

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: P242615

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242615  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DRP-S795D930-X4F0-XX-UDD-F-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

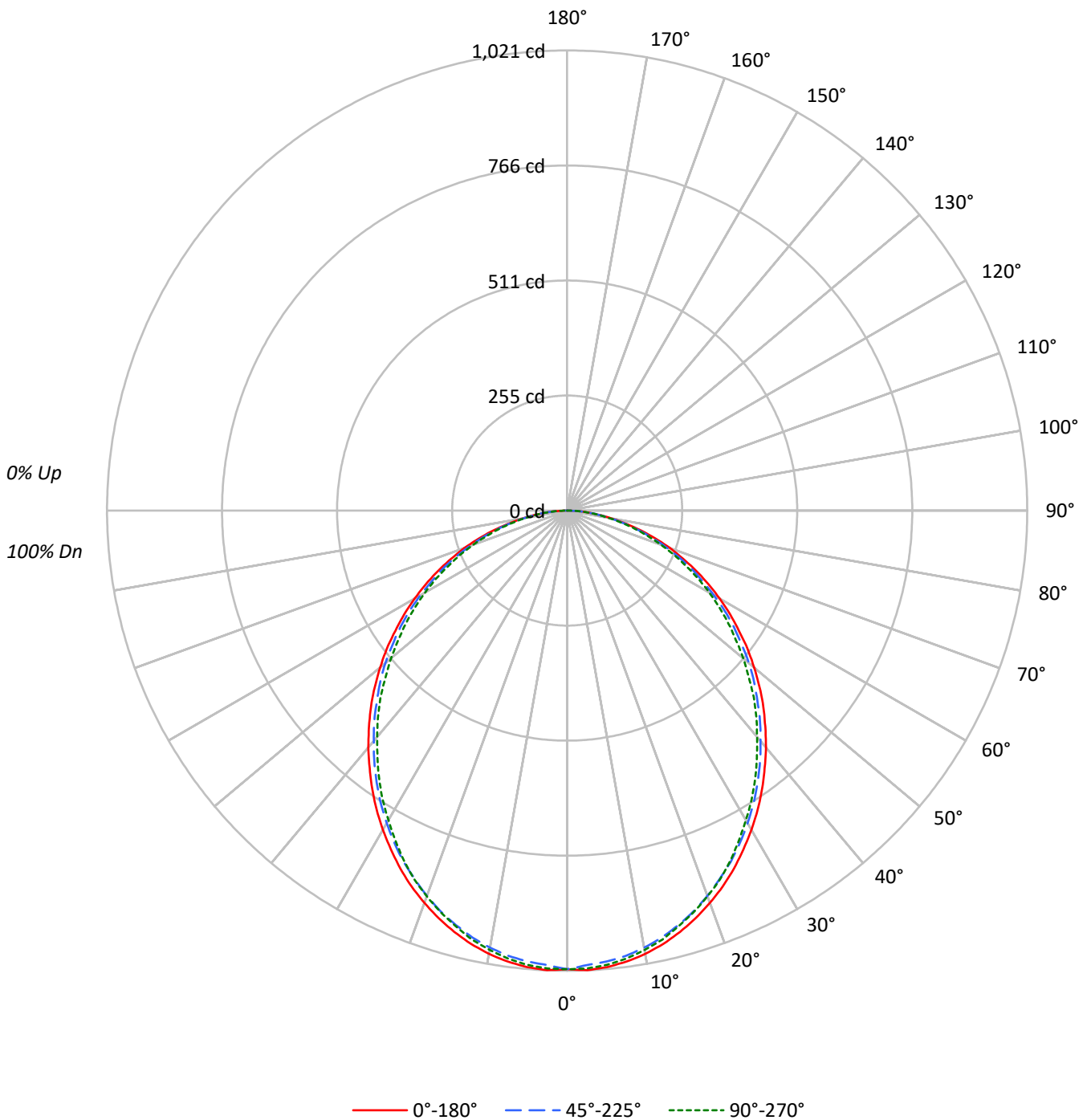
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2611.6 lumens  
Efficiency: N/A  
Efficacy: 98.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (Ain): 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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84																												
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70																												
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60																												
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51																												
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44																												
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39																												
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35																												
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31																												
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28																												
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	25																												

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9044	9044	9044
5°	9072	8963	9028
10°	9014	8890	8934
15°	8906	8764	8786
20°	8761	8607	8615
25°	8596	8428	8404
30°	8393	8217	8142
35°	8184	7997	7891
40°	7966	7748	7606
45°	7739	7502	7359
50°	7487	7284	7058
55°	7214	7000	6772
60°	6942	6683	6478
65°	6636	6379	6123
70°	6292	5975	5741
75°	5770	5488	5347
80°	5134	4924	4802
85°	4488	4324	4243

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7739 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.9	3.7
10°-20°	270.2	10.3
20°-30°	397.6	15.2
30°-40°	462.2	17.7
40°-50°	462.2	17.7
50°-60°	404.3	15.5
60°-70°	300.1	11.5
70°-80°	170.3	6.5
80°-90°	48.8	1.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	763.7	29.2
0°-40°	1226.0	46.9
0°-60°	2092.4	80.1
0°-90°	2611.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2611.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1018	1018	1018	1018	1018	
5°	1017	1013	1004	1013	1012	96
15°	968	964	952	957	955	273
25°	876	871	859	860	857	403
35°	754	748	737	731	727	472
45°	616	610	597	588	585	475
55°	466	463	452	442	437	417
65°	316	311	303	295	291	312
75°	168	164	160	156	156	178
85°	44	44	42	42	42	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1017.5	1017.5	1017.5	1017.5	1017.5
2.5°	1020.8	1018.3	1009.3	1017.5	1016.7
5°	1016.7	1013.4	1004.5	1013.4	1011.8
7.5°	1009.3	1006.1	996.3	1003.6	1002.8
10°	998.7	995.5	984.9	991.4	989.8
12.5°	984.9	981.6	970.2	977.5	975.1
15°	967.8	964.5	952.3	957.2	954.7
17.5°	948.2	944.1	932.7	936.0	934.3
20°	926.2	922.1	909.9	912.3	910.7
22.5°	902.5	896.8	884.6	889.5	886.2
25°	876.4	870.7	859.3	860.1	856.9
27.5°	847.1	841.4	830.8	829.2	825.1
30°	817.7	811.2	800.6	797.4	793.3
32.5°	786.8	781.1	769.6	765.6	761.5
35°	754.2	748.4	737.0	731.3	727.2
37.5°	719.9	715.0	702.8	697.1	691.4
40°	686.5	680.0	667.7	659.6	655.5
42.5°	650.6	647.3	633.5	623.7	621.3
45°	615.6	609.8	596.8	587.8	585.4
47.5°	578.9	574.8	562.6	552.8	546.3
50°	541.4	538.1	526.7	515.3	510.4
52.5°	504.7	500.6	488.4	478.6	472.1
55°	465.5	463.1	451.7	441.9	437.0
57.5°	428.8	426.4	415.0	405.2	400.3
60°	390.5	386.5	375.9	368.5	364.4
62.5°	353.0	349.8	338.3	331.8	327.8
65°	315.5	311.4	303.3	295.1	291.1
67.5°	277.2	273.9	265.8	257.6	256.8
70°	242.1	236.4	229.9	223.4	220.9
72.5°	204.6	198.9	194.0	189.1	186.7
75°	168.0	163.9	159.8	156.5	155.7
77.5°	132.1	130.4	126.4	125.6	123.1
80°	100.3	97.8	96.2	94.6	93.8
82.5°	69.3	68.5	68.5	67.7	66.9
85°	44.0	44.0	42.4	42.4	41.6
87.5°	21.2	20.4	19.6	19.6	19.6
90°	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	18.95	20.56	19.31	20.88	21.19	18.57	20.19	18.94	20.50	20.82
	3H	20.71	22.17	21.09	22.49	22.85	20.29	21.74	20.66	22.07	22.43
	4H	21.36	22.74	21.76	23.09	23.46	20.93	22.30	21.33	22.65	23.03
	6H	21.84	23.11	22.25	23.48	23.87	21.41	22.68	21.82	23.04	23.43
	8H	21.99	23.20	22.41	23.59	23.99	21.56	22.78	21.99	23.17	23.57
	12H	22.09	23.26	22.52	23.64	24.07	21.67	22.84	22.10	23.22	23.65
4H	2H	19.52	20.89	19.92	21.24	21.62	19.22	20.60	19.62	20.94	21.32
	3H	21.50	22.65	21.91	23.05	23.45	21.15	22.30	21.56	22.70	23.10
	4H	22.28	23.32	22.71	23.74	24.17	21.92	22.96	22.35	23.37	23.81
	6H	22.89	23.80	23.34	24.24	24.69	22.52	23.43	22.98	23.87	24.33
	8H	23.08	23.94	23.54	24.38	24.84	22.73	23.58	23.19	24.02	24.49
	12H	23.24	24.00	23.72	24.48	24.94	22.88	23.65	23.36	24.12	24.59
8H	4H	22.56	23.41	23.02	23.85	24.32	22.24	23.09	22.70	23.53	24.00
	6H	23.28	23.99	23.77	24.48	24.95	22.96	23.67	23.46	24.16	24.63
	8H	23.55	24.19	24.06	24.69	25.18	23.24	23.88	23.75	24.38	24.87
	12H	23.78	24.34	24.29	24.83	25.39	23.47	24.04	23.98	24.53	25.09
12H	4H	22.59	23.35	23.07	23.83	24.30	22.27	23.04	22.75	23.51	23.98
	6H	23.33	23.97	23.84	24.47	24.96	23.02	23.66	23.53	24.16	24.65
	8H	23.66	24.22	24.17	24.71	25.27	23.36	23.92	23.87	24.41	24.98