

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: P243547

Luminaire Tested: **S124DR-H350D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243547
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-55)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DR-H350D935-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1159.4 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.88' x H: 0.08')
CIE Type: Direct

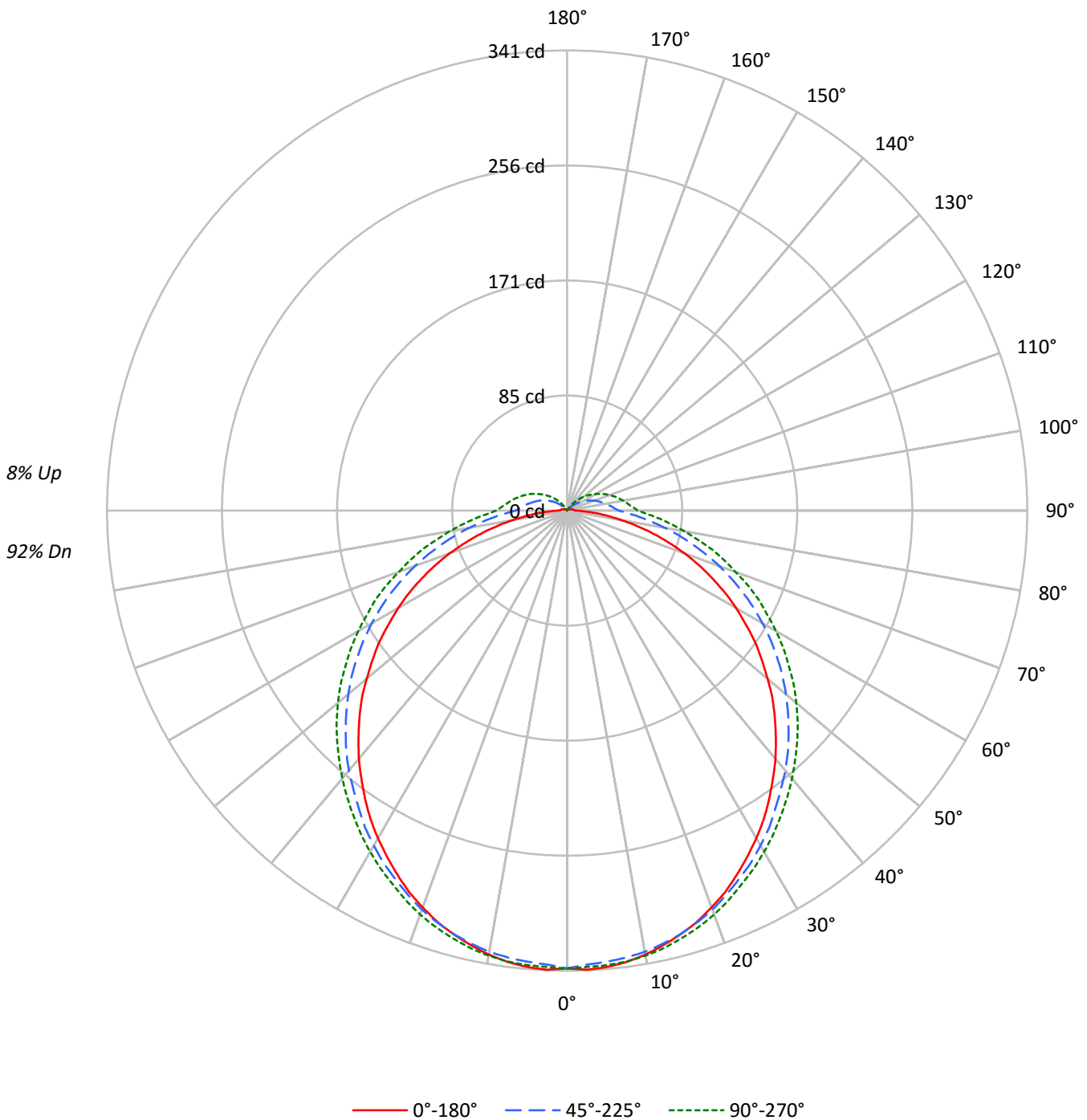
Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	92
1	105	100	95	91	102	97	93	89	91	88	84	86	83	80	81	79	77	74
2	95	86	79	73	92	84	77	71	79	73	68	74	70	66	70	67	63	60
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	46	55	49	45	43
5	72	59	50	43	70	58	49	42	55	47	41	52	45	40	49	43	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	39	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3015	3015	3015
5°	3024	2942	2948
10°	3004	2893	2887
15°	2975	2834	2817
20°	2937	2771	2747
25°	2891	2699	2667
30°	2843	2632	2597
35°	2790	2556	2525
40°	2737	2493	2458
45°	2679	2424	2393
50°	2614	2354	2326
55°	2558	2281	2249
60°	2477	2197	2174
65°	2385	2105	2098
70°	2272	1999	1989
75°	2098	1871	1911
80°	1857	1745	1799
85°	1678	1645	1733



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.1	2.8
10°-20°	92.1	7.9
20°-30°	139.4	12.0
30°-40°	168.8	14.6
40°-50°	178.5	15.4
50°-60°	168.2	14.5
60°-70°	139.7	12.1
70°-80°	98.2	8.5
80°-90°	55.3	4.8
90°-100°	32.8	2.8
100°-110°	24.3	2.1
110°-120°	16.2	1.4
120°-130°	9.2	0.8
130°-140°	3.9	0.3
140°-150°	0.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	263.6	22.7
0°-40°	432.3	37.3
0°-60°	779.0	67.2
0°-90°	1072.2	92.5
90°-120°	73.4	6.3
90°-150°	87.2	7.5
90°-180°	87.0	7.5
0°-180°	1159.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	339	339	339	339	339	
5°	340	338	336	338	338	32
15°	325	326	325	328	328	92
25°	298	300	301	306	306	137
35°	261	265	269	275	276	163
45°	218	225	232	239	241	168
55°	170	179	190	198	200	152
65°	119	130	144	153	157	117
75°	66	80	96	107	111	70
85°	20	36	54	65	69	21
90°	6	21	38	49	52	4
95°	5	17	33	44	46	4
105°	4	11	25	35	38	4
115°	2	6	18	26	29	2
125°	1	1	10	18	20	1
135°	1	1	3	9	12	1
145°	0	0	0	2	4	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	339.2	339.2	339.2	339.2	339.2
2.5°	340.6	339.5	336.7	338.8	338.5
5°	339.5	338.1	335.6	338.5	338.1
7.5°	337.4	336.3	334.1	337.4	337.0
10°	334.1	333.4	332.0	334.9	334.9
12.5°	329.8	329.8	328.7	332.0	332.0
15°	325.1	325.8	324.8	328.4	328.0
17.5°	319.7	320.4	320.1	323.7	323.7
20°	312.9	313.9	314.7	318.6	318.6
22.5°	306.0	307.5	308.2	312.5	312.5
25°	297.7	300.2	301.3	305.7	305.7
27.5°	289.1	292.3	294.5	298.4	299.2
30°	280.4	284.0	286.6	290.9	292.0
32.5°	271.1	274.7	278.6	282.9	284.4
35°	261.0	265.3	269.2	275.0	276.1
37.5°	250.5	255.6	260.2	266.4	267.8
40°	240.1	246.2	251.6	257.4	259.2
42.5°	228.9	235.0	242.2	248.3	250.1
45°	217.7	224.6	232.1	239.0	241.1
47.5°	206.5	213.7	222.0	229.2	231.8
50°	193.9	201.8	211.6	218.8	221.7
52.5°	181.7	190.3	201.1	208.3	211.6
55°	170.1	179.1	190.0	198.2	200.4
57.5°	156.8	166.9	178.8	187.8	190.0
60°	144.5	154.6	167.2	176.3	178.8
62.5°	131.9	142.7	155.7	164.7	167.2
65°	118.6	130.5	143.8	152.8	156.8
67.5°	105.6	117.5	131.6	141.7	144.9
70°	92.6	104.9	120.0	130.1	132.6
72.5°	78.9	92.3	107.8	118.2	121.8
75°	66.0	80.0	95.9	106.7	111.0
77.5°	53.3	68.1	84.7	95.9	98.8
80°	40.7	56.9	73.5	84.7	88.3
82.5°	30.6	45.8	63.1	75.0	77.9
85°	20.5	36.4	53.7	65.2	68.8
87.5°	12.3	28.5	45.1	55.9	59.5
90°	6.1	21.3	38.2	48.7	52.3
92.5°	5.4	19.1	35.3	45.8	49.4
95°	5.0	17.3	33.2	43.6	46.5
97.5°	4.7	15.9	31.0	41.1	44.3
100°	4.3	14.1	29.2	38.9	42.2
102.5°	4.0	12.6	27.0	36.8	40.0
105°	3.6	11.2	25.2	34.6	37.8
107.5°	3.2	9.7	23.4	32.4	35.7
110°	2.9	8.3	21.6	30.3	33.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.5	7.2	19.5	28.1	31.4
115°	2.5	5.8	17.7	26.0	29.2
117.5°	2.2	4.3	15.9	23.8	26.7
120°	2.2	3.2	14.1	21.6	24.5
122.5°	1.8	2.2	12.3	19.8	22.3
125°	1.4	1.1	10.5	17.7	20.2
127.5°	1.4	1.1	8.7	15.5	18.0
130°	1.1	1.1	6.8	13.3	15.9
132.5°	1.1	0.7	5.0	11.5	13.7
135°	0.7	0.7	3.2	9.4	11.5
137.5°	0.7	0.4	2.2	7.6	9.7
140°	0.7	0.4	0.7	5.8	7.6
142.5°	0.4	0.4	0.0	4.0	5.4
145°	0.4	0.0	0.0	2.2	3.6
147.5°	0.4	0.0	0.0	0.4	1.8
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)