

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: P242497

Luminaire Tested: **S123DR-S560D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242497
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-S560D830-X4F0-XX-UDD-D-W
Description: DEFINE 3 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: 2088.0 lumens
Efficiency: N/A
Efficacy: 111.1 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

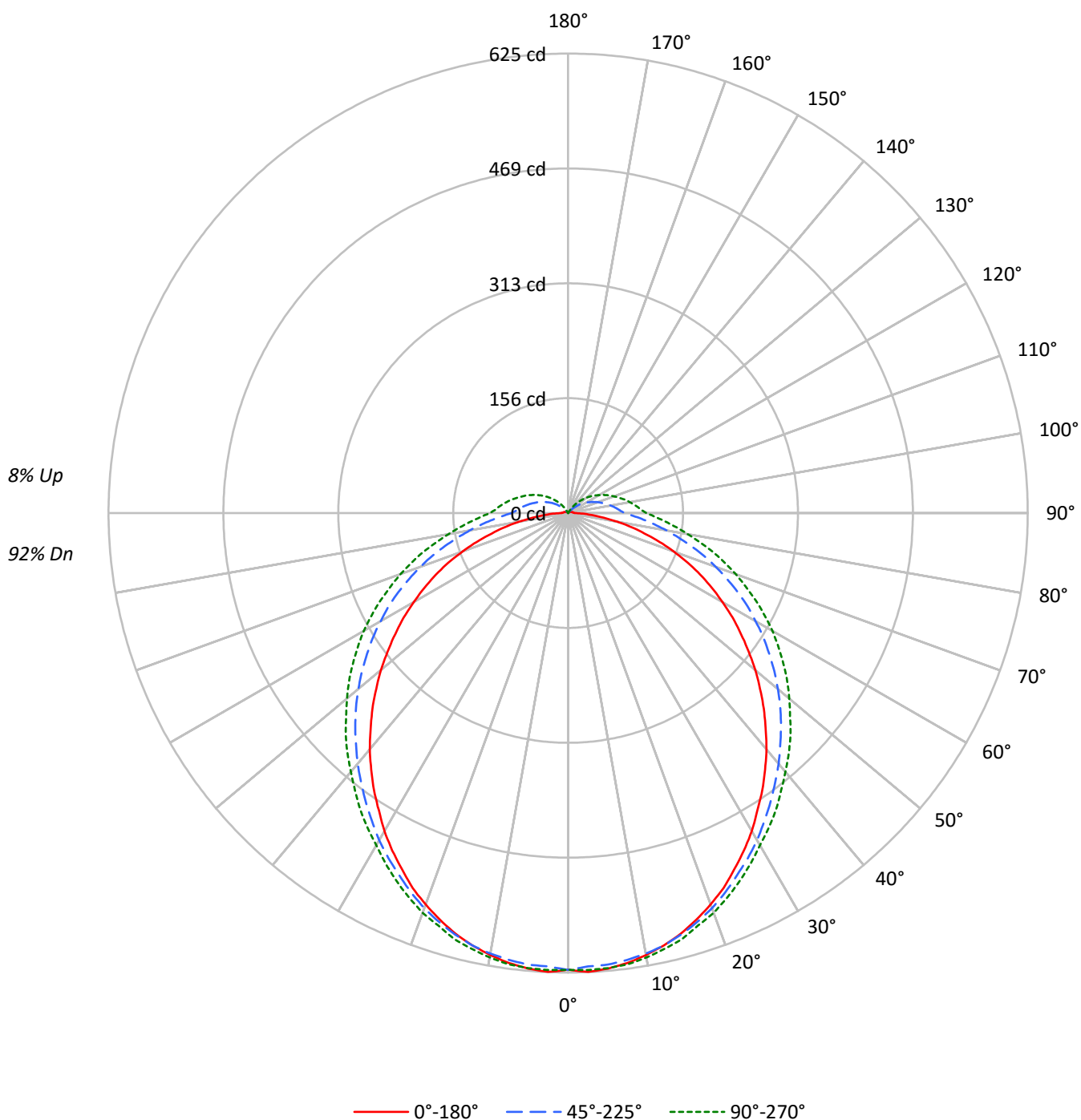
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	7531	7531	7531
5°	7554	7327	7327
10°	7485	7145	7100
15°	7389	6941	6856
20°	7251	6712	6591
25°	7079	6449	6315
30°	6905	6213	6036
35°	6709	5963	5811
40°	6522	5735	5571
45°	6315	5516	5377
50°	6110	5299	5164
55°	5884	5076	4970
60°	5663	4850	4772
65°	5437	4608	4536
70°	5096	4336	4296
75°	4665	4025	4047
80°	4168	3715	3763
85°	3706	3480	3577

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.9	2.8
10°-20°	168.0	8.0
20°-30°	251.2	12.0
30°-40°	300.0	14.4
40°-50°	313.9	15.0
50°-60°	294.5	14.1
60°-70°	246.0	11.8
70°-80°	175.9	8.4
80°-90°	104.7	5.0
90°-100°	65.8	3.1
100°-110°	48.4	2.3
110°-120°	32.3	1.5
120°-130°	18.4	0.9
130°-140°	8.3	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°	478.2	22.9
0°-40°	778.2	37.3
0°-60°	1386.5	66.4
0°-90°	1913.2	91.6
90°-120°	146.4	7.0
90°-150°	174.8	8.4
90°-180°	175.0	8.4
0°-180°	2088.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	621	621	621	621	621	
5°	622	621	616	622	621	59
15°	592	594	594	600	600	167
25°	535	541	543	552	552	246
35°	460	471	480	490	493	288
45°	376	392	409	422	428	290
55°	287	309	334	352	357	257
65°	198	225	254	275	282	196
75°	108	139	173	196	204	115
85°	33	67	103	126	133	34
90°	9	42	76	100	106	6
95°	7	34	67	88	95	6
105°	5	22	51	70	76	5
115°	3	12	36	52	58	4
125°	2	2	22	36	41	2
135°	1	1	8	20	24	1
145°	1	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°	621.3	621.3	621.3	621.3	621.3
2.5°	624.7	622.6	617.2	622.6	622.0
5°	622.0	620.6	616.5	622.0	621.3
7.5°	617.2	617.2	613.2	619.9	619.2
10°	610.4	611.8	608.4	615.2	613.8
12.5°	602.3	604.4	602.3	608.4	607.1
15°	592.2	594.2	593.5	600.3	599.6
17.5°	580.0	584.1	583.4	589.5	588.1
20°	566.5	570.5	571.9	578.0	578.6
22.5°	552.2	556.3	558.3	566.5	565.8
25°	534.6	541.4	543.4	552.2	552.2
27.5°	517.7	525.2	529.2	536.7	537.4
30°	499.5	508.3	513.7	521.8	521.8
32.5°	479.2	489.3	496.7	505.5	507.6
35°	460.2	471.0	479.8	490.0	492.7
37.5°	439.9	452.1	462.2	473.7	475.8
40°	419.6	431.8	445.3	456.8	459.5
42.5°	397.3	412.8	427.0	439.9	444.0
45°	376.3	392.5	409.4	422.3	427.7
47.5°	354.0	372.2	391.2	405.4	409.4
50°	332.3	351.2	372.2	387.8	392.5
52.5°	309.3	329.6	353.3	369.5	375.6
55°	287.0	309.3	333.6	351.9	357.3
57.5°	265.3	288.3	314.7	333.0	339.1
60°	242.3	266.6	294.4	313.3	320.8
62.5°	220.6	245.7	275.4	294.4	301.2
65°	198.3	224.7	254.5	274.8	281.5
67.5°	176.0	203.7	233.5	255.8	261.2
70°	152.3	181.4	213.9	235.5	242.3
72.5°	130.6	159.7	193.6	215.9	222.7
75°	107.6	139.4	173.3	195.6	203.7
77.5°	88.0	119.8	153.6	177.3	183.4
80°	67.0	100.2	135.4	158.4	165.1
82.5°	48.7	82.6	118.4	141.4	148.2
85°	33.2	67.0	102.9	125.9	132.6
87.5°	20.3	54.1	88.7	111.7	118.4
90°	8.8	42.0	76.5	99.5	106.3
92.5°	8.1	37.2	71.1	93.4	99.5
95°	7.4	33.8	67.0	88.0	94.7
97.5°	6.8	31.1	62.9	83.2	90.0
100°	6.1	27.7	58.9	78.5	85.3
102.5°	5.4	24.4	54.8	73.8	80.5
105°	5.4	21.7	50.8	69.7	75.8
107.5°	4.7	18.9	46.7	65.0	71.1
110°	4.1	16.2	43.3	60.9	66.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.1	13.5	39.3	56.2	62.3
115°	3.4	11.5	35.9	52.1	57.5
117.5°	3.4	8.8	31.8	48.1	53.5
120°	2.7	6.1	28.4	44.0	48.7
122.5°	2.7	4.1	25.0	39.9	44.7
125°	2.0	2.0	21.7	35.9	40.6
127.5°	2.0	1.4	18.3	31.8	36.5
130°	2.0	1.4	14.9	27.7	31.8
132.5°	1.4	1.4	11.5	23.7	28.4
135°	1.4	0.7	8.1	20.3	23.7
137.5°	1.4	0.7	5.4	16.2	19.6
140°	0.7	0.7	2.7	12.9	16.2
142.5°	0.7	0.0	0.0	8.8	12.2
145°	0.7	0.0	0.0	5.4	8.1
147.5°	0.0	0.0	0.0	2.0	4.7
150°	0.0	0.0	0.0	0.0	1.4
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)