

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: P231757

Luminaire Tested: **S124-RDR-2-35-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231757  
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-2-35-X-0048-1-U-DD-1-W  
Description: DEFINE 4 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: 4066.8 lumens  
Efficiency: N/A  
Efficacy: 95.5 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

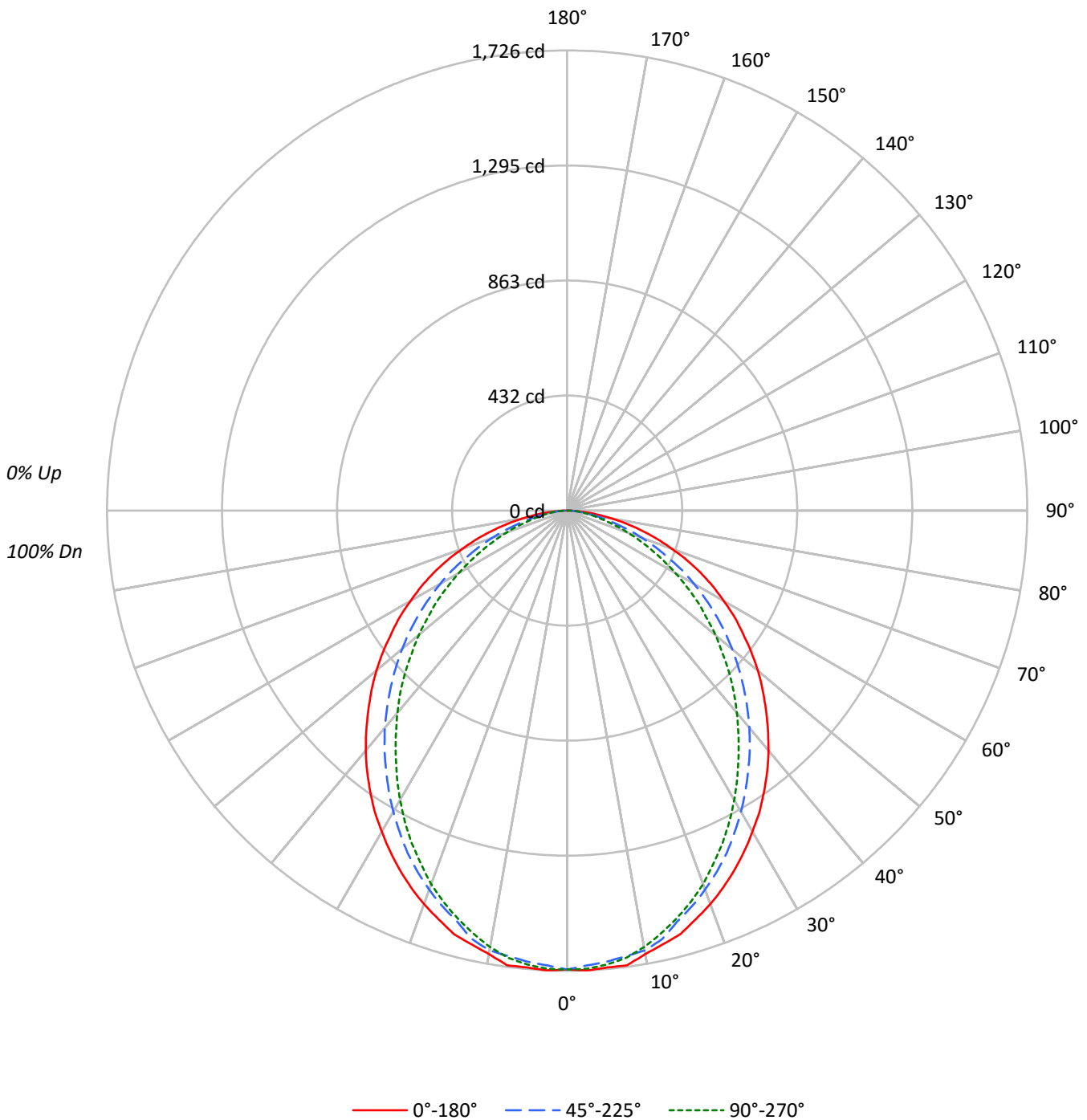
Input Watts (W): 42.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	98	90	85	79	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	35	33
9	58	45	37	32	57	45	37	32	44	37	32	43	36	31	41	36	31	30
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27

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

	0°	45°	90°
0°	15427	15427	15427
5°	15472	15276	15374
10°	15367	15240	15127
15°	15249	14801	14700
20°	14977	14427	14220
25°	14698	14005	13620
30°	14383	13496	12966
35°	14082	12958	12260
40°	13747	12436	11580
45°	13354	11855	10889
50°	13020	11262	10133
55°	12573	10603	9337
60°	12163	9848	8396
65°	11717	8878	7425
70°	10930	7831	6361
75°	10023	6467	5065
80°	8674	4980	4500
85°	7043	4318	3999



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.3	4.0
10°-20°	453.4	11.1
20°-30°	656.6	16.1
30°-40°	747.7	18.4
40°-50°	729.7	17.9
50°-60°	616.1	15.2
60°-70°	430.7	10.6
70°-80°	216.6	5.3
80°-90°	53.6	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°	1272.4	31.3
0°-40°	2020.1	49.7
0°-60°	3365.9	82.8
0°-90°	4066.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4066.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1722	1722	1722	1722	1722	
5°	1720	1714	1698	1712	1709	164
15°	1644	1631	1596	1596	1585	462
25°	1487	1465	1416	1393	1378	685
35°	1287	1250	1185	1141	1121	805
45°	1054	1013	936	880	859	814
55°	805	758	679	618	598	722
65°	553	498	419	369	350	545
75°	290	244	187	156	146	307
85°	68	45	42	40	39	81
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1721.6	1721.6	1721.6	1721.6	1721.6
2.5°	1726.3	1723.2	1707.6	1723.2	1720.1
5°	1720.1	1713.8	1698.3	1712.3	1709.2
7.5°	1720.1	1712.3	1685.8	1695.2	1692.0
10°	1688.9	1693.6	1674.9	1665.6	1662.5
12.5°	1665.6	1657.8	1646.9	1632.9	1625.1
15°	1643.8	1631.3	1595.5	1595.5	1584.6
17.5°	1606.4	1597.1	1556.6	1556.6	1539.5
20°	1570.6	1556.6	1513.0	1513.0	1491.2
22.5°	1530.2	1514.6	1466.3	1461.7	1433.6
25°	1486.6	1464.8	1416.5	1393.2	1377.6
27.5°	1439.9	1413.4	1360.5	1330.9	1316.9
30°	1390.1	1362.0	1304.4	1268.6	1253.1
32.5°	1341.8	1309.1	1245.3	1206.4	1187.7
35°	1287.3	1250.0	1184.6	1141.0	1120.8
37.5°	1232.8	1195.5	1125.4	1075.6	1055.4
40°	1175.2	1133.2	1063.2	1011.8	990.0
42.5°	1114.5	1072.5	999.3	944.9	926.2
45°	1053.8	1013.4	935.5	879.5	859.3
47.5°	994.7	949.5	871.7	812.6	789.2
50°	934.0	887.3	807.9	748.7	726.9
52.5°	870.2	823.5	744.1	683.4	658.4
55°	804.8	758.1	678.7	618.0	597.7
57.5°	745.6	692.7	613.3	554.2	532.4
60°	678.7	625.8	549.5	490.3	468.5
62.5°	616.4	561.9	487.2	429.6	407.8
65°	552.6	498.1	418.7	368.9	350.2
67.5°	485.7	434.3	358.0	311.3	294.2
70°	417.2	367.4	298.9	256.8	242.8
72.5°	353.4	305.1	241.3	203.9	194.6
75°	289.5	244.4	186.8	155.7	146.3
77.5°	227.3	186.8	138.5	115.2	112.1
80°	168.1	133.9	96.5	87.2	87.2
82.5°	115.2	84.1	66.9	63.8	63.8
85°	68.5	45.1	42.0	40.5	38.9
87.5°	29.6	20.2	18.7	17.1	17.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)