

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: P243537

Luminaire Tested: **S124DR-H350D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243537
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-H350D840-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1359.8 lumens
Efficiency: N/A
Efficacy: 121.4 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

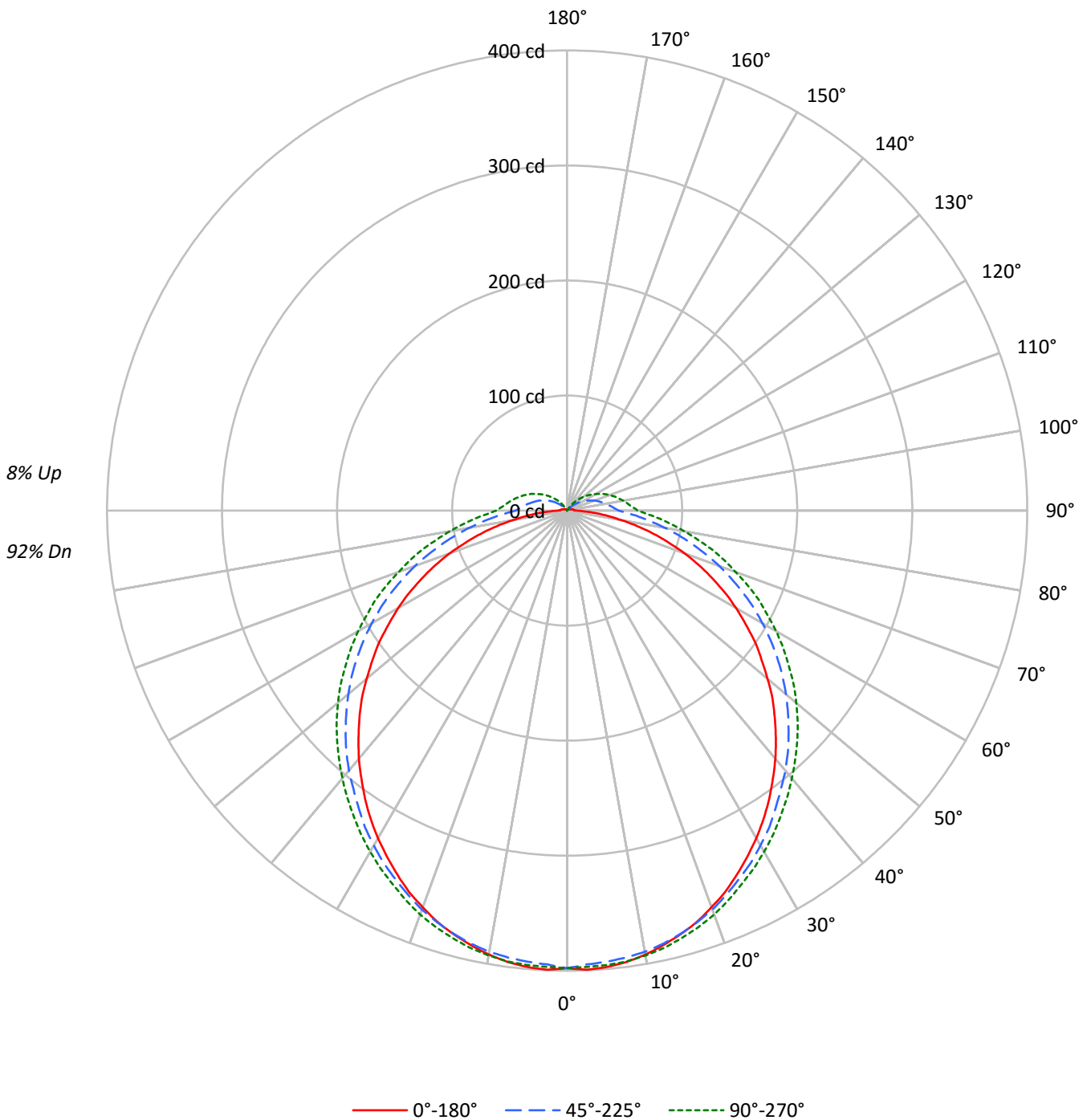
Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3536	3536	3536
5°	3546	3451	3457
10°	3524	3393	3385
15°	3489	3324	3304
20°	3445	3250	3222
25°	3391	3165	3127
30°	3334	3087	3046
35°	3272	2999	2961
40°	3210	2924	2883
45°	3142	2844	2807
50°	3066	2762	2728
55°	3000	2675	2639
60°	2905	2578	2550
65°	2797	2469	2461
70°	2665	2346	2334
75°	2461	2195	2241
80°	2181	2047	2111
85°	1973	1930	2033



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.7	2.8
10°-20°	108.0	7.9
20°-30°	163.5	12.0
30°-40°	197.9	14.6
40°-50°	209.4	15.4
50°-60°	197.2	14.5
60°-70°	163.9	12.1
70°-80°	115.2	8.5
80°-90°	64.9	4.8
90°-100°	38.5	2.8
100°-110°	28.5	2.1
110°-120°	19.0	1.4
120°-130°	10.7	0.8
130°-140°	4.6	0.3
140°-150°	0.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	309.1	22.7
0°-40°	507.1	37.3
0°-60°	913.7	67.2
0°-90°	1257.6	92.5
90°-120°	86.0	6.3
90°-150°	102.2	7.5
90°-180°	102.0	7.5
0°-180°	1359.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	398	398	398	398	398	
5°	398	396	394	397	396	38
15°	381	382	381	385	385	108
25°	349	352	353	358	358	161
35°	306	311	316	323	324	191
45°	255	263	272	280	283	197
55°	200	210	223	232	235	178
65°	139	153	169	179	184	138
75°	77	94	112	125	130	82
85°	24	43	63	76	81	25
90°	7	25	45	57	61	5
95°	6	20	39	51	54	5
105°	4	13	30	41	44	4
115°	3	7	21	30	34	3
125°	2	1	12	21	24	2
135°	1	1	4	11	14	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°	397.8	397.8	397.8	397.8	397.8
2.5°	399.5	398.2	394.9	397.4	397.0
5°	398.2	396.5	393.6	397.0	396.5
7.5°	395.7	394.4	391.9	395.7	395.3
10°	391.9	391.1	389.4	392.7	392.7
12.5°	386.8	386.8	385.6	389.4	389.4
15°	381.3	382.2	380.9	385.1	384.7
17.5°	375.0	375.8	375.4	379.6	379.6
20°	367.0	368.2	369.1	373.7	373.7
22.5°	358.9	360.6	361.5	366.5	366.5
25°	349.2	352.2	353.4	358.5	358.5
27.5°	339.1	342.9	345.4	350.0	350.9
30°	328.9	333.1	336.1	341.2	342.4
32.5°	317.9	322.1	326.8	331.9	333.6
35°	306.1	311.2	315.8	322.6	323.8
37.5°	293.8	299.7	305.2	312.4	314.1
40°	281.6	288.7	295.1	301.9	304.0
42.5°	268.5	275.6	284.1	291.3	293.4
45°	255.3	263.4	272.3	280.3	282.8
47.5°	242.2	250.7	260.4	268.9	271.8
50°	227.4	236.7	248.2	256.6	260.0
52.5°	213.1	223.2	235.9	244.4	248.2
55°	199.5	210.1	222.8	232.5	235.1
57.5°	183.9	195.7	209.7	220.3	222.8
60°	169.5	181.4	196.2	206.7	209.7
62.5°	154.7	167.4	182.6	193.2	196.2
65°	139.1	153.0	168.7	179.3	183.9
67.5°	123.9	137.8	154.3	166.1	169.9
70°	108.6	123.0	140.8	152.6	155.6
72.5°	92.6	108.2	126.4	138.7	142.9
75°	77.4	93.9	112.5	125.1	130.2
77.5°	62.6	79.9	99.3	112.5	115.8
80°	47.8	66.8	86.2	99.3	103.6
82.5°	35.9	53.7	74.0	87.9	91.3
85°	24.1	42.7	63.0	76.5	80.7
87.5°	14.4	33.4	52.8	65.5	69.8
90°	7.2	24.9	44.8	57.1	61.3
92.5°	6.3	22.4	41.4	53.7	57.9
95°	5.9	20.3	38.9	51.2	54.5
97.5°	5.5	18.6	36.4	48.2	52.0
100°	5.1	16.5	34.2	45.7	49.5
102.5°	4.7	14.8	31.7	43.1	46.9
105°	4.2	13.1	29.6	40.6	44.4
107.5°	3.8	11.4	27.5	38.0	41.9
110°	3.4	9.7	25.4	35.5	39.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.0	8.5	22.8	33.0	36.8
115°	3.0	6.8	20.7	30.4	34.2
117.5°	2.5	5.1	18.6	27.9	31.3
120°	2.5	3.8	16.5	25.4	28.7
122.5°	2.1	2.5	14.4	23.3	26.2
125°	1.7	1.3	12.3	20.7	23.7
127.5°	1.7	1.3	10.1	18.2	21.1
130°	1.3	1.3	8.0	15.6	18.6
132.5°	1.3	0.8	5.9	13.5	16.1
135°	0.8	0.8	3.8	11.0	13.5
137.5°	0.8	0.4	2.5	8.9	11.4
140°	0.8	0.4	0.8	6.8	8.9
142.5°	0.4	0.4	0.0	4.7	6.3
145°	0.4	0.0	0.0	2.5	4.2
147.5°	0.4	0.0	0.0	0.4	2.1
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)