

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: P242669

Luminaire Tested: **S124DR-S575D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242669  
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-S575D830-X4F0-XX-UDD-D-W  
Description: DEFINE 4 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: 2060.5 lumens  
Efficiency: N/A  
Efficacy: 109.6 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

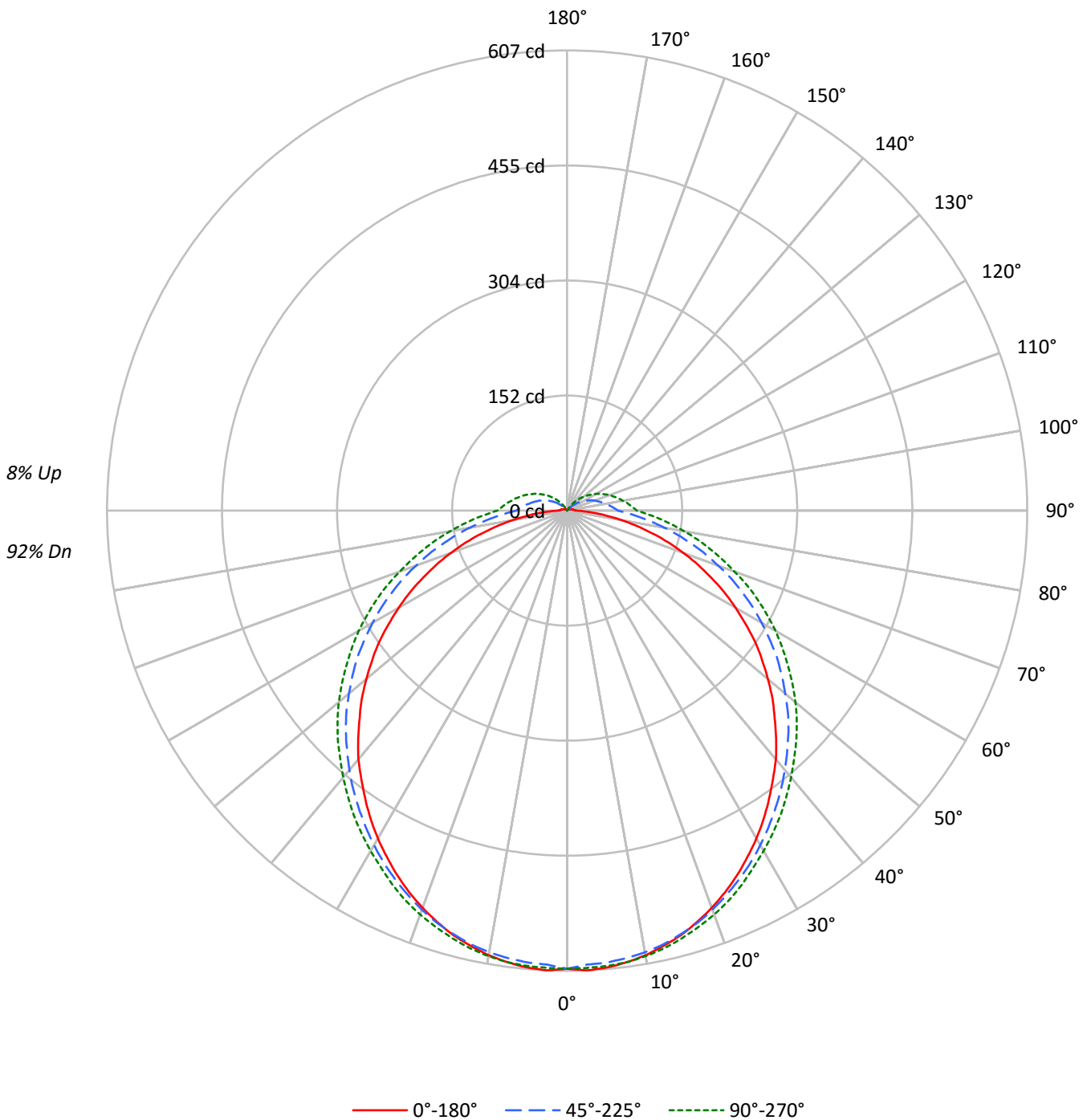
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	5372	5372	5372
5°	5388	5245	5258
10°	5356	5154	5146
15°	5307	5049	5017
20°	5235	4935	4890
25°	5152	4807	4752
30°	5064	4680	4611
35°	4964	4551	4487
40°	4883	4427	4357
45°	4764	4311	4245
50°	4662	4179	4126
55°	4559	4054	3988
60°	4396	3895	3860
65°	4218	3725	3704
70°	4002	3529	3522
75°	3701	3315	3355
80°	3367	3101	3185
85°	2939	2901	3069



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.3	2.8
10°-20°	164.1	8.0
20°-30°	248.1	12.0
30°-40°	300.1	14.6
40°-50°	317.3	15.4
50°-60°	298.6	14.5
60°-70°	247.8	12.0
70°-80°	173.9	8.4
80°-90°	98.0	4.8
90°-100°	58.4	2.8
100°-110°	43.2	2.1
110°-120°	29.0	1.4
120°-130°	16.3	0.8
130°-140°	7.1	0.3
140°-150°	1.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	469.4	22.8
0°-40°	769.5	37.3
0°-60°	1385.4	67.2
0°-90°	1905.1	92.5
90°-120°	130.6	6.3
90°-150°	155.4	7.5
90°-180°	155.0	7.5
0°-180°	2060.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	604	604	604	604	604	
5°	605	603	598	604	603	57
15°	580	581	579	585	584	163
25°	531	535	537	544	545	244
35°	464	472	479	489	491	291
45°	387	400	413	424	428	299
55°	303	317	338	351	355	270
65°	210	232	254	271	277	208
75°	116	141	170	189	195	124
85°	36	64	95	115	122	37
90°	11	38	67	87	92	7
95°	9	31	59	77	83	7
105°	6	20	45	62	67	7
115°	4	10	32	47	51	4
125°	3	2	19	32	36	3
135°	1	1	6	17	21	1
145°	1	0	0	4	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



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	604.4	604.4	604.4	604.4	604.4
2.5°	607.1	605.0	599.6	604.4	603.7
5°	605.0	603.0	598.3	603.7	603.0
7.5°	601.0	599.6	595.6	601.6	601.0
10°	595.6	594.9	591.5	597.6	596.9
12.5°	588.1	588.1	586.1	591.5	591.5
15°	580.0	580.7	578.6	584.7	584.1
17.5°	569.2	571.2	570.5	576.6	575.9
20°	557.7	559.7	560.4	567.1	567.1
22.5°	544.8	547.5	548.9	555.6	557.0
25°	530.6	534.6	536.7	544.1	544.8
27.5°	515.0	521.1	523.8	530.6	531.3
30°	499.5	504.9	509.6	517.1	518.4
32.5°	482.5	489.3	494.7	503.5	504.9
35°	464.3	472.4	479.2	488.6	490.7
37.5°	446.0	455.5	463.6	473.1	475.1
40°	428.4	437.2	446.7	456.8	459.5
42.5°	408.1	418.2	429.7	441.3	443.3
45°	387.1	400.0	412.8	424.3	427.7
47.5°	367.5	380.3	395.2	406.7	410.8
50°	345.8	360.7	375.6	389.1	393.2
52.5°	324.2	339.1	356.7	370.2	374.3
55°	303.2	317.4	337.7	351.2	355.3
57.5°	279.5	297.1	316.7	333.0	336.4
60°	256.5	274.1	296.4	312.0	317.4
62.5°	234.2	253.8	276.1	291.7	297.1
65°	209.8	231.5	254.5	271.4	276.8
67.5°	186.8	209.8	234.2	251.1	256.5
70°	163.1	186.1	211.8	230.1	234.8
72.5°	140.1	163.8	191.5	209.1	214.5
75°	116.4	141.4	169.9	188.8	194.9
77.5°	94.1	120.5	150.2	169.2	176.0
80°	73.8	100.8	130.6	150.9	156.3
82.5°	53.5	81.9	111.7	132.6	138.7
85°	35.9	64.3	94.7	115.1	121.8
87.5°	22.3	50.1	79.9	99.5	105.6
90°	10.8	37.9	67.0	86.6	92.0
92.5°	10.2	33.8	62.9	81.9	87.3
95°	8.8	31.1	58.9	77.2	83.2
97.5°	8.1	27.7	55.5	73.1	79.2
100°	7.4	25.0	51.4	69.7	74.4
102.5°	7.4	22.3	48.1	65.6	71.1
105°	6.1	19.6	44.7	61.6	67.0
107.5°	6.1	17.6	41.3	58.2	62.9
110°	5.4	14.9	38.6	54.1	59.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4.7	12.9	35.2	50.1	55.5
115°	4.1	10.2	31.8	46.7	51.4
117.5°	4.1	8.1	28.4	42.6	48.1
120°	3.4	5.4	25.0	38.6	44.0
122.5°	3.4	3.4	21.7	35.2	39.9
125°	2.7	2.0	18.9	31.8	35.9
127.5°	2.7	2.0	15.6	27.7	32.5
130°	2.0	1.4	12.2	24.4	28.4
132.5°	2.0	1.4	9.5	21.0	25.0
135°	1.4	1.4	6.1	16.9	21.0
137.5°	1.4	0.7	3.4	13.5	16.9
140°	1.4	0.7	1.4	10.2	13.5
142.5°	0.7	0.7	0.0	7.4	10.2
145°	0.7	0.0	0.0	4.1	6.8
147.5°	0.7	0.0	0.0	0.7	3.4
150°	0.7	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)