

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: P242693

Luminaire Tested: **S124DR-S575D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242693  
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-S575D940-X4F0-XX-UDD-D-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1949.4 lumens  
Efficiency: N/A  
Efficacy: 103.7 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

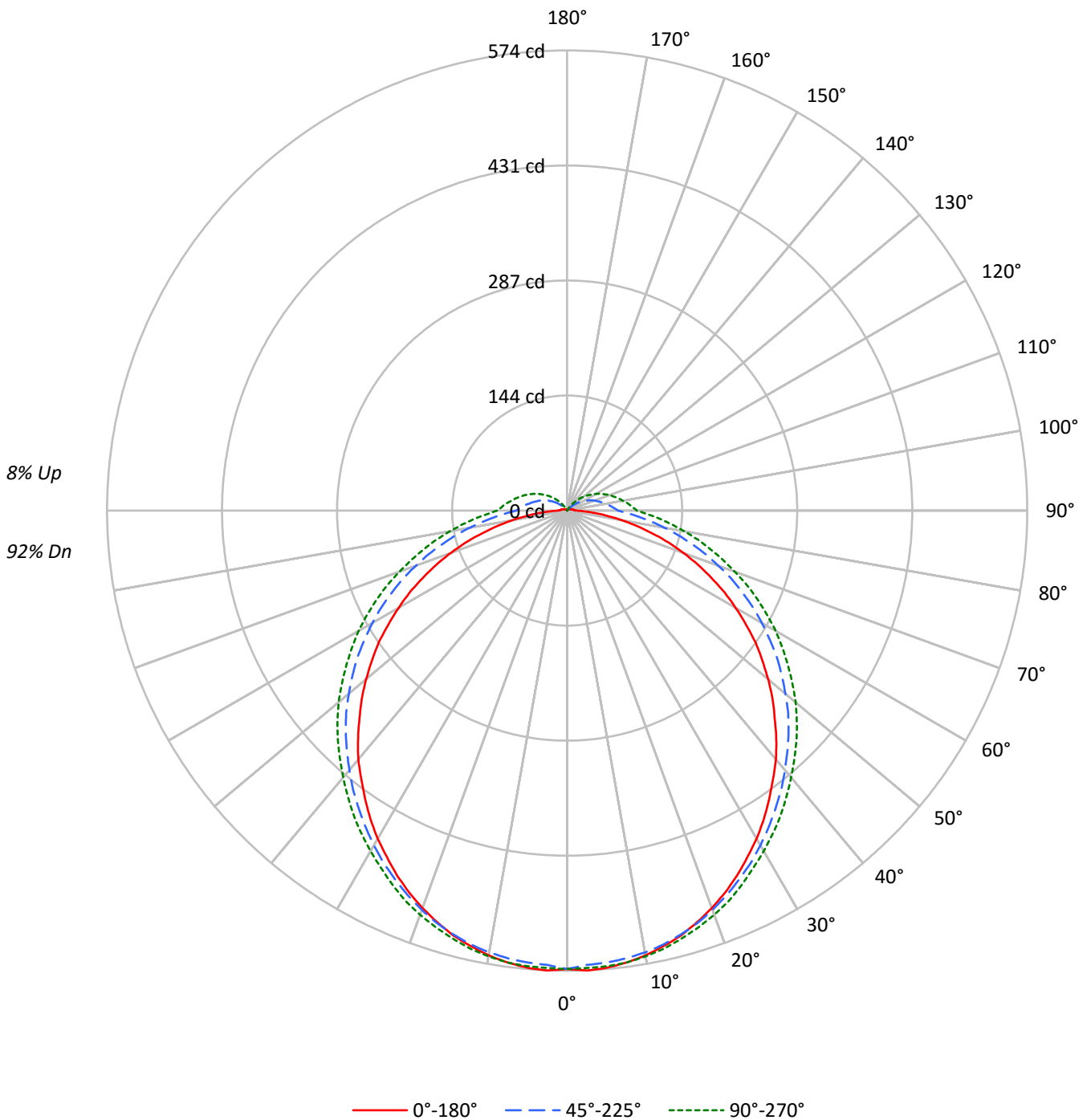
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	5083	5083	5083
5°	5098	4962	4974
10°	5066	4876	4868
15°	5020	4777	4746
20°	4952	4668	4626
25°	4875	4547	4496
30°	4790	4427	4362
35°	4695	4305	4245
40°	4620	4188	4122
45°	4507	4079	4016
50°	4412	3954	3904
55°	4312	3835	3772
60°	4160	3685	3652
65°	3991	3523	3504
70°	3786	3339	3333
75°	3500	3135	3174
80°	3185	2935	3014
85°	2775	2745	2903



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.2	2.8
10°-20°	155.2	8.0
20°-30°	234.7	12.0
30°-40°	283.9	14.6
40°-50°	300.2	15.4
50°-60°	282.5	14.5
60°-70°	234.4	12.0
70°-80°	164.5	8.4
80°-90°	92.7	4.8
90°-100°	55.2	2.8
100°-110°	40.9	2.1
110°-120°	27.4	1.4
120°-130°	15.5	0.8
130°-140°	6.7	0.3
140°-150°	1.3	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	444.1	22.8
0°-40°	728.0	37.3
0°-60°	1310.7	67.2
0°-90°	1802.4	92.5
90°-120°	123.6	6.3
90°-150°	147.0	7.5
90°-180°	147.0	7.5
0°-180°	1949.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	572	572	572	572	572	
5°	572	570	566	571	570	54
15°	549	549	547	553	553	155
25°	502	506	508	515	515	231
35°	439	447	453	462	464	275
45°	366	378	391	401	405	283
55°	287	300	320	332	336	256
65°	198	219	241	257	262	197
75°	110	134	161	179	184	117
85°	34	61	90	109	115	35
90°	10	36	63	82	87	7
95°	8	30	56	73	79	7
105°	6	19	42	58	63	7
115°	4	10	30	44	49	4
125°	3	2	18	30	34	2
135°	1	1	6	16	20	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°	571.8	571.8	571.8	571.8	571.8
2.5°	574.3	572.4	567.3	571.8	571.1
5°	572.4	570.5	566.0	571.1	570.5
7.5°	568.6	567.3	563.4	569.2	568.6
10°	563.4	562.8	559.6	565.4	564.7
12.5°	556.4	556.4	554.5	559.6	559.6
15°	548.7	549.4	547.4	553.2	552.6
17.5°	538.5	540.4	539.7	545.5	544.9
20°	527.6	529.5	530.1	536.5	536.5
22.5°	515.4	518.0	519.3	525.7	526.9
25°	502.0	505.8	507.7	514.8	515.4
27.5°	487.2	493.0	495.6	502.0	502.6
30°	472.5	477.6	482.1	489.2	490.4
32.5°	456.5	462.9	468.0	476.4	477.6
35°	439.2	446.9	453.3	462.3	464.2
37.5°	421.9	430.9	438.6	447.5	449.5
40°	405.3	413.6	422.6	432.2	434.7
42.5°	386.1	395.7	406.6	417.5	419.4
45°	366.2	378.4	390.6	401.4	404.7
47.5°	347.7	359.8	373.9	384.8	388.6
50°	327.2	341.3	355.4	368.2	372.0
52.5°	306.7	320.8	337.4	350.2	354.1
55°	286.8	300.3	319.5	332.3	336.1
57.5°	264.4	281.1	299.6	315.0	318.2
60°	242.7	259.3	280.4	295.2	300.3
62.5°	221.5	240.1	261.2	276.0	281.1
65°	198.5	219.0	240.7	256.7	261.9
67.5°	176.7	198.5	221.5	237.5	242.7
70°	154.3	176.1	200.4	217.7	222.2
72.5°	132.5	154.9	181.2	197.8	203.0
75°	110.1	133.8	160.7	178.6	184.4
77.5°	89.0	114.0	142.1	160.1	166.5
80°	69.8	95.4	123.6	142.8	147.9
82.5°	50.6	77.5	105.6	125.5	131.3
85°	33.9	60.8	89.6	108.8	115.2
87.5°	21.1	47.4	75.6	94.1	99.9
90°	10.2	35.9	63.4	82.0	87.1
92.5°	9.6	32.0	59.5	77.5	82.6
95°	8.3	29.5	55.7	73.0	78.8
97.5°	7.7	26.3	52.5	69.1	74.9
100°	7.0	23.7	48.7	65.9	70.4
102.5°	7.0	21.1	45.5	62.1	67.2
105°	5.8	18.6	42.3	58.3	63.4
107.5°	5.8	16.6	39.1	55.1	59.5
110°	5.1	14.1	36.5	51.2	56.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4.5	12.2	33.3	47.4	52.5
115°	3.8	9.6	30.1	44.2	48.7
117.5°	3.8	7.7	26.9	40.3	45.5
120°	3.2	5.1	23.7	36.5	41.6
122.5°	3.2	3.2	20.5	33.3	37.8
125°	2.6	1.9	17.9	30.1	33.9
127.5°	2.6	1.9	14.7	26.3	30.7
130°	1.9	1.3	11.5	23.0	26.9
132.5°	1.9	1.3	9.0	19.8	23.7
135°	1.3	1.3	5.8	16.0	19.8
137.5°	1.3	0.6	3.2	12.8	16.0
140°	1.3	0.6	1.3	9.6	12.8
142.5°	0.6	0.6	0.0	7.0	9.6
145°	0.6	0.0	0.0	3.8	6.4
147.5°	0.6	0.0	0.0	0.6	3.2
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)