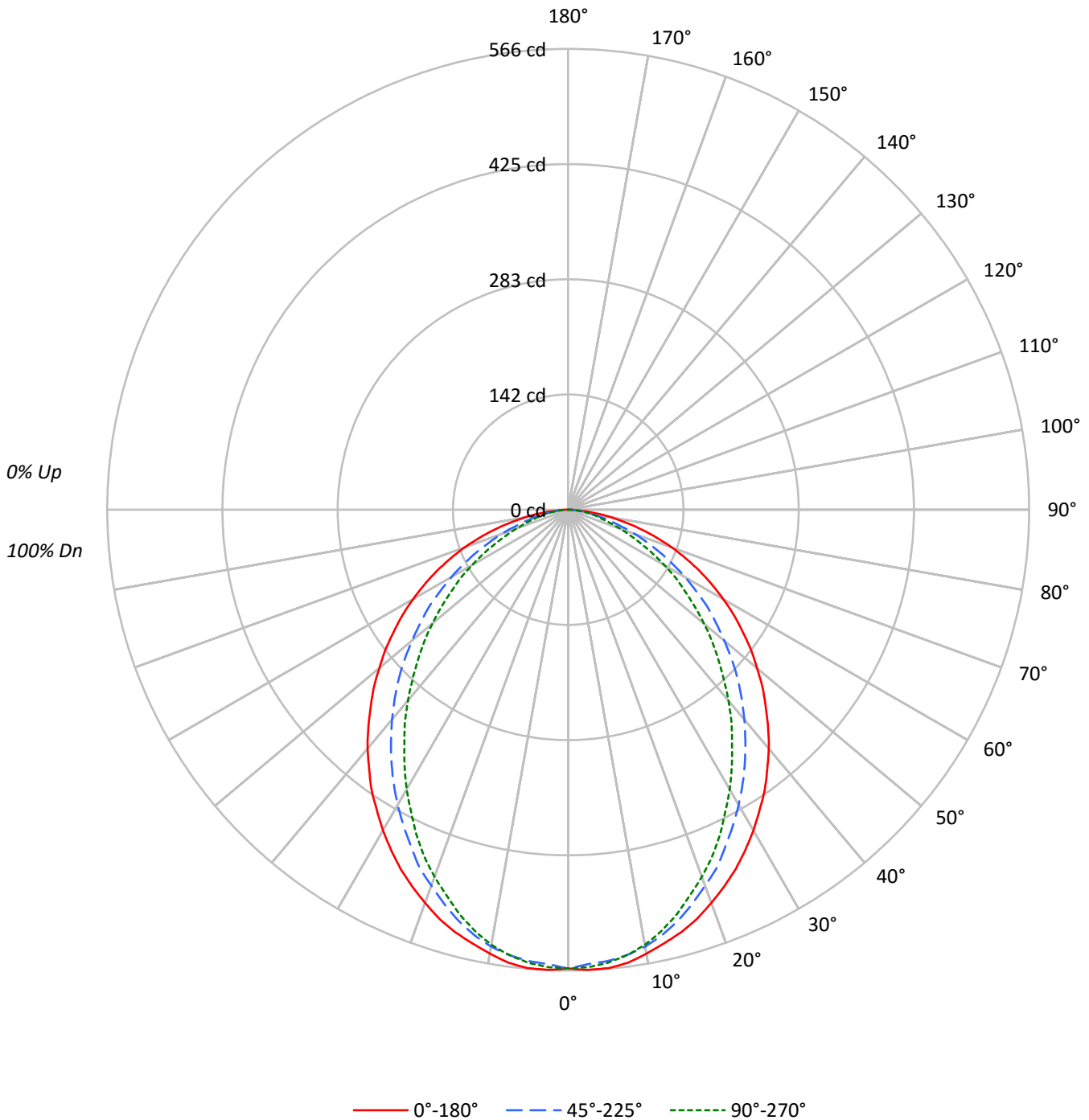
Input Watts (W): 13.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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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	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°	6935	6935	6935
5°	6983	6874	6901
10°	6918	6808	6781
15°	6843	6654	6555
20°	6731	6435	6283
25°	6612	6200	5983
30°	6465	5947	5635
35°	6321	5684	5269
40°	6156	5405	4916
45°	5970	5124	4539
50°	5796	4792	4170
55°	5609	4485	3761
60°	5415	4086	3352
65°	5169	3629	2874
70°	4861	3134	2422
75°	4403	2515	2021
80°	3792	2034	1878
85°	2965	1709	1638



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.1	4.1
10°-20°	147.8	11.5
20°-30°	212.3	16.5
30°-40°	239.0	18.6
40°-50°	229.8	17.9
50°-60°	190.5	14.8
60°-70°	130.0	10.1
70°-80°	64.6	5.0
80°-90°	16.0	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°	413.2	32.2
0°-40°	652.2	50.8
0°-60°	1072.5	83.6
0°-90°	1283.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1283.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	564	564	564	564	564	
5°	565	563	556	560	559	54
15°	537	532	522	520	514	151
25°	487	479	457	447	441	224
35°	421	405	378	360	351	263
45°	343	325	294	270	261	265
55°	261	241	209	184	175	234
65°	178	156	125	105	99	176
75°	93	74	53	44	42	98
85°	21	14	12	12	12	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	563.5	563.5	563.5	563.5	563.5
2.5°	565.7	563.5	558.6	563.5	562.4
5°	565.2	563.0	556.4	560.2	558.6
7.5°	561.3	558.6	551.9	554.2	551.9
10°	553.6	551.9	544.8	545.9	542.6
12.5°	545.3	542.6	534.9	534.9	529.9
15°	537.1	532.1	522.2	520.5	514.5
17.5°	526.6	523.3	507.3	504.5	496.8
20°	513.9	507.8	491.3	486.3	479.7
22.5°	500.7	493.5	476.4	468.1	461.5
25°	486.9	478.6	456.6	447.2	440.6
27.5°	470.9	461.5	437.8	426.8	418.0
30°	454.9	443.3	418.5	405.3	396.5
32.5°	437.3	425.1	398.7	382.1	373.8
35°	420.7	404.7	378.3	360.1	350.7
37.5°	401.4	385.4	357.3	336.9	329.2
40°	383.2	366.1	336.4	314.8	306.0
42.5°	363.4	345.2	315.4	292.8	282.9
45°	343.0	324.8	294.4	270.2	260.8
47.5°	323.7	304.4	272.4	248.7	239.9
50°	302.7	284.0	250.3	226.6	217.8
52.5°	282.9	261.9	228.8	205.1	196.3
55°	261.4	241.0	209.0	184.2	175.3
57.5°	241.5	220.0	186.4	163.2	157.1
60°	220.0	198.0	166.0	143.9	136.2
62.5°	199.1	175.9	144.5	124.1	117.4
65°	177.5	155.5	124.6	105.3	98.7
67.5°	156.6	135.1	104.2	88.2	82.2
70°	135.1	114.1	87.1	71.7	67.3
72.5°	113.6	94.3	68.9	56.8	53.5
75°	92.6	74.4	52.9	44.1	42.5
77.5°	71.7	56.8	39.1	34.7	34.2
80°	53.5	39.1	28.7	26.5	26.5
82.5°	35.8	24.3	19.9	19.3	18.7
85°	21.0	13.8	12.1	12.1	11.6
87.5°	8.8	5.5	5.5	5.5	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)