

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: P242491

Luminaire Tested: **S123DR-S340D927-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242491
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DR-S340D927-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1067.1 lumens
Efficiency: N/A
Efficacy: 92.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

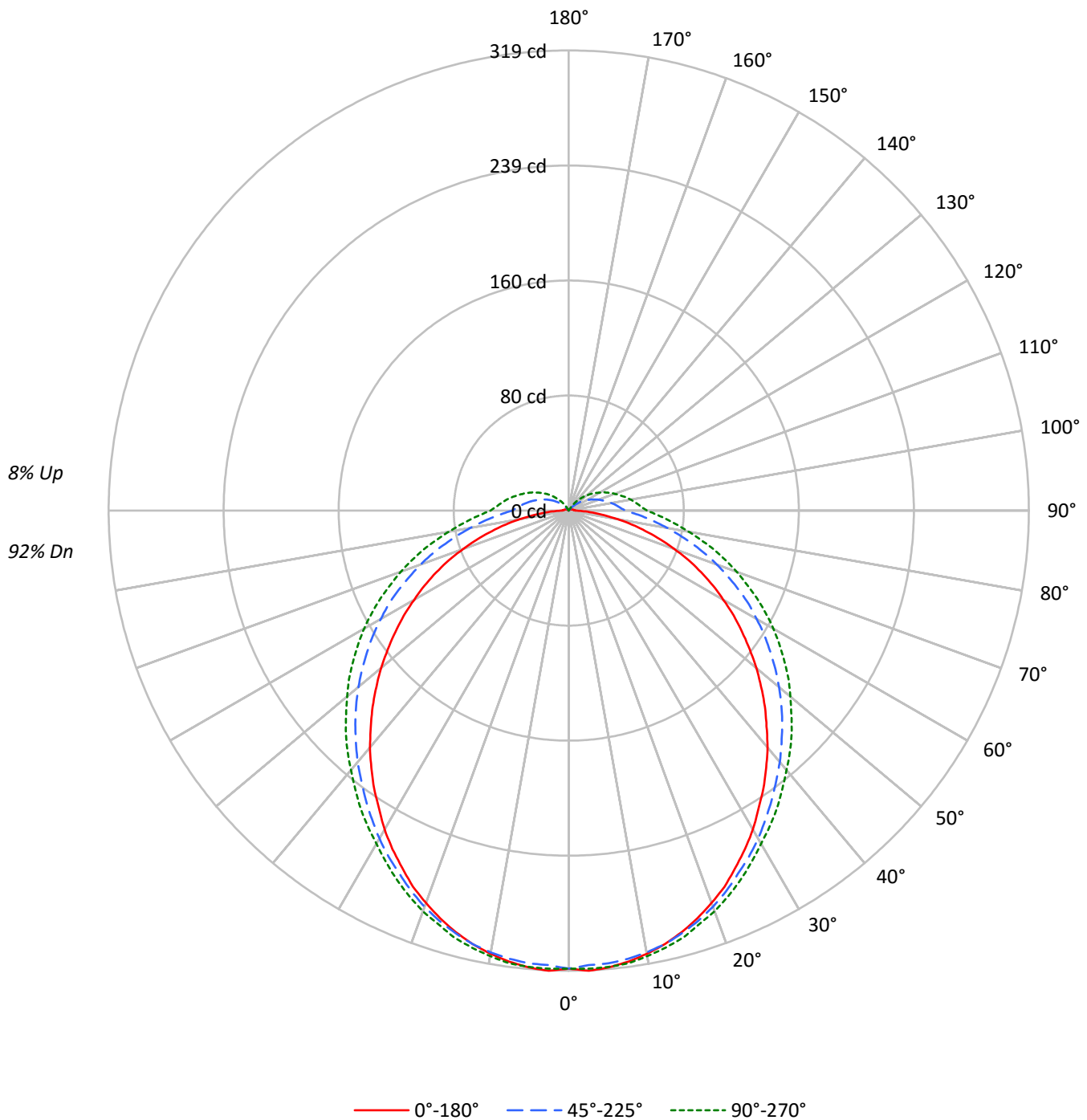
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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			
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	113	113	113	113	106	106	106	100	100	100	94	94	94	92		
1	105	100	95	90	102	97	92	88	91	87	84	85	82	80	80	78	76	73		
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63	60		
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52	50		
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45	42		
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39	36		
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34	32		
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	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	28	24	22		
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22	20		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3848	3848	3848
5°	3861	3745	3744
10°	3826	3652	3628
15°	3776	3547	3505
20°	3705	3430	3368
25°	3618	3296	3227
30°	3529	3175	3085
35°	3429	3047	2970
40°	3332	2931	2848
45°	3227	2820	2748
50°	3122	2708	2639
55°	3008	2594	2540
60°	2893	2479	2438
65°	2777	2356	2319
70°	2603	2216	2195
75°	2384	2056	2068
80°	2128	1898	1924
85°	1887	1779	1829

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.1	2.8
10°-20°	85.9	8.0
20°-30°	128.4	12.0
30°-40°	153.3	14.4
40°-50°	160.4	15.0
50°-60°	150.5	14.1
60°-70°	125.7	11.8
70°-80°	89.9	8.4
80°-90°	53.5	5.0
90°-100°	33.6	3.1
100°-110°	24.7	2.3
110°-120°	16.5	1.5
120°-130°	9.4	0.9
130°-140°	4.2	0.4
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°	244.4	22.9
0°-40°	397.7	37.3
0°-60°	708.6	66.4
0°-90°	977.8	91.6
90°-120°	74.8	7.0
90°-150°	89.3	8.4
90°-180°	89.0	8.3
0°-180°	1067.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	318	318	318	318	318	
5°	318	317	315	318	318	30
15°	303	304	303	307	306	85
25°	273	277	278	282	282	126
35°	235	241	245	250	252	147
45°	192	201	209	216	219	148
55°	147	158	170	180	183	131
65°	101	115	130	140	144	100
75°	55	71	88	100	104	59
85°	17	34	53	64	68	17
90°	4	21	39	51	54	3
95°	4	17	34	45	48	3
105°	3	11	26	36	39	3
115°	2	6	18	27	29	2
125°	1	1	11	18	21	1
135°	1	0	4	10	12	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°	317.5	317.5	317.5	317.5	317.5
2.5°	319.3	318.2	315.4	318.2	317.9
5°	317.9	317.2	315.1	317.9	317.5
7.5°	315.4	315.4	313.4	316.8	316.5
10°	312.0	312.7	311.0	314.4	313.7
12.5°	307.8	308.9	307.8	311.0	310.3
15°	302.6	303.7	303.3	306.8	306.5
17.5°	296.4	298.5	298.2	301.3	300.6
20°	289.5	291.6	292.3	295.4	295.7
22.5°	282.2	284.3	285.4	289.5	289.2
25°	273.2	276.7	277.7	282.2	282.2
27.5°	264.6	268.4	270.5	274.3	274.6
30°	255.3	259.8	262.5	266.7	266.7
32.5°	244.9	250.1	253.9	258.4	259.4
35°	235.2	240.7	245.2	250.4	251.8
37.5°	224.8	231.1	236.2	242.1	243.2
40°	214.4	220.7	227.6	233.5	234.9
42.5°	203.0	211.0	218.3	224.8	226.9
45°	192.3	200.6	209.3	215.8	218.6
47.5°	180.9	190.2	199.9	207.2	209.3
50°	169.8	179.5	190.2	198.2	200.6
52.5°	158.1	168.4	180.6	188.9	192.0
55°	146.7	158.1	170.5	179.9	182.6
57.5°	135.6	147.3	160.8	170.2	173.3
60°	123.8	136.3	150.5	160.1	163.9
62.5°	112.8	125.6	140.8	150.5	153.9
65°	101.3	114.8	130.1	140.4	143.9
67.5°	89.9	104.1	119.3	130.7	133.5
70°	77.8	92.7	109.3	120.4	123.8
72.5°	66.8	81.6	98.9	110.3	113.8
75°	55.0	71.3	88.5	100.0	104.1
77.5°	45.0	61.2	78.5	90.6	93.7
80°	34.2	51.2	69.2	80.9	84.4
82.5°	24.9	42.2	60.5	72.3	75.7
85°	16.9	34.2	52.6	64.3	67.8
87.5°	10.4	27.7	45.3	57.1	60.5
90°	4.5	21.4	39.1	50.8	54.3
92.5°	4.2	19.0	36.3	47.7	50.8
95°	3.8	17.3	34.2	45.0	48.4
97.5°	3.5	15.9	32.2	42.5	46.0
100°	3.1	14.2	30.1	40.1	43.6
102.5°	2.8	12.5	28.0	37.7	41.2
105°	2.8	11.1	25.9	35.6	38.7
107.5°	2.4	9.7	23.9	33.2	36.3
110°	2.1	8.3	22.1	31.1	33.9

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.1	6.9	20.1	28.7	31.8
115°	1.7	5.9	18.3	26.6	29.4
117.5°	1.7	4.5	16.3	24.6	27.3
120°	1.4	3.1	14.5	22.5	24.9
122.5°	1.4	2.1	12.8	20.4	22.8
125°	1.0	1.0	11.1	18.3	20.8
127.5°	1.0	0.7	9.3	16.3	18.7
130°	1.0	0.7	7.6	14.2	16.3
132.5°	0.7	0.7	5.9	12.1	14.5
135°	0.7	0.3	4.2	10.4	12.1
137.5°	0.7	0.3	2.8	8.3	10.0
140°	0.3	0.3	1.4	6.6	8.3
142.5°	0.3	0.0	0.0	4.5	6.2
145°	0.3	0.0	0.0	2.8	4.2
147.5°	0.0	0.0	0.0	1.0	2.4
150°	0.0	0.0	0.0	0.0	0.7
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)