

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: P242668

Luminaire Tested: **S124DR-S350D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242668
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-S350D830-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1253.0 lumens
Efficiency: N/A
Efficacy: 108.0 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

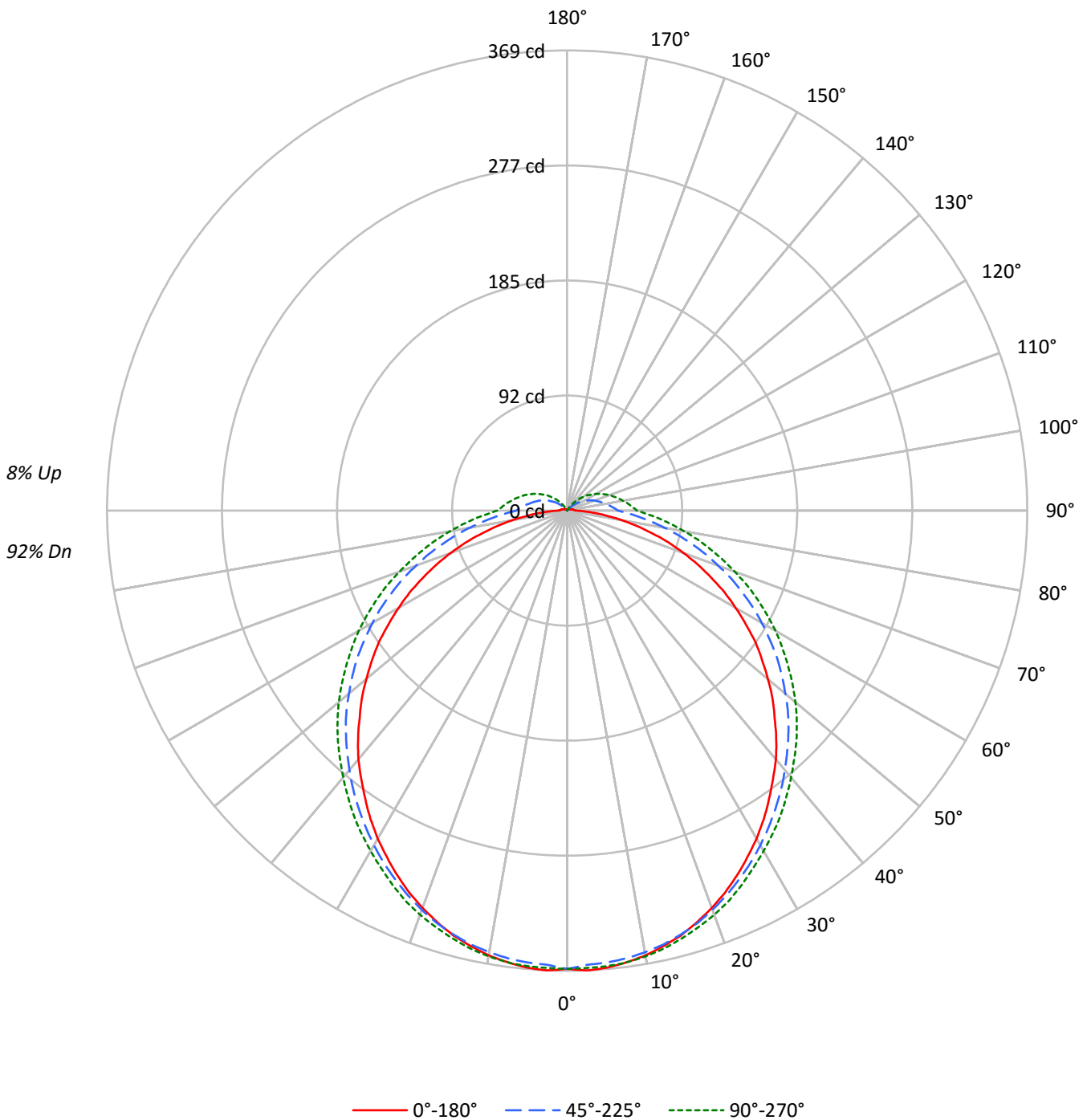
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3267	3267	3267
5°	3277	3189	3197
10°	3257	3134	3129
15°	3227	3071	3051
20°	3183	3001	2974
25°	3133	2923	2890
30°	3079	2846	2804
35°	3018	2767	2729
40°	2969	2691	2649
45°	2897	2621	2581
50°	2836	2541	2509
55°	2773	2466	2425
60°	2674	2369	2347
65°	2565	2264	2252
70°	2434	2146	2142
75°	2251	2015	2040
80°	2049	1886	1938
85°	1785	1765	1867



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.8	2.8
10°-20°	99.8	8.0
20°-30°	150.9	12.0
30°-40°	182.5	14.6
40°-50°	192.9	15.4
50°-60°	181.6	14.5
60°-70°	150.7	12.0
70°-80°	105.7	8.4
80°-90°	59.6	4.8
90°-100°	35.5	2.8
100°-110°	26.3	2.1
110°-120°	17.6	1.4
120°-130°	9.9	0.8
130°-140°	4.3	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°	285.4	22.8
0°-40°	467.9	37.3
0°-60°	842.5	67.2
0°-90°	1158.5	92.5
90°-120°	79.4	6.3
90°-150°	94.5	7.5
90°-180°	94.0	7.5
0°-180°	1253.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	368	368	368	368	368	
5°	368	367	364	367	367	35
15°	353	353	352	356	355	99
25°	323	325	326	331	331	149
35°	282	287	291	297	298	177
45°	235	243	251	258	260	182
55°	184	193	205	214	216	164
65°	128	141	155	165	168	126
75°	71	86	103	115	118	75
85°	22	39	58	70	74	23
90°	7	23	41	53	56	5
95°	5	19	36	47	51	4
105°	4	12	27	37	41	4
115°	2	6	19	28	31	3
125°	2	1	12	19	22	2
135°	1	1	4	10	13	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°	367.5	367.5	367.5	367.5	367.5
2.5°	369.1	367.9	364.6	367.5	367.1
5°	367.9	366.7	363.8	367.1	366.7
7.5°	365.4	364.6	362.2	365.9	365.4
10°	362.2	361.7	359.7	363.4	363.0
12.5°	357.6	357.6	356.4	359.7	359.7
15°	352.7	353.1	351.9	355.6	355.2
17.5°	346.1	347.3	346.9	350.6	350.2
20°	339.1	340.3	340.8	344.9	344.9
22.5°	331.3	332.9	333.8	337.9	338.7
25°	322.6	325.1	326.3	330.9	331.3
27.5°	313.2	316.9	318.5	322.6	323.1
30°	303.7	307.0	309.9	314.4	315.2
32.5°	293.4	297.5	300.8	306.2	307.0
35°	282.3	287.3	291.4	297.1	298.4
37.5°	271.2	277.0	281.9	287.7	288.9
40°	260.5	265.9	271.6	277.8	279.4
42.5°	248.2	254.3	261.3	268.3	269.6
45°	235.4	243.2	251.0	258.0	260.1
47.5°	223.5	231.3	240.3	247.3	249.8
50°	210.3	219.3	228.4	236.6	239.1
52.5°	197.1	206.2	216.9	225.1	227.6
55°	184.4	193.0	205.4	213.6	216.1
57.5°	170.0	180.7	192.6	202.5	204.5
60°	156.0	166.7	180.3	189.7	193.0
62.5°	142.4	154.3	167.9	177.4	180.7
65°	127.6	140.7	154.7	165.0	168.3
67.5°	113.6	127.6	142.4	152.7	156.0
70°	99.2	113.2	128.8	139.9	142.8
72.5°	85.2	99.6	116.5	127.2	130.5
75°	70.8	86.0	103.3	114.8	118.5
77.5°	57.2	73.3	91.4	102.9	107.0
80°	44.9	61.3	79.4	91.8	95.1
82.5°	32.5	49.8	67.9	80.7	84.4
85°	21.8	39.1	57.6	70.0	74.1
87.5°	13.6	30.5	48.6	60.5	64.2
90°	6.6	23.0	40.7	52.7	56.0
92.5°	6.2	20.6	38.3	49.8	53.1
95°	5.3	18.9	35.8	46.9	50.6
97.5°	4.9	16.9	33.7	44.4	48.1
100°	4.5	15.2	31.3	42.4	45.3
102.5°	4.5	13.6	29.2	39.9	43.2
105°	3.7	11.9	27.2	37.4	40.7
107.5°	3.7	10.7	25.1	35.4	38.3
110°	3.3	9.1	23.5	32.9	36.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.9	7.8	21.4	30.5	33.7
115°	2.5	6.2	19.3	28.4	31.3
117.5°	2.5	4.9	17.3	25.9	29.2
120°	2.1	3.3	15.2	23.5	26.7
122.5°	2.1	2.1	13.2	21.4	24.3
125°	1.6	1.2	11.5	19.3	21.8
127.5°	1.6	1.2	9.5	16.9	19.8
130°	1.2	0.8	7.4	14.8	17.3
132.5°	1.2	0.8	5.8	12.8	15.2
135°	0.8	0.8	3.7	10.3	12.8
137.5°	0.8	0.4	2.1	8.2	10.3
140°	0.8	0.4	0.8	6.2	8.2
142.5°	0.4	0.4	0.0	4.5	6.2
145°	0.4	0.0	0.0	2.5	4.1
147.5°	0.4	0.0	0.0	0.4	2.1
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)