

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: P243371

Luminaire Tested: **S123DR-H560D930-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243371
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-54)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DR-H560D930-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1769.2 lumens
Efficiency: N/A
Efficacy: 102.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

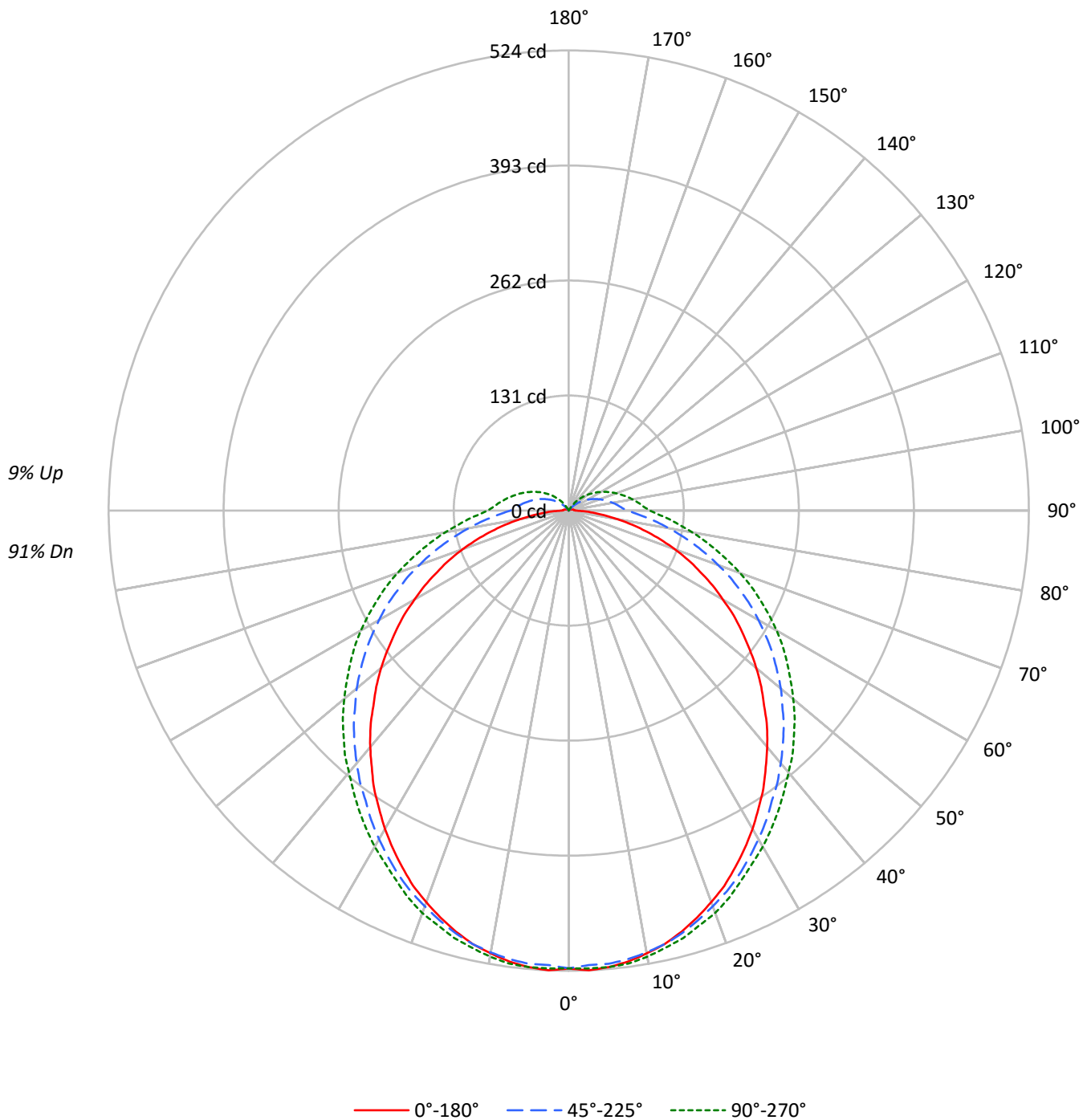
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	91		
1	105	100	95	90	101	96	92	88	91	87	84	85	82	80	80	78	76	73		
2	95	86	79	72	91	83	77	71	78	73	68	74	69	65	69	66	62	60		
3	86	75	66	60	83	73	65	58	69	62	56	65	59	54	61	56	52	50		
4	79	66	57	50	76	64	56	49	61	53	48	57	51	46	54	49	45	42		
5	72	59	50	43	70	57	49	42	54	47	41	51	45	40	49	43	39	36		
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34	31		
7	62	48	39	33	60	47	38	32	44	37	32	42	36	31	40	34	30	28		
8	57	44	35	29	55	43	34	29	41	33	28	39	32	27	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	23	35	28	23	33	27	22	32	26	22	20		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6319	6319	6319
5°	6337	6156	6153
10°	6278	6000	5966
15°	6192	5829	5762
20°	6073	5626	5554
25°	5937	5438	5314
30°	5786	5226	5112
35°	5634	5012	4911
40°	5466	4838	4719
45°	5281	4664	4557
50°	5126	4489	4390
55°	4937	4309	4226
60°	4737	4110	4067
65°	4529	3897	3871
70°	4293	3669	3680
75°	3936	3421	3455
80°	3484	3177	3260
85°	3092	2979	3107

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.5	2.8
10°-20°	141.1	8.0
20°-30°	211.3	11.9
30°-40°	252.8	14.3
40°-50°	265.1	15.0
50°-60°	249.3	14.1
60°-70°	208.6	11.8
70°-80°	149.7	8.5
80°-90°	89.7	5.1
90°-100°	56.8	3.2
100°-110°	41.9	2.4
110°-120°	28.0	1.6
120°-130°	16.2	0.9
130°-140°	7.5	0.4
140°-150°	1.7	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	401.9	22.7
0°-40°	654.7	37.0
0°-60°	1169.1	66.1
0°-90°	1617.1	91.4
90°-120°	126.8	7.2
90°-150°	152.1	8.6
90°-180°	152.0	8.6
0°-180°	1769.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	521	521	521	521	521	
5°	522	521	518	522	522	49
15°	496	500	498	505	504	140
25°	448	454	458	465	465	207
35°	386	396	403	414	416	241
45°	315	330	346	358	362	243
55°	241	261	283	298	304	216
65°	165	190	215	234	240	164
75°	91	118	147	167	174	96
85°	28	56	88	108	115	28
90°	8	36	66	86	92	5
95°	6	29	58	76	82	5
105°	4	19	44	60	65	5
115°	3	10	31	45	50	3
125°	2	2	19	31	35	2
135°	1	0	8	18	21	1
145°	0	0	0	5	8	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°	521.3	521.3	521.3	521.3	521.3
2.5°	524.0	522.3	518.0	522.9	521.8
5°	521.8	521.3	518.0	522.3	521.8
7.5°	518.0	518.0	515.3	520.2	520.2
10°	512.0	513.6	510.9	516.4	515.8
12.5°	505.5	507.7	505.5	511.5	509.8
15°	496.3	499.5	498.4	505.0	503.9
17.5°	485.9	489.7	489.2	495.7	495.2
20°	474.5	479.4	479.4	485.9	487.6
22.5°	462.6	468.0	469.6	476.1	477.2
25°	448.4	454.4	458.2	465.3	464.7
27.5°	433.7	440.8	445.2	452.8	452.8
30°	418.5	426.7	432.1	440.3	441.9
32.5°	402.2	412.0	418.5	427.2	429.4
35°	386.5	395.7	403.3	413.6	416.4
37.5°	368.5	379.9	390.3	401.1	402.8
40°	351.7	364.2	375.6	387.0	389.2
42.5°	334.3	347.3	360.9	372.3	377.2
45°	314.7	330.5	346.2	358.2	362.5
47.5°	297.3	313.1	329.9	344.1	349.0
50°	278.8	295.1	315.3	328.8	333.7
52.5°	259.8	277.8	298.9	313.6	318.5
55°	240.8	260.9	283.2	298.4	303.8
57.5°	222.9	243.0	266.3	283.2	289.2
60°	202.7	225.0	249.5	266.9	273.4
62.5°	184.8	207.6	233.2	250.6	257.1
65°	165.2	189.7	215.2	234.3	240.2
67.5°	147.3	171.2	198.9	218.0	224.5
70°	128.3	153.3	181.0	200.6	207.6
72.5°	109.3	135.9	164.2	184.3	190.2
75°	90.8	118.5	147.3	167.4	173.9
77.5°	73.4	101.1	131.0	151.1	158.2
80°	56.0	84.8	115.8	135.9	143.0
82.5°	40.8	70.1	101.6	121.2	127.7
85°	27.7	56.5	88.1	108.2	115.2
87.5°	16.3	45.7	76.1	96.2	102.2
90°	7.6	35.9	66.3	86.4	92.4
92.5°	7.1	32.1	61.4	80.4	86.4
95°	6.0	29.4	57.6	76.1	82.1
97.5°	6.0	26.6	54.4	72.3	77.7
100°	5.4	23.9	51.1	67.9	73.4
102.5°	4.9	21.2	47.3	64.1	69.6
105°	4.3	19.0	44.0	60.3	65.2
107.5°	3.8	16.3	40.8	56.5	61.4
110°	3.8	14.1	37.5	52.7	57.6

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.3	12.0	34.2	48.9	53.8
115°	2.7	9.8	31.0	45.1	50.0
117.5°	2.7	7.6	27.7	41.9	46.2
120°	2.7	6.0	25.0	38.0	42.4
122.5°	2.2	3.8	22.3	34.8	39.1
125°	2.2	2.2	19.0	31.0	35.3
127.5°	1.6	1.1	16.3	27.7	31.5
130°	1.6	1.1	13.6	24.5	28.3
132.5°	1.1	1.1	10.9	21.2	25.0
135°	1.1	0.5	8.2	17.9	21.2
137.5°	1.1	0.5	5.4	14.7	17.9
140°	0.5	0.5	2.7	11.4	14.7
142.5°	0.5	0.0	0.5	8.7	11.4
145°	0.5	0.0	0.0	5.4	7.6
147.5°	0.5	0.0	0.0	2.7	4.9
150°	0.5	0.0	0.0	0.0	1.6
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)