

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: P333971

Luminaire Tested: **S123DW-S560D930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333971  
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: S123DW-S560D930-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER  
PENDANT/SURFACE/WALL MOUNT, 560 LUMENS PER FOOT  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

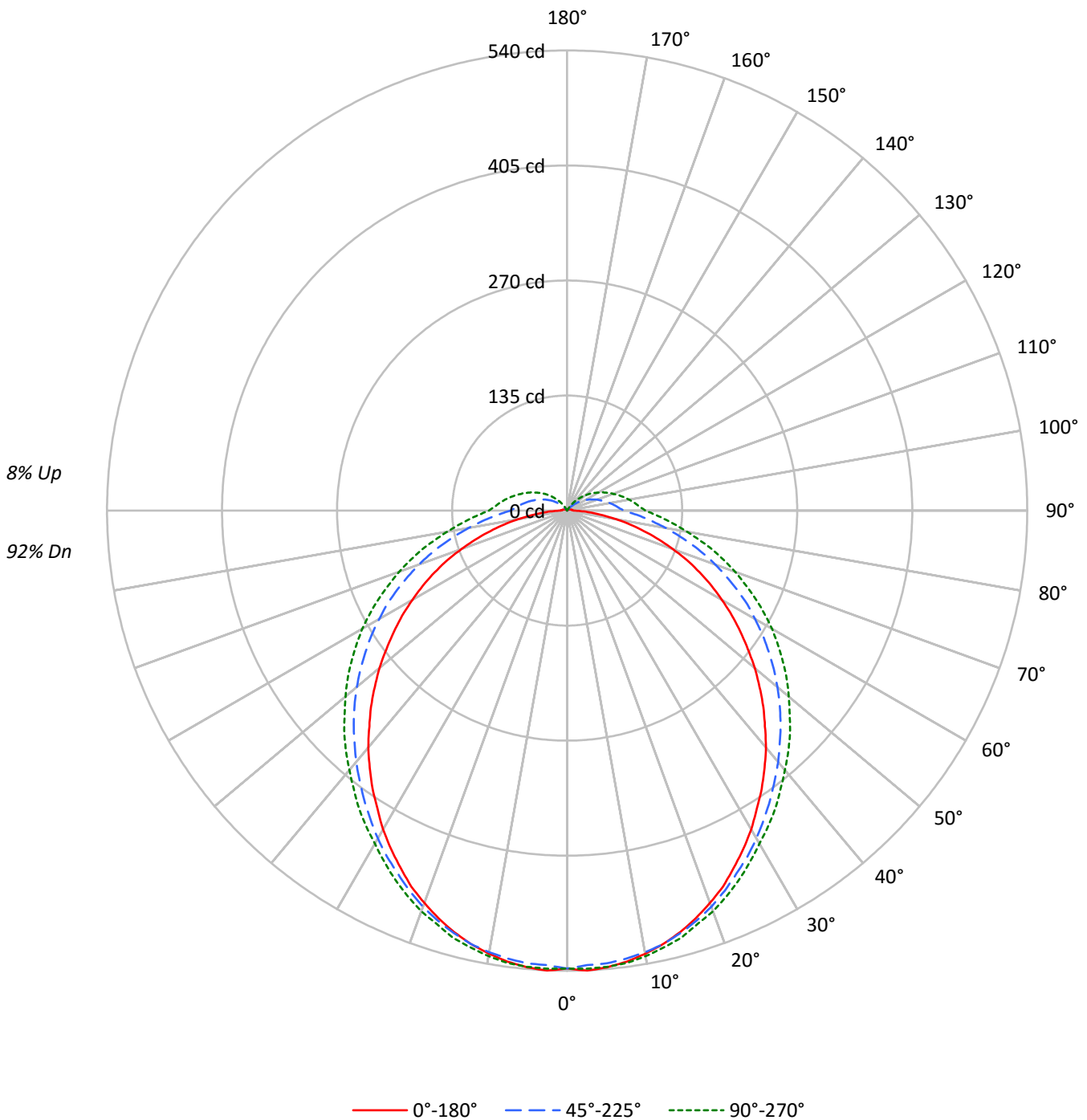
Lumens per Lamp: N/A  
Luminaire Lumens: 1806.1 lumens  
Efficiency: N/A  
Efficacy: 96.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	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°	5785	5785	5785
5°	5813	5762	5807
10°	5771	5752	5804
15°	5708	5721	5780
20°	5613	5667	5733
25°	5493	5583	5673
30°	5369	5522	5609
35°	5231	5455	5600
40°	5101	5413	5585
45°	4955	5392	5632
50°	4813	5392	5685
55°	4658	5416	5801
60°	4512	5483	5974
65°	4368	5606	6202
70°	4145	5822	6596
75°	3872	6234	7328
80°	3595	7259	8852
85°	3545	10992	14166



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.0	2.8
10°-20°	145.3	8.0
20°-30°	217.3	12.0
30°-40°	259.5	14.4
40°-50°	271.5	15.0
50°-60°	254.8	14.1
60°-70°	212.8	11.8
70°-80°	152.2	8.4
80°-90°	90.5	5.0
90°-100°	56.9	3.2
100°-110°	41.8	2.3
110°-120°	27.9	1.5
120°-130°	15.9	0.9
130°-140°	7.2	0.4
140°-150°	1.5	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	413.6	22.9
0°-40°	673.1	37.3
0°-60°	1199.4	66.4
0°-90°	1654.9	91.6
90°-120°	126.7	7.0
90°-150°	151.2	8.4
90°-180°	151.0	8.4
0°-180°	1806.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	537	537	537	537	537	
5°	538	537	533	538	537	51
15°	512	514	513	519	519	144
25°	462	468	470	478	478	213
35°	398	407	415	424	426	249
45°	326	340	354	365	370	251
55°	248	268	289	304	309	222
65°	172	194	220	238	244	170
75°	93	121	150	169	176	99
85°	29	58	89	109	115	30
90°	8	36	66	86	92	5
95°	6	29	58	76	82	5
105°	5	19	44	60	66	5
115°	3	10	31	45	50	3
125°	2	2	19	31	35	2
135°	1	1	7	18	20	1
145°	1	0	0	5	7	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



TEST NUMBER: P333971

CATALOG NUMBER: S123DW-S560D930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	537.4	537.4	537.4	537.4	537.4
2.5°	540.3	538.6	533.9	538.6	538.0
5°	538.0	536.8	533.3	538.0	537.4
7.5°	533.9	533.9	530.4	536.2	535.6
10°	528.0	529.2	526.3	532.1	531.0
12.5°	521.0	522.8	521.0	526.3	525.1
15°	512.2	514.0	513.4	519.3	518.7
17.5°	501.7	505.2	504.6	509.9	508.7
20°	490.0	493.5	494.7	499.9	500.5
22.5°	477.7	481.2	483.0	490.0	489.4
25°	462.5	468.3	470.1	477.7	477.7
27.5°	447.8	454.3	457.8	464.2	464.8
30°	432.0	439.6	444.3	451.3	451.3
32.5°	414.5	423.2	429.7	437.3	439.1
35°	398.1	407.4	415.1	423.8	426.2
37.5°	380.5	391.1	399.8	409.8	411.5
40°	363.0	373.5	385.2	395.1	397.5
42.5°	343.6	357.1	369.4	380.5	384.0
45°	325.5	339.5	354.2	365.3	370.0
47.5°	306.2	322.0	338.4	350.7	354.2
50°	287.4	303.8	322.0	335.4	339.5
52.5°	267.5	285.1	305.6	319.6	324.9
55°	248.2	267.5	288.6	304.4	309.1
57.5°	229.5	249.4	272.2	288.0	293.3
60°	209.6	230.7	254.7	271.0	277.5
62.5°	190.8	212.5	238.3	254.7	260.5
65°	171.5	194.4	220.1	237.7	243.5
67.5°	152.2	176.2	202.0	221.3	226.0
70°	131.7	156.9	185.0	203.7	209.6
72.5°	113.0	138.2	167.4	186.7	192.6
75°	93.1	120.6	149.9	169.2	176.2
77.5°	76.1	103.6	132.9	153.4	158.6
80°	58.0	86.6	117.1	137.0	142.8
82.5°	42.1	71.4	102.4	122.3	128.2
85°	28.7	58.0	89.0	108.9	114.7
87.5°	17.6	46.8	76.7	96.6	102.4
90°	7.6	36.3	66.2	86.1	91.9
92.5°	7.0	32.2	61.5	80.8	86.1
95°	6.4	29.3	58.0	76.1	82.0
97.5°	5.9	26.9	54.4	72.0	77.9
100°	5.3	24.0	50.9	67.9	73.8
102.5°	4.7	21.1	47.4	63.8	69.7
105°	4.7	18.7	43.9	60.3	65.6
107.5°	4.1	16.4	40.4	56.2	61.5
110°	3.5	14.0	37.5	52.7	57.4



TEST NUMBER: P333971

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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	3.5	11.7	34.0	48.6	53.9
115°	2.9	10.0	31.0	45.1	49.8
117.5°	2.9	7.6	27.5	41.6	46.2
120°	2.3	5.3	24.6	38.1	42.1
122.5°	2.3	3.5	21.7	34.5	38.6
125°	1.8	1.8	18.7	31.0	35.1
127.5°	1.8	1.2	15.8	27.5	31.6
130°	1.8	1.2	12.9	24.0	27.5
132.5°	1.2	1.2	10.0	20.5	24.6
135°	1.2	0.6	7.0	17.6	20.5
137.5°	1.2	0.6	4.7	14.0	17.0
140°	0.6	0.6	2.3	11.1	14.0
142.5°	0.6	0.0	0.0	7.6	10.5
145°	0.6	0.0	0.0	4.7	7.0
147.5°	0.0	0.0	0.0	1.8	4.1
150°	0.0	0.0	0.0	0.0	1.2
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)