

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: P242683

Luminaire Tested: **S124DR-S575D930-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242683  
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-S575D930-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: 1782.3 lumens  
Efficiency: N/A  
Efficacy: 94.8 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

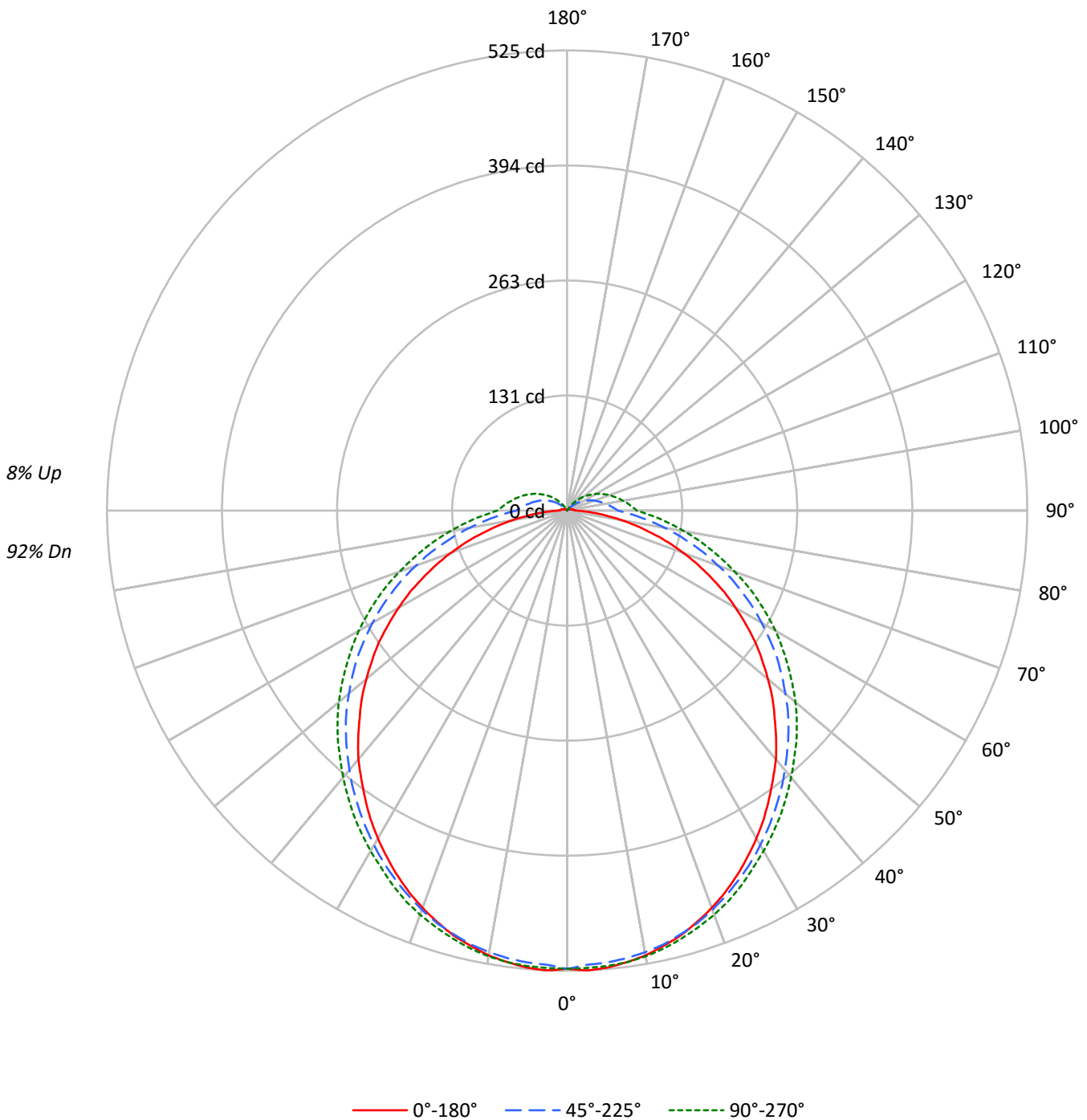
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	4647	4647	4647
5°	4661	4537	4548
10°	4633	4458	4451
15°	4590	4367	4339
20°	4528	4268	4230
25°	4457	4158	4111
30°	4380	4048	3988
35°	4293	3936	3881
40°	4224	3829	3769
45°	4121	3729	3672
50°	4033	3615	3569
55°	3944	3506	3449
60°	3803	3369	3339
65°	3649	3222	3203
70°	3463	3052	3046
75°	3202	2866	2902
80°	2911	2683	2755
85°	2538	2512	2656



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.5	2.8
10°-20°	141.9	8.0
20°-30°	214.6	12.0
30°-40°	259.6	14.6
40°-50°	274.4	15.4
50°-60°	258.3	14.5
60°-70°	214.3	12.0
70°-80°	150.4	8.4
80°-90°	84.8	4.8
90°-100°	50.5	2.8
100°-110°	37.4	2.1
110°-120°	25.1	1.4
120°-130°	14.1	0.8
130°-140°	6.1	0.3
140°-150°	1.2	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	406.0	22.8
0°-40°	665.6	37.3
0°-60°	1198.4	67.2
0°-90°	1647.9	92.5
90°-120°	112.9	6.3
90°-150°	134.4	7.5
90°-180°	134.0	7.5
0°-180°	1782.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	523	523	523	523	523	
5°	523	522	518	522	522	50
15°	502	502	500	506	505	141
25°	459	462	464	471	471	211
35°	402	409	414	423	424	251
45°	335	346	357	367	370	259
55°	262	275	292	304	307	234
65°	182	200	220	235	239	180
75°	101	122	147	163	169	107
85°	31	56	82	100	105	32
90°	9	33	58	75	80	6
95°	8	27	51	67	72	6
105°	5	17	39	53	58	6
115°	4	9	28	40	44	4
125°	2	2	16	28	31	2
135°	1	1	5	15	18	1
145°	1	0	0	4	6	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°	522.8	522.8	522.8	522.8	522.8
2.5°	525.1	523.4	518.7	522.8	522.2
5°	523.4	521.6	517.5	522.2	521.6
7.5°	519.8	518.7	515.2	520.4	519.8
10°	515.2	514.6	511.6	516.9	516.3
12.5°	508.7	508.7	507.0	511.6	511.6
15°	501.7	502.3	500.5	505.8	505.2
17.5°	492.3	494.1	493.5	498.8	498.2
20°	482.4	484.1	484.7	490.6	490.6
22.5°	471.3	473.6	474.8	480.6	481.8
25°	459.0	462.5	464.2	470.7	471.3
27.5°	445.5	450.8	453.1	459.0	459.5
30°	432.0	436.7	440.8	447.2	448.4
32.5°	417.4	423.2	427.9	435.5	436.7
35°	401.6	408.6	414.5	422.7	424.4
37.5°	385.8	394.0	401.0	409.2	411.0
40°	370.6	378.2	386.4	395.1	397.5
42.5°	353.0	361.8	371.7	381.7	383.4
45°	334.9	346.0	357.1	367.0	370.0
47.5°	317.9	329.0	341.9	351.8	355.3
50°	299.1	312.0	324.9	336.6	340.1
52.5°	280.4	293.3	308.5	320.2	323.7
55°	262.3	274.6	292.1	303.8	307.3
57.5°	241.8	257.0	274.0	288.0	290.9
60°	221.9	237.1	256.4	269.9	274.6
62.5°	202.6	219.5	238.8	252.3	257.0
65°	181.5	200.2	220.1	234.7	239.4
67.5°	161.6	181.5	202.6	217.2	221.9
70°	141.1	161.0	183.2	199.0	203.1
72.5°	121.2	141.7	165.7	180.9	185.6
75°	100.7	122.3	146.9	163.3	168.6
77.5°	81.4	104.2	130.0	146.4	152.2
80°	63.8	87.2	113.0	130.5	135.2
82.5°	46.2	70.8	96.6	114.7	120.0
85°	31.0	55.6	82.0	99.5	105.4
87.5°	19.3	43.3	69.1	86.1	91.3
90°	9.4	32.8	58.0	74.9	79.6
92.5°	8.8	29.3	54.4	70.8	75.5
95°	7.6	26.9	50.9	66.7	72.0
97.5°	7.0	24.0	48.0	63.2	68.5
100°	6.4	21.7	44.5	60.3	64.4
102.5°	6.4	19.3	41.6	56.8	61.5
105°	5.3	17.0	38.6	53.3	58.0
107.5°	5.3	15.2	35.7	50.3	54.4
110°	4.7	12.9	33.4	46.8	51.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4.1	11.1	30.4	43.3	48.0
115°	3.5	8.8	27.5	40.4	44.5
117.5°	3.5	7.0	24.6	36.9	41.6
120°	2.9	4.7	21.7	33.4	38.1
122.5°	2.9	2.9	18.7	30.4	34.5
125°	2.3	1.8	16.4	27.5	31.0
127.5°	2.3	1.8	13.5	24.0	28.1
130°	1.8	1.2	10.5	21.1	24.6
132.5°	1.8	1.2	8.2	18.1	21.7
135°	1.2	1.2	5.3	14.6	18.1
137.5°	1.2	0.6	2.9	11.7	14.6
140°	1.2	0.6	1.2	8.8	11.7
142.5°	0.6	0.6	0.0	6.4	8.8
145°	0.6	0.0	0.0	3.5	5.9
147.5°	0.6	0.0	0.0	0.6	2.9
150°	0.6	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)