

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: P242684

Luminaire Tested: **S124DR-S795D930-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242684  
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-S795D930-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: 2482.3 lumens  
Efficiency: N/A  
Efficacy: 94.0 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

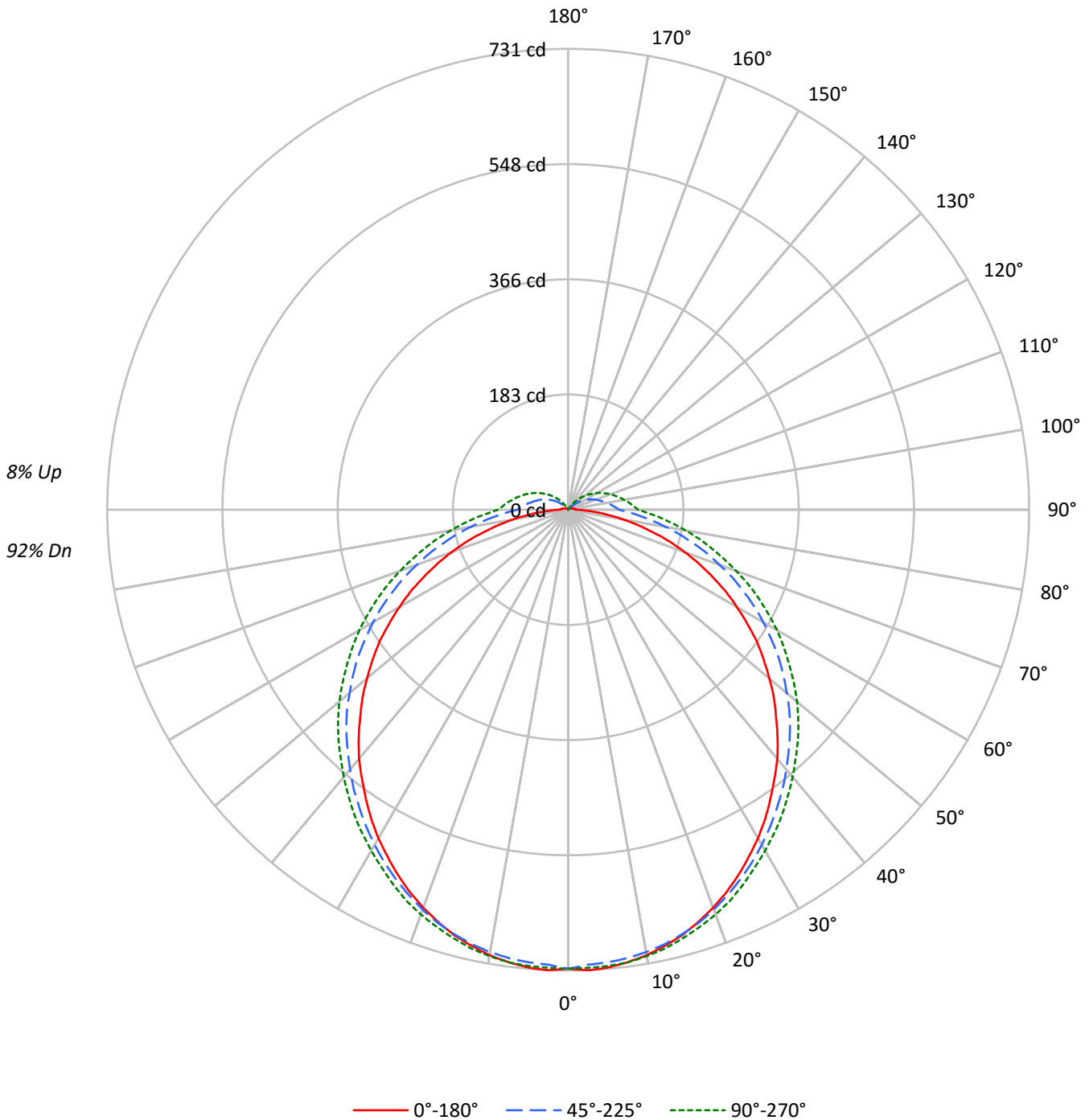
Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	6472	6472	6472
5°	6492	6318	6334
10°	6452	6209	6199
15°	6393	6083	6043
20°	6305	5945	5891
25°	6207	5791	5725
30°	6100	5638	5555
35°	5979	5481	5405
40°	5882	5332	5249
45°	5740	5193	5114
50°	5617	5035	4971
55°	5492	4883	4804
60°	5296	4692	4650
65°	5081	4488	4463
70°	4822	4252	4243
75°	4457	3991	4042
80°	4056	3738	3837
85°	3537	3496	3699



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.0	2.8
10°-20°	197.7	8.0
20°-30°	298.9	12.0
30°-40°	361.6	14.6
40°-50°	382.2	15.4
50°-60°	359.7	14.5
60°-70°	298.5	12.0
70°-80°	209.5	8.4
80°-90°	118.1	4.8
90°-100°	70.3	2.8
100°-110°	52.1	2.1
110°-120°	34.9	1.4
120°-130°	19.7	0.8
130°-140°	8.5	0.3
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°	565.5	22.8
0°-40°	927.0	37.3
0°-60°	1669.0	67.2
0°-90°	2295.1	92.5
90°-120°	157.3	6.3
90°-150°	187.2	7.5
90°-180°	187.0	7.5
0°-180°	2482.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	728	728	728	728	728	
5°	729	726	721	727	726	69
15°	699	700	697	704	704	197
25°	639	644	646	656	656	294
35°	559	569	577	589	591	350
45°	466	482	497	511	515	360
55°	365	382	407	423	428	325
65°	253	279	307	327	334	251
75°	140	170	205	228	235	149
85°	43	78	114	139	147	45
90°	13	46	81	104	111	9
95°	11	38	71	93	100	8
105°	7	24	54	74	81	8
115°	5	12	38	56	62	5
125°	3	2	23	38	43	3
135°	2	2	7	20	25	1
145°	1	0	0	5	8	1
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°	728.1	728.1	728.1	728.1	728.1
2.5°	731.3	728.9	722.4	728.1	727.2
5°	728.9	726.4	720.7	727.2	726.4
7.5°	724.0	722.4	717.5	724.8	724.0
10°	717.5	716.6	712.6	719.9	719.1
12.5°	708.5	708.5	706.0	712.6	712.6
15°	698.7	699.5	697.1	704.4	703.6
17.5°	685.7	688.1	687.3	694.6	693.8
20°	671.8	674.3	675.1	683.2	683.2
22.5°	656.3	659.6	661.2	669.4	671.0
25°	639.2	644.1	646.5	655.5	656.3
27.5°	620.4	627.8	631.0	639.2	640.0
30°	601.7	608.2	613.9	622.9	624.5
32.5°	581.3	589.5	596.0	606.6	608.2
35°	559.3	569.1	577.2	588.6	591.1
37.5°	537.3	548.7	558.5	569.9	572.3
40°	516.1	526.7	538.1	550.3	553.6
42.5°	491.6	503.9	517.7	531.6	534.0
45°	466.4	481.8	497.3	511.2	515.3
47.5°	442.7	458.2	476.1	490.0	494.9
50°	416.6	434.6	452.5	468.8	473.7
52.5°	390.5	408.5	429.7	446.0	450.9
55°	365.3	382.4	406.8	423.1	428.0
57.5°	336.7	357.9	381.6	401.1	405.2
60°	309.0	330.2	357.1	375.9	382.4
62.5°	282.1	305.7	332.6	351.4	357.9
65°	252.7	278.8	306.6	326.9	333.5
67.5°	225.0	252.7	282.1	302.5	309.0
70°	196.5	224.2	255.2	277.2	282.9
72.5°	168.8	197.3	230.7	251.9	258.4
75°	140.2	170.4	204.6	227.5	234.8
77.5°	113.3	145.1	181.0	203.8	212.0
80°	88.9	121.5	157.4	181.8	188.3
82.5°	64.4	98.7	134.5	159.8	167.1
85°	43.2	77.5	114.1	138.6	146.8
87.5°	26.9	60.3	96.2	119.8	127.2
90°	13.0	45.7	80.7	104.4	110.9
92.5°	12.2	40.8	75.8	98.7	105.2
95°	10.6	37.5	70.9	92.9	100.3
97.5°	9.8	33.4	66.9	88.1	95.4
100°	9.0	30.2	62.0	84.0	89.7
102.5°	9.0	26.9	57.9	79.1	85.6
105°	7.3	23.6	53.8	74.2	80.7
107.5°	7.3	21.2	49.7	70.1	75.8
110°	6.5	17.9	46.5	65.2	71.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	5.7	15.5	42.4	60.3	66.9
115°	4.9	12.2	38.3	56.3	62.0
117.5°	4.9	9.8	34.2	51.4	57.9
120°	4.1	6.5	30.2	46.5	53.0
122.5°	4.1	4.1	26.1	42.4	48.1
125°	3.3	2.4	22.8	38.3	43.2
127.5°	3.3	2.4	18.8	33.4	39.1
130°	2.4	1.6	14.7	29.4	34.2
132.5°	2.4	1.6	11.4	25.3	30.2
135°	1.6	1.6	7.3	20.4	25.3
137.5°	1.6	0.8	4.1	16.3	20.4
140°	1.6	0.8	1.6	12.2	16.3
142.5°	0.8	0.8	0.0	9.0	12.2
145°	0.8	0.0	0.0	4.9	8.2
147.5°	0.8	0.0	0.0	0.8	4.1
150°	0.8	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)