

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: P242682

Luminaire Tested: **S124DR-S350D930-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242682
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-S350D930-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1083.8 lumens
Efficiency: N/A
Efficacy: 93.4 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

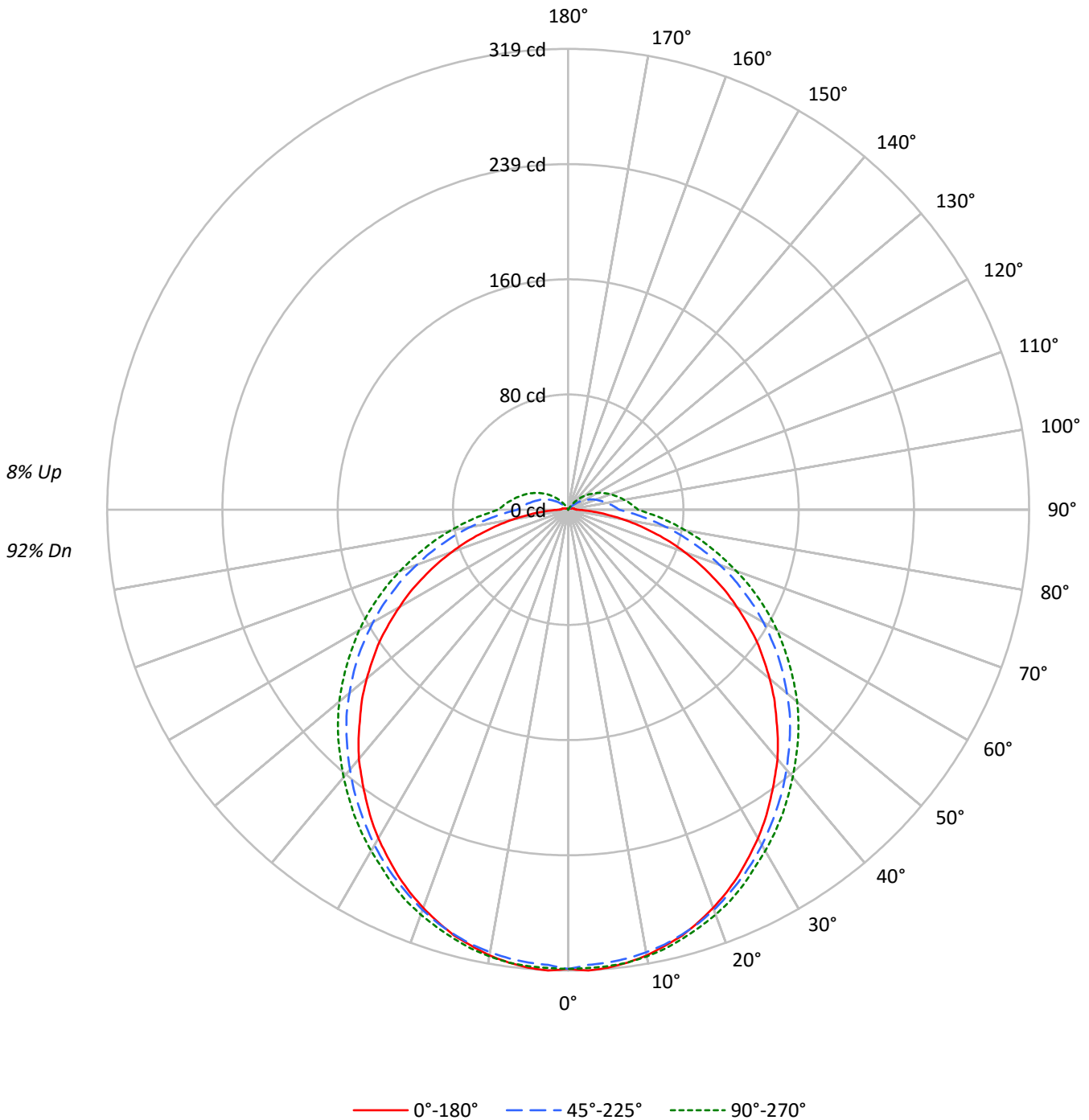
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2826	2826	2826
5°	2834	2759	2766
10°	2817	2711	2707
15°	2792	2656	2638
20°	2753	2596	2572
25°	2710	2529	2500
30°	2663	2462	2426
35°	2611	2393	2360
40°	2568	2328	2292
45°	2506	2267	2233
50°	2453	2199	2170
55°	2398	2132	2098
60°	2312	2049	2031
65°	2220	1958	1948
70°	2105	1856	1852
75°	1946	1744	1764
80°	1770	1631	1675
85°	1547	1526	1615



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.1	2.8
10°-20°	86.3	8.0
20°-30°	130.5	12.0
30°-40°	157.9	14.6
40°-50°	166.9	15.4
50°-60°	157.1	14.5
60°-70°	130.3	12.0
70°-80°	91.5	8.4
80°-90°	51.6	4.8
90°-100°	30.7	2.8
100°-110°	22.7	2.1
110°-120°	15.3	1.4
120°-130°	8.6	0.8
130°-140°	3.7	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°	246.9	22.8
0°-40°	404.8	37.3
0°-60°	728.7	67.2
0°-90°	1002.1	92.5
90°-120°	68.7	6.3
90°-150°	81.7	7.5
90°-180°	82.0	7.6
0°-180°	1083.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	318	318	318	318	318	
5°	318	317	315	318	317	30
15°	305	305	304	308	307	86
25°	279	281	282	286	287	129
35°	244	248	252	257	258	153
45°	204	210	217	223	225	157
55°	160	167	178	185	187	142
65°	110	122	134	143	146	109
75°	61	74	89	99	102	65
85°	19	34	50	60	64	20
90°	6	20	35	46	48	4
95°	5	16	31	41	44	4
105°	3	10	24	32	35	4
115°	2	5	17	25	27	2
125°	1	1	10	17	19	1
135°	1	1	3	9	11	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°	317.9	317.9	317.9	317.9	317.9
2.5°	319.3	318.2	315.4	317.9	317.5
5°	318.2	317.2	314.7	317.5	317.2
7.5°	316.1	315.4	313.3	316.5	316.1
10°	313.3	312.9	311.1	314.3	314.0
12.5°	309.3	309.3	308.3	311.1	311.1
15°	305.1	305.4	304.4	307.6	307.2
17.5°	299.4	300.4	300.1	303.3	302.9
20°	293.3	294.4	294.8	298.3	298.3
22.5°	286.6	288.0	288.7	292.3	293.0
25°	279.1	281.2	282.3	286.2	286.6
27.5°	270.9	274.1	275.5	279.1	279.4
30°	262.7	265.6	268.1	272.0	272.7
32.5°	253.8	257.4	260.2	264.8	265.6
35°	244.2	248.5	252.0	257.0	258.1
37.5°	234.6	239.6	243.8	248.8	249.9
40°	225.3	230.0	234.9	240.3	241.7
42.5°	214.7	220.0	226.0	232.1	233.2
45°	203.6	210.4	217.1	223.2	225.0
47.5°	193.3	200.1	207.9	213.9	216.1
50°	181.9	189.7	197.6	204.7	206.8
52.5°	170.5	178.3	187.6	194.7	196.9
55°	159.5	167.0	177.6	184.8	186.9
57.5°	147.0	156.3	166.6	175.1	176.9
60°	134.9	144.2	155.9	164.1	167.0
62.5°	123.2	133.5	145.2	153.4	156.3
65°	110.4	121.7	133.8	142.7	145.6
67.5°	98.3	110.4	123.2	132.1	134.9
70°	85.8	97.9	111.4	121.0	123.5
72.5°	73.7	86.1	100.7	110.0	112.8
75°	61.2	74.4	89.4	99.3	102.5
77.5°	49.5	63.4	79.0	89.0	92.6
80°	38.8	53.0	68.7	79.4	82.2
82.5°	28.1	43.1	58.7	69.8	73.0
85°	18.9	33.8	49.8	60.5	64.1
87.5°	11.7	26.3	42.0	52.3	55.5
90°	5.7	19.9	35.2	45.6	48.4
92.5°	5.3	17.8	33.1	43.1	45.9
95°	4.6	16.4	31.0	40.6	43.8
97.5°	4.3	14.6	29.2	38.4	41.6
100°	3.9	13.2	27.1	36.7	39.2
102.5°	3.9	11.7	25.3	34.5	37.4
105°	3.2	10.3	23.5	32.4	35.2
107.5°	3.2	9.3	21.7	30.6	33.1
110°	2.8	7.8	20.3	28.5	31.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.5	6.8	18.5	26.3	29.2
115°	2.1	5.3	16.7	24.6	27.1
117.5°	2.1	4.3	15.0	22.4	25.3
120°	1.8	2.8	13.2	20.3	23.1
122.5°	1.8	1.8	11.4	18.5	21.0
125°	1.4	1.1	10.0	16.7	18.9
127.5°	1.4	1.1	8.2	14.6	17.1
130°	1.1	0.7	6.4	12.8	15.0
132.5°	1.1	0.7	5.0	11.0	13.2
135°	0.7	0.7	3.2	8.9	11.0
137.5°	0.7	0.4	1.8	7.1	8.9
140°	0.7	0.4	0.7	5.3	7.1
142.5°	0.4	0.4	0.0	3.9	5.3
145°	0.4	0.0	0.0	2.1	3.6
147.5°	0.4	0.0	0.0	0.4	1.8
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)