

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: P231754

Luminaire Tested: **S124-RDR-1-40-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231754  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33917)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124-RDR-1-40-X-0048-1-U-DD-1-W  
Description: DEFINE 4 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: 2925.2 lumens  
Efficiency: N/A  
Efficacy: 104.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.1 / 1.25  
Luminous Opening: Rectangular (W 0.31' x L: 3.92' x H: 0')  
CIE Type: Direct

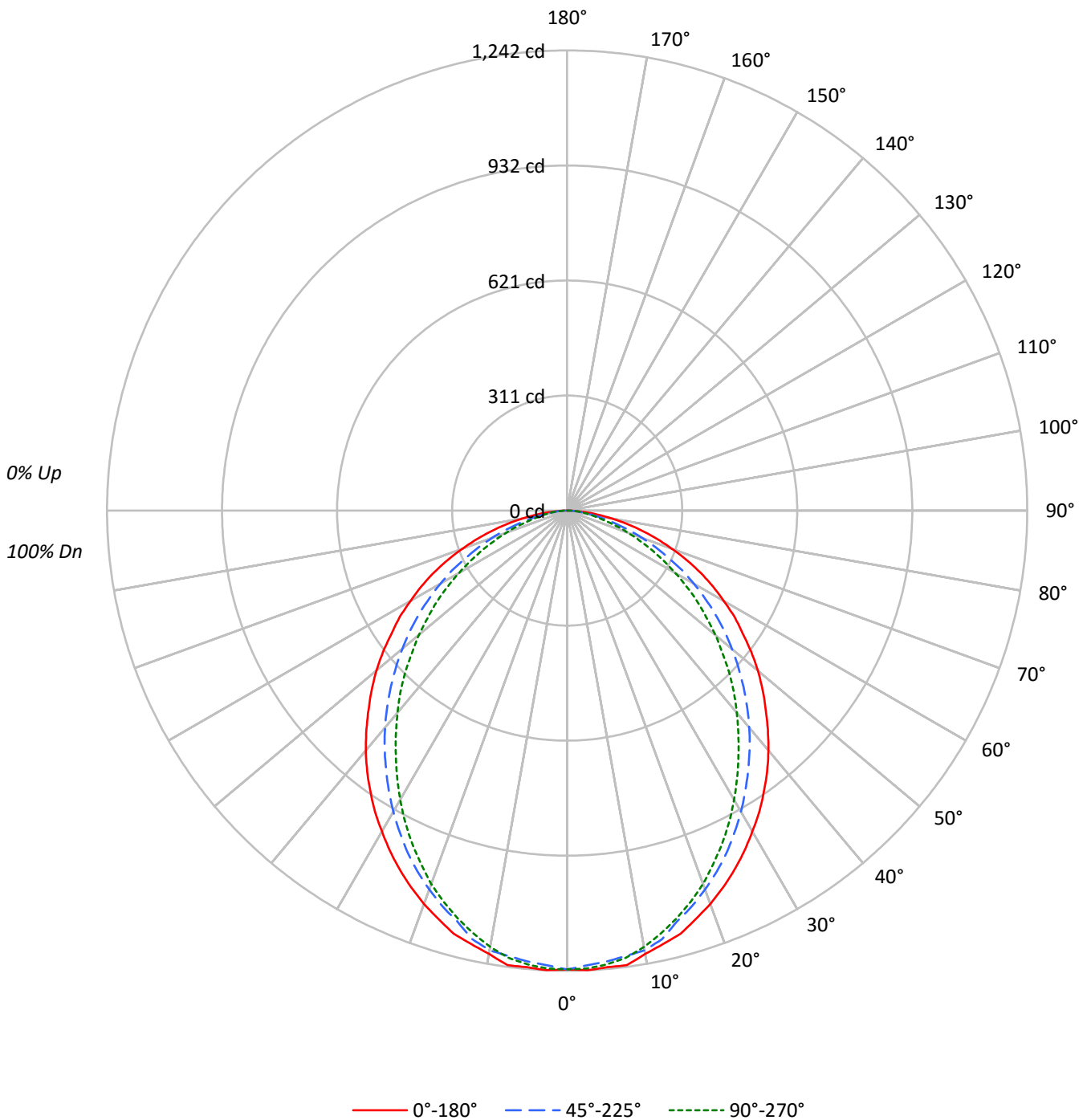
Input Watts (W): 27.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85					85			
2	100	92	86	80	98	90	85	79	87	82	78	84	80	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41					41			
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36					36			
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	35	33					33			
9	58	45	37	32	57	45	37	32	44	37	32	43	36	31	41	36	31	30					30			
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27					27			

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

	0°	45°	90°
0°	11096	11096	11096
5°	11128	10987	11058
10°	11053	10961	10880
15°	10969	10646	10574
20°	10772	10378	10228
25°	10572	10074	9797
30°	10346	9708	9326
35°	10129	9321	8819
40°	9888	8945	8330
45°	9606	8527	7831
50°	9365	8101	7289
55°	9044	7627	6716
60°	8749	7082	6039
65°	8428	6386	5341
70°	7862	5633	4577
75°	7212	4653	3642
80°	6239	3581	3235
85°	5069	3105	2879



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.8	4.0
10°-20°	326.1	11.1
20°-30°	472.3	16.1
30°-40°	537.8	18.4
40°-50°	524.8	17.9
50°-60°	443.2	15.1
60°-70°	309.8	10.6
70°-80°	155.8	5.3
80°-90°	38.5	1.3
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°	915.2	31.3
0°-40°	1453.0	49.7
0°-60°	2421.0	82.8
0°-90°	2925.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2925.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1238	1238	1238	1238	1238	
5°	1237	1233	1222	1232	1229	118
15°	1182	1173	1148	1148	1140	332
25°	1069	1054	1019	1002	991	492
35°	926	899	852	821	806	579
45°	758	729	673	633	618	586
55°	579	545	488	444	430	519
65°	398	358	301	265	252	392
75°	208	176	134	112	105	221
85°	49	32	30	29	28	58
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1238.3	1238.3	1238.3	1238.3	1238.3
2.5°	1241.7	1239.5	1228.3	1239.5	1237.2
5°	1237.2	1232.7	1221.5	1231.6	1229.4
7.5°	1237.2	1231.6	1212.6	1219.3	1217.1
10°	1214.8	1218.2	1204.7	1198.0	1195.8
12.5°	1198.0	1192.4	1184.6	1174.5	1168.9
15°	1182.4	1173.4	1147.6	1147.6	1139.8
17.5°	1155.5	1148.8	1119.7	1119.7	1107.3
20°	1129.7	1119.7	1088.3	1088.3	1072.6
22.5°	1100.6	1089.4	1054.7	1051.4	1031.2
25°	1069.3	1053.6	1018.9	1002.1	990.9
27.5°	1035.7	1016.6	978.6	957.3	947.2
30°	999.9	979.7	938.3	912.5	901.3
32.5°	965.1	941.6	895.7	867.7	854.3
35°	926.0	899.1	852.1	820.7	806.2
37.5°	886.8	859.9	809.5	773.7	759.1
40°	845.3	815.1	764.7	727.8	712.1
42.5°	801.7	771.4	718.8	679.6	666.2
45°	758.0	728.9	672.9	632.6	618.0
47.5°	715.5	683.0	627.0	584.5	567.7
50°	671.8	638.2	581.1	538.6	522.9
52.5°	625.9	592.3	535.2	491.5	473.6
55°	578.9	545.3	488.2	444.5	429.9
57.5°	536.3	498.2	441.1	398.6	382.9
60°	488.2	450.1	395.2	352.7	337.0
62.5°	443.4	404.2	350.5	309.0	293.3
65°	397.5	358.3	301.2	265.4	251.9
67.5°	349.3	312.4	257.5	223.9	211.6
70°	300.1	264.2	215.0	184.7	174.7
72.5°	254.2	219.5	173.5	146.7	140.0
75°	208.3	175.8	134.4	112.0	105.2
77.5°	163.5	134.4	99.6	82.9	80.6
80°	120.9	96.3	69.4	62.7	62.7
82.5°	82.9	60.5	48.1	45.9	45.9
85°	49.3	32.5	30.2	29.1	28.0
87.5°	21.3	14.6	13.4	12.3	12.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)