

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: P243523

Luminaire Tested: **S124DR-H350D927-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243523
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-H350D927-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1066.7 lumens
Efficiency: N/A
Efficacy: 95.2 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

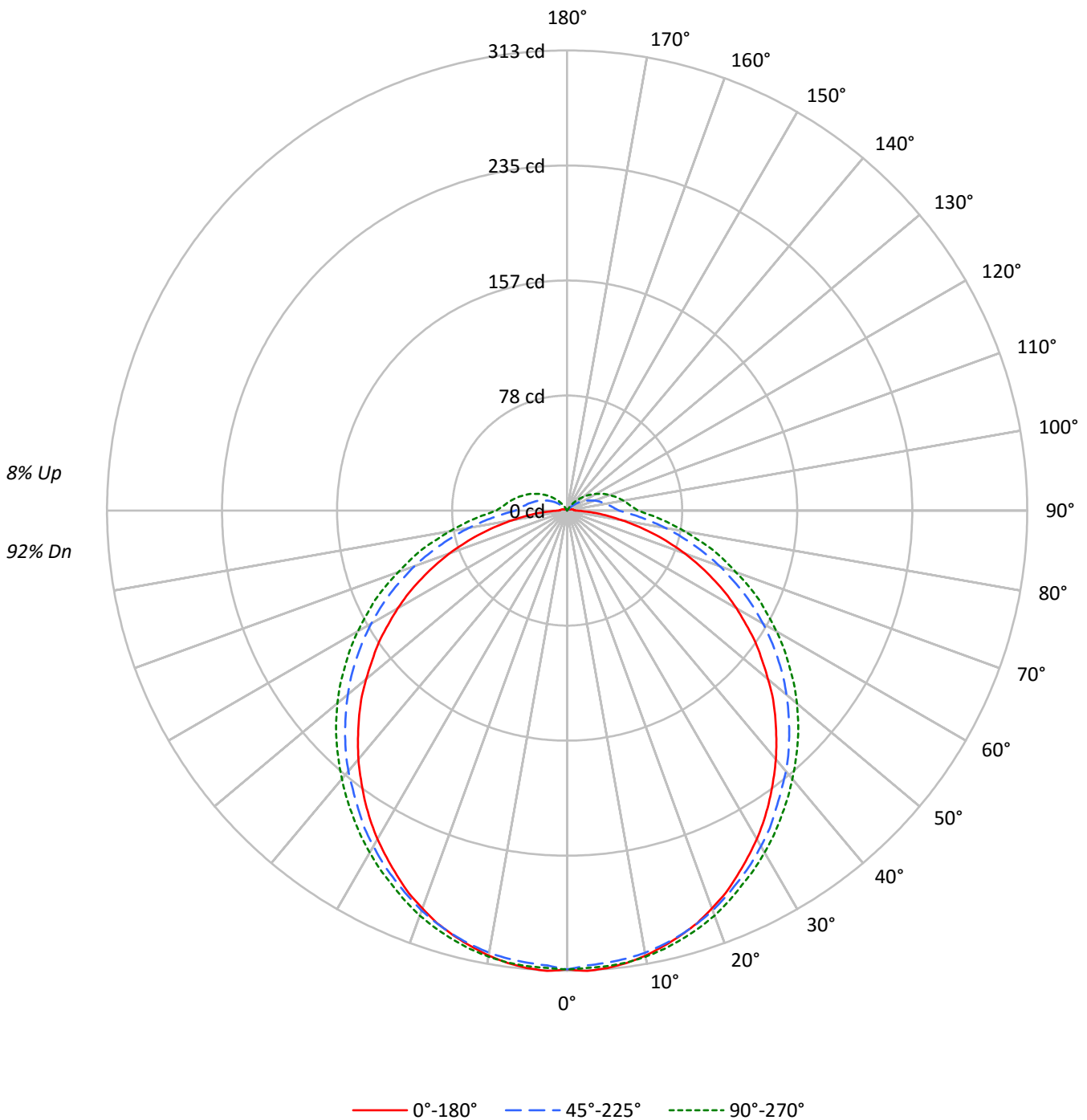
Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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°	2774	2774	2774
5°	2782	2706	2713
10°	2764	2661	2656
15°	2737	2607	2592
20°	2702	2549	2528
25°	2660	2483	2453
30°	2616	2421	2389
35°	2567	2352	2323
40°	2518	2294	2261
45°	2465	2231	2202
50°	2405	2166	2141
55°	2353	2098	2070
60°	2280	2022	2000
65°	2194	1936	1931
70°	2091	1839	1830
75°	1930	1721	1758
80°	1711	1608	1654
85°	1547	1513	1595



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.5	2.8
10°-20°	84.7	7.9
20°-30°	128.2	12.0
30°-40°	155.3	14.6
40°-50°	164.2	15.4
50°-60°	154.7	14.5
60°-70°	128.6	12.1
70°-80°	90.4	8.5
80°-90°	50.9	4.8
90°-100°	30.2	2.8
100°-110°	22.4	2.1
110°-120°	14.9	1.4
120°-130°	8.4	0.8
130°-140°	3.6	0.3
140°-150°	0.7	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	242.5	22.7
0°-40°	397.8	37.3
0°-60°	716.7	67.2
0°-90°	986.5	92.5
90°-120°	67.5	6.3
90°-150°	80.2	7.5
90°-180°	80.0	7.5
0°-180°	1066.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	312	312	312	312	312	
5°	312	311	309	311	311	30
15°	299	300	299	302	302	84
25°	274	276	277	281	281	126
35°	240	244	248	253	254	150
45°	200	207	214	220	222	155
55°	156	165	175	182	184	139
65°	109	120	132	141	144	108
75°	61	74	88	98	102	64
85°	19	34	49	60	63	19
90°	6	20	35	45	48	4
95°	5	16	30	40	43	4
105°	3	10	23	32	35	4
115°	2	5	16	24	27	2
125°	1	1	10	16	19	1
135°	1	1	3	9	11	1
145°	0	0	0	2	3	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°	312.1	312.1	312.1	312.1	312.1
2.5°	313.4	312.4	309.7	311.7	311.4
5°	312.4	311.1	308.7	311.4	311.1
7.5°	310.4	309.4	307.4	310.4	310.1
10°	307.4	306.8	305.4	308.1	308.1
12.5°	303.4	303.4	302.4	305.4	305.4
15°	299.1	299.8	298.8	302.1	301.8
17.5°	294.2	294.8	294.5	297.8	297.8
20°	287.9	288.9	289.5	293.2	293.2
22.5°	281.6	282.9	283.5	287.5	287.5
25°	273.9	276.2	277.2	281.2	281.2
27.5°	266.0	269.0	270.9	274.6	275.3
30°	258.0	261.3	263.6	267.6	268.6
32.5°	249.4	252.7	256.4	260.3	261.7
35°	240.1	244.1	247.7	253.0	254.0
37.5°	230.5	235.1	239.4	245.1	246.4
40°	220.9	226.5	231.5	236.8	238.4
42.5°	210.6	216.2	222.9	228.5	230.2
45°	200.3	206.6	213.6	219.9	221.9
47.5°	190.0	196.7	204.3	210.9	213.2
50°	178.4	185.7	194.7	201.3	204.0
52.5°	167.1	175.1	185.1	191.7	194.7
55°	156.5	164.8	174.8	182.4	184.4
57.5°	144.3	153.5	164.5	172.8	174.8
60°	133.0	142.3	153.9	162.2	164.5
62.5°	121.4	131.3	143.3	151.6	153.9
65°	109.1	120.1	132.3	140.6	144.3
67.5°	97.2	108.1	121.0	130.3	133.3
70°	85.2	96.5	110.4	119.7	122.0
72.5°	72.6	84.9	99.2	108.8	112.1
75°	60.7	73.6	88.2	98.2	102.1
77.5°	49.1	62.7	77.9	88.2	90.9
80°	37.5	52.4	67.7	77.9	81.2
82.5°	28.2	42.1	58.0	69.0	71.6
85°	18.9	33.5	49.4	60.0	63.3
87.5°	11.3	26.2	41.5	51.4	54.7
90°	5.6	19.6	35.2	44.8	48.1
92.5°	5.0	17.6	32.5	42.1	45.4
95°	4.6	15.9	30.5	40.1	42.8
97.5°	4.3	14.6	28.5	37.8	40.8
100°	4.0	12.9	26.9	35.8	38.8
102.5°	3.6	11.6	24.9	33.8	36.8
105°	3.3	10.3	23.2	31.8	34.8
107.5°	3.0	9.0	21.6	29.8	32.8
110°	2.7	7.6	19.9	27.9	30.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.3	6.6	17.9	25.9	28.9
115°	2.3	5.3	16.2	23.9	26.9
117.5°	2.0	4.0	14.6	21.9	24.5
120°	2.0	3.0	12.9	19.9	22.6
122.5°	1.7	2.0	11.3	18.2	20.6
125°	1.3	1.0	9.6	16.2	18.6
127.5°	1.3	1.0	8.0	14.3	16.6
130°	1.0	1.0	6.3	12.3	14.6
132.5°	1.0	0.7	4.6	10.6	12.6
135°	0.7	0.7	3.0	8.6	10.6
137.5°	0.7	0.3	2.0	7.0	9.0
140°	0.7	0.3	0.7	5.3	7.0
142.5°	0.3	0.3	0.0	3.6	5.0
145°	0.3	0.0	0.0	2.0	3.3
147.5°	0.3	0.0	0.0	0.3	1.7
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)