

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P242684

Luminaire Tested: S124DRP-S795D930-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
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  
Product Line: NEO-RAY  
Catalog Number: S124DRP-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: -

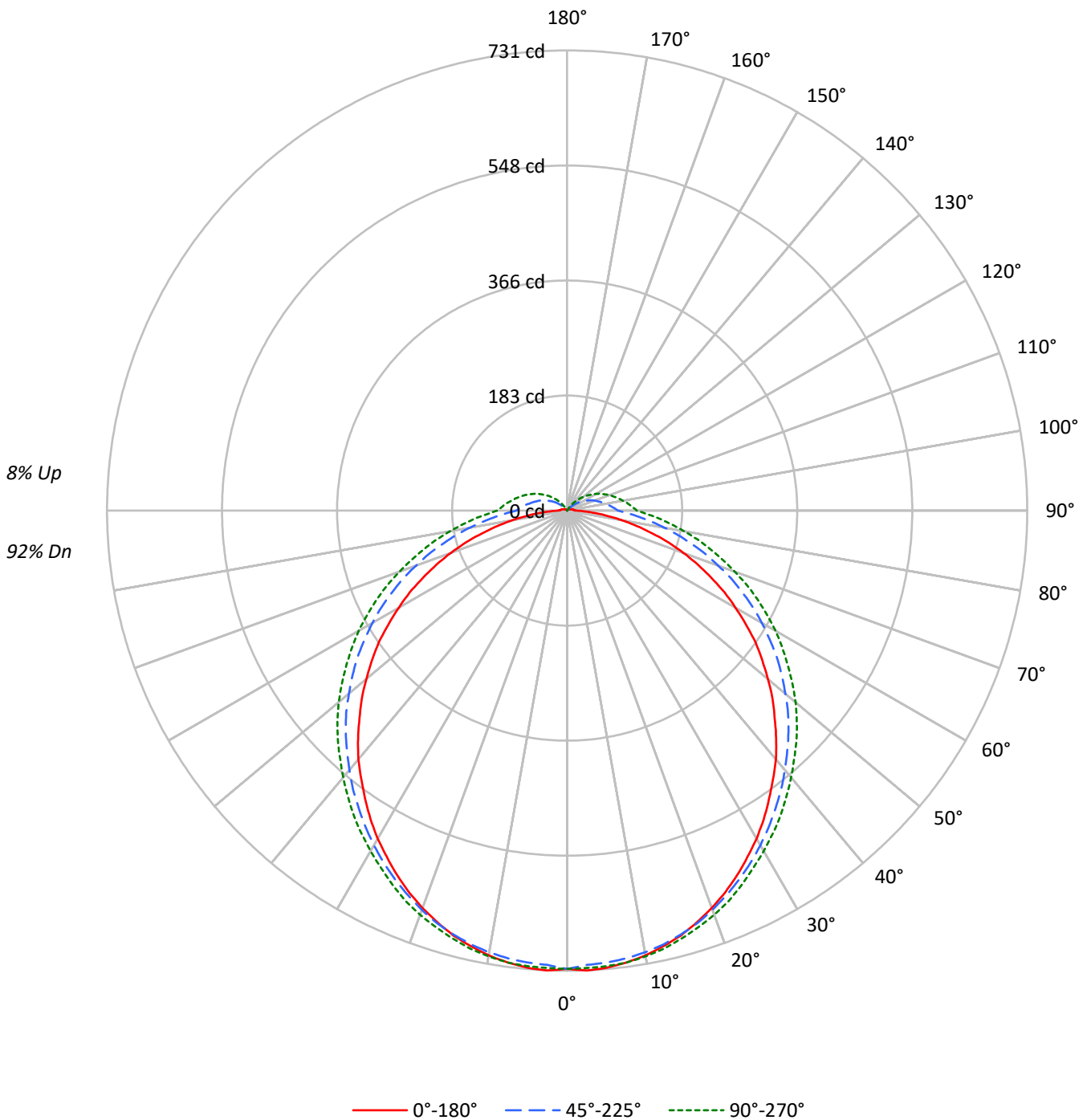
**Summary**

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: 24 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	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

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5740 cd/sqm



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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

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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	16.28	17.80	16.76	18.27	18.77	17.83	19.36	18.31	19.82	20.32
	3H	17.92	19.31	18.41	19.78	20.32	20.14	21.53	20.63	22.00	22.54
	4H	18.48	19.80	19.00	20.29	20.85	21.20	22.51	21.71	23.01	23.56
	6H	18.87	20.09	19.39	20.60	21.17	22.25	23.48	22.78	23.98	24.55
	8H	18.97	20.15	19.51	20.68	21.25	22.77	23.94	23.31	24.47	25.05
	12H	19.03	20.16	19.58	20.68	21.29	23.32	24.45	23.87	24.97	25.58
4H	2H	17.13	18.44	17.64	18.94	19.49	18.33	19.65	18.84	20.14	20.69
	3H	19.01	20.13	19.53	20.66	21.24	20.86	21.98	21.38	22.52	23.09
	4H	19.71	20.74	20.26	21.28	21.89	22.08	23.10	22.62	23.65	24.25
	6H	20.23	21.13	20.79	21.70	22.32	23.31	24.21	23.87	24.78	25.40
	8H	20.39	21.23	20.95	21.81	22.44	23.92	24.77	24.49	25.34	25.97
	12H	20.49	21.26	21.08	21.86	22.49	24.58	25.35	25.17	25.95	26.59
8H	4H	20.29	21.14	20.86	21.71	22.34	22.33	23.18	22.90	23.75	24.39
	6H	20.99	21.70	21.59	22.32	22.95	23.73	24.44	24.33	25.06	25.70
	8H	21.24	21.88	21.85	22.51	23.16	24.47	25.11	25.08	25.74	26.39
	12H	21.42	22.00	22.04	22.61	23.33	25.29	25.87	25.91	26.48	27.20
12H	4H	20.43	21.20	21.02	21.80	22.43	22.35	23.12	22.94	23.72	24.36
	6H	21.20	21.85	21.81	22.47	23.12	23.77	24.42	24.39	25.05	25.70
	8H	21.54	22.11	22.15	22.73	23.44	24.58	25.16	25.20	25.77	26.49