

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: P242677

Luminaire Tested: **S124DR-S350D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242677
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DR-S350D840-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1342.5 lumens
Efficiency: N/A
Efficacy: 115.7 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

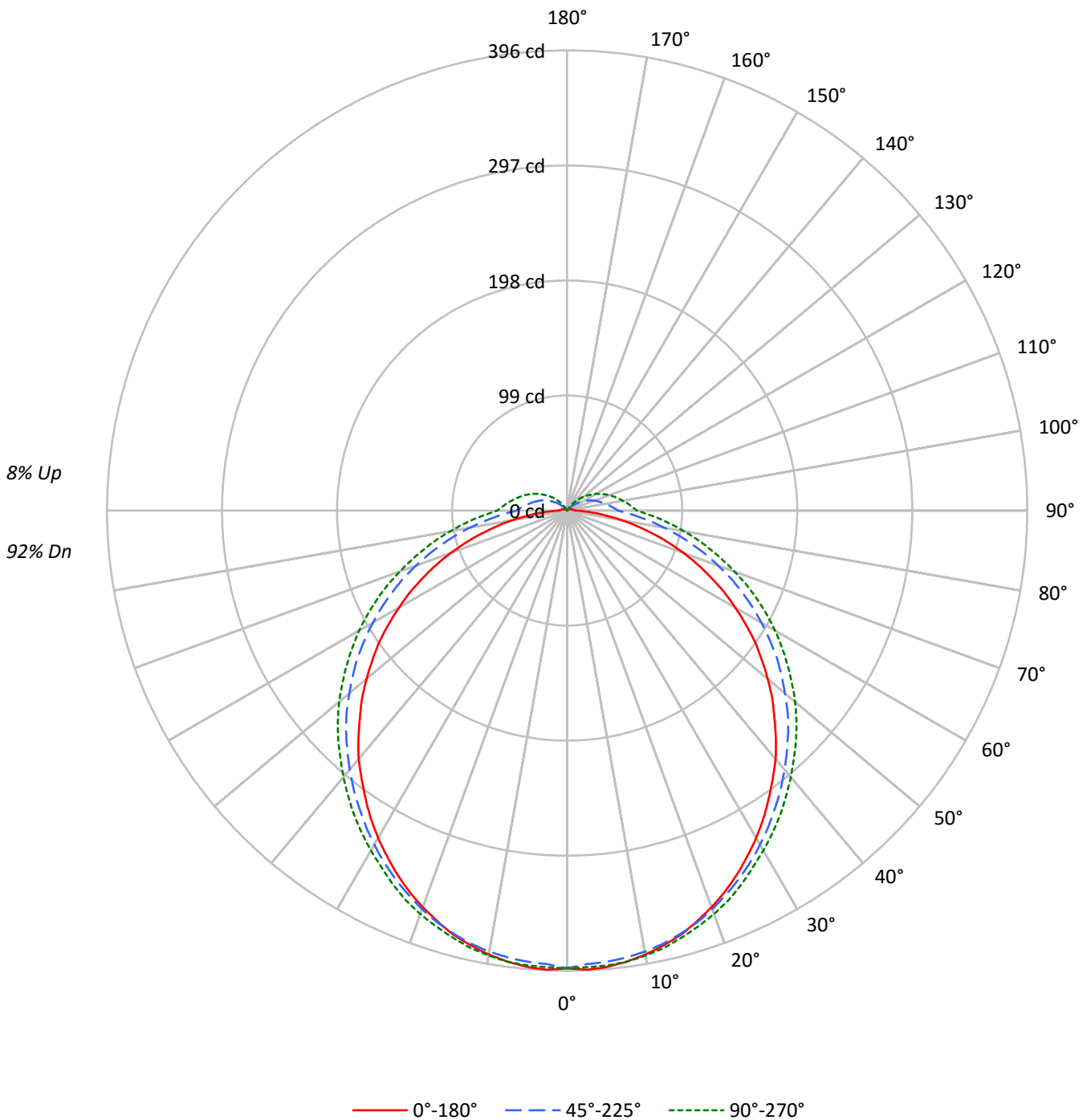
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	87	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	47	55	49	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	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	38	30	25	36	29	25	34	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3500	3500	3500
5°	3511	3417	3426
10°	3489	3358	3353
15°	3458	3290	3268
20°	3410	3215	3186
25°	3357	3132	3096
30°	3299	3049	3005
35°	3234	2965	2923
40°	3181	2884	2839
45°	3104	2809	2766
50°	3038	2723	2689
55°	2970	2641	2598
60°	2864	2537	2515
65°	2748	2427	2413
70°	2609	2299	2295
75°	2410	2160	2186
80°	2195	2021	2076
85°	1916	1890	2001



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.3	2.8
10°-20°	106.9	8.0
20°-30°	161.6	12.0
30°-40°	195.5	14.6
40°-50°	206.7	15.4
50°-60°	194.5	14.5
60°-70°	161.4	12.0
70°-80°	113.3	8.4
80°-90°	63.9	4.8
90°-100°	38.0	2.8
100°-110°	28.2	2.1
110°-120°	18.9	1.4
120°-130°	10.6	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°	305.8	22.8
0°-40°	501.4	37.3
0°-60°	902.6	67.2
0°-90°	1241.2	92.5
90°-120°	85.1	6.3
90°-150°	101.2	7.5
90°-180°	101.0	7.5
0°-180°	1342.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	394	394	394	394	394	
5°	394	393	390	393	393	37
15°	378	378	377	381	380	106
25°	346	348	350	354	355	159
35°	302	308	312	318	320	189
45°	252	261	269	276	279	195
55°	198	207	220	229	232	176
65°	137	151	166	177	180	136
75°	76	92	111	123	127	81
85°	23	42	62	75	79	24
90°	7	25	44	56	60	5
95°	6	20	38	50	54	5
105°	4	13	29	40	44	5
115°	3	7	21	30	34	3
125°	2	1	12	21	23	2
135°	1	1	4	11	14	1
145°	0	0	0	3	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°	393.8	393.8	393.8	393.8	393.8
2.5°	395.5	394.2	390.7	393.8	393.3
5°	394.2	392.9	389.8	393.3	392.9
7.5°	391.5	390.7	388.0	392.0	391.5
10°	388.0	387.6	385.4	389.3	388.9
12.5°	383.2	383.2	381.8	385.4	385.4
15°	377.9	378.3	377.0	381.0	380.5
17.5°	370.8	372.1	371.7	375.7	375.2
20°	363.3	364.6	365.1	369.5	369.5
22.5°	354.9	356.7	357.6	362.0	362.9
25°	345.7	348.3	349.7	354.5	354.9
27.5°	335.5	339.5	341.3	345.7	346.1
30°	325.4	328.9	332.0	336.9	337.8
32.5°	314.4	318.8	322.3	328.1	328.9
35°	302.5	307.8	312.2	318.4	319.7
37.5°	290.6	296.7	302.0	308.2	309.5
40°	279.1	284.8	291.0	297.6	299.4
42.5°	265.9	272.5	280.0	287.5	288.8
45°	252.2	260.6	269.0	276.5	278.7
47.5°	239.4	247.8	257.5	265.0	267.6
50°	225.3	235.0	244.7	253.5	256.2
52.5°	211.2	220.9	232.4	241.2	243.8
55°	197.5	206.8	220.0	228.8	231.5
57.5°	182.1	193.6	206.4	216.9	219.1
60°	167.1	178.6	193.1	203.3	206.8
62.5°	152.6	165.3	179.9	190.0	193.6
65°	136.7	150.8	165.8	176.8	180.3
67.5°	121.7	136.7	152.6	163.6	167.1
70°	106.3	121.3	138.0	149.9	153.0
72.5°	91.3	106.7	124.8	136.2	139.8
75°	75.8	92.2	110.7	123.0	127.0
77.5°	61.3	78.5	97.9	110.2	114.6
80°	48.1	65.7	85.1	98.3	101.9
82.5°	34.8	53.4	72.8	86.4	90.4
85°	23.4	41.9	61.7	75.0	79.4
87.5°	14.6	32.6	52.0	64.8	68.8
90°	7.1	24.7	43.7	56.4	60.0
92.5°	6.6	22.0	41.0	53.4	56.9
95°	5.7	20.3	38.4	50.3	54.2
97.5°	5.3	18.1	36.2	47.6	51.6
100°	4.9	16.3	33.5	45.4	48.5
102.5°	4.9	14.6	31.3	42.8	46.3
105°	4.0	12.8	29.1	40.1	43.7
107.5°	4.0	11.5	26.9	37.9	41.0
110°	3.5	9.7	25.1	35.3	38.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.1	8.4	22.9	32.6	36.2
115°	2.6	6.6	20.7	30.4	33.5
117.5°	2.6	5.3	18.5	27.8	31.3
120°	2.2	3.5	16.3	25.1	28.7
122.5°	2.2	2.2	14.1	22.9	26.0
125°	1.8	1.3	12.3	20.7	23.4
127.5°	1.8	1.3	10.1	18.1	21.2
130°	1.3	0.9	7.9	15.9	18.5
132.5°	1.3	0.9	6.2	13.7	16.3
135°	0.9	0.9	4.0	11.0	13.7
137.5°	0.9	0.4	2.2	8.8	11.0
140°	0.9	0.4	0.9	6.6	8.8
142.5°	0.4	0.4	0.0	4.9	6.6
145°	0.4	0.0	0.0	2.6	4.4
147.5°	0.4	0.0	0.0	0.4	2.2
150°	0.4	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)