

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: P242596

Luminaire Tested: S124DRP-S795D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242596  
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-S795D927-X4F0-XX-UDD-F-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

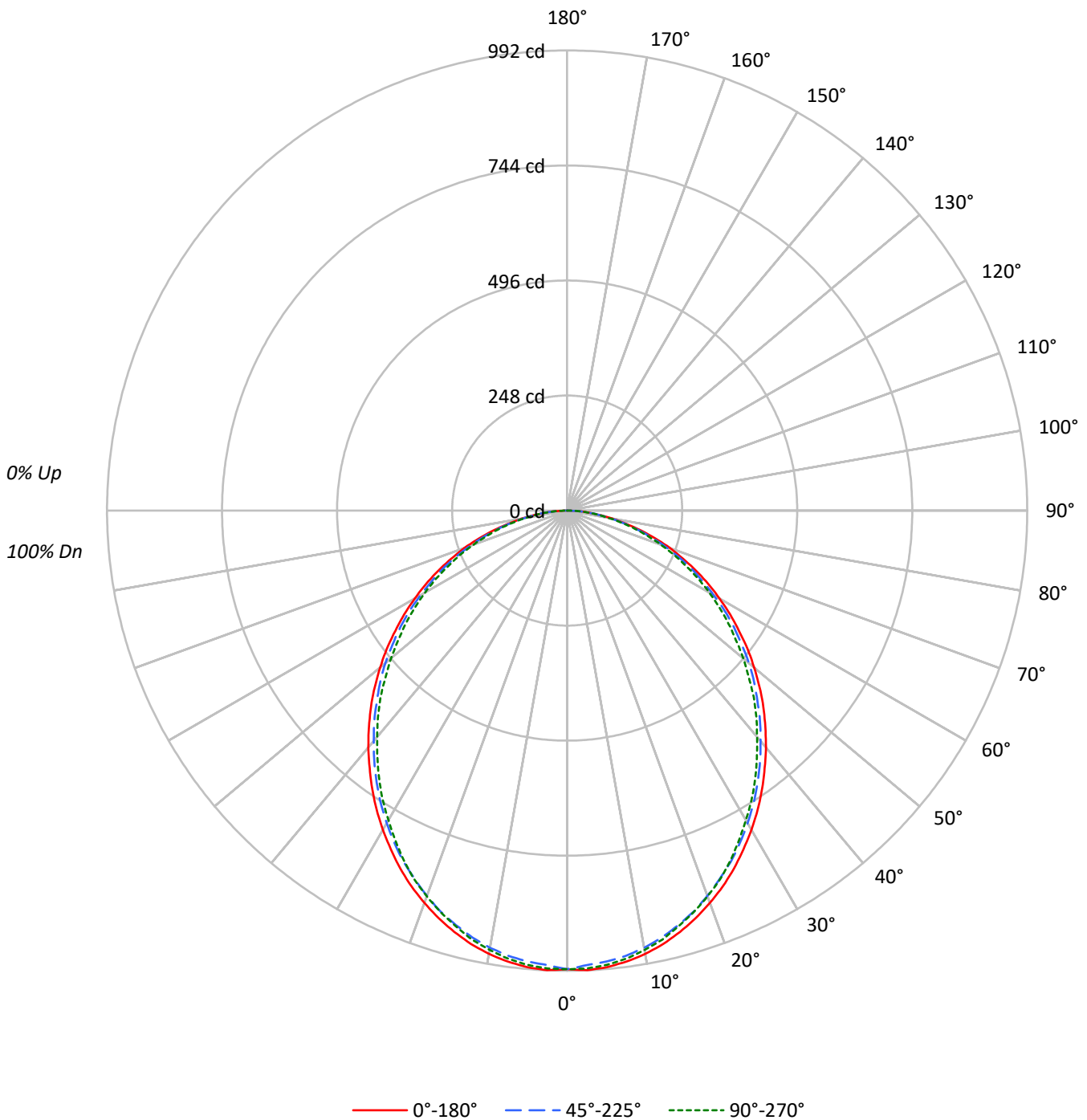
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2537.6 lumens  
Efficiency: N/A  
Efficacy: 97.2 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): 26.1  
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	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°	8788	8788	8788
5°	8815	8709	8772
10°	8759	8638	8680
15°	8653	8515	8536
20°	8512	8363	8371
25°	8352	8190	8166
30°	8156	7984	7912
35°	7952	7771	7668
40°	7740	7528	7390
45°	7519	7290	7150
50°	7274	7078	6858
55°	7009	6802	6580
60°	6747	6492	6295
65°	6449	6198	5948
70°	6115	5806	5580
75°	5605	5334	5196
80°	4986	4786	4663
85°	4365	4202	4120

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7519 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.2	3.7
10°-20°	262.5	10.3
20°-30°	386.4	15.2
30°-40°	449.1	17.7
40°-50°	449.1	17.7
50°-60°	392.8	15.5
60°-70°	291.6	11.5
70°-80°	165.5	6.5
80°-90°	47.4	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°	742.1	29.2
0°-40°	1191.2	46.9
0°-60°	2033.1	80.1
0°-90°	2537.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2537.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	989	989	989	989	989	
5°	988	985	976	985	983	94
15°	940	937	925	930	928	265
25°	852	846	835	836	833	392
35°	733	727	716	711	707	458
45°	598	593	580	571	569	461
55°	452	450	439	429	425	405
65°	307	303	295	287	283	303
75°	163	159	155	152	151	173
85°	43	43	41	41	40	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	988.6	988.6	988.6	988.6	988.6
2.5°	991.8	989.4	980.7	988.6	987.9
5°	987.9	984.7	976.0	984.7	983.1
7.5°	980.7	977.6	968.0	975.2	974.4
10°	970.4	967.3	957.0	963.3	961.7
12.5°	957.0	953.8	942.7	949.8	947.5
15°	940.3	937.2	925.3	930.0	927.6
17.5°	921.3	917.3	906.3	909.4	907.8
20°	899.9	896.0	884.1	886.5	884.9
22.5°	876.9	871.4	859.5	864.3	861.1
25°	851.6	846.1	835.0	835.8	832.6
27.5°	823.1	817.5	807.2	805.7	801.7
30°	794.6	788.2	777.9	774.8	770.8
32.5°	764.5	758.9	747.8	743.9	739.9
35°	732.8	727.2	716.1	710.6	706.6
37.5°	699.5	694.7	682.9	677.3	671.8
40°	667.0	660.7	648.8	640.9	636.9
42.5°	632.2	629.0	615.5	606.0	603.6
45°	598.1	592.6	579.9	571.2	568.8
47.5°	562.5	558.5	546.6	537.1	530.8
50°	526.0	522.8	511.8	500.7	495.9
52.5°	490.4	486.4	474.5	465.0	458.7
55°	452.3	450.0	438.9	429.4	424.6
57.5°	416.7	414.3	403.2	393.7	389.0
60°	379.5	375.5	365.2	358.1	354.1
62.5°	343.0	339.8	328.8	322.4	318.5
65°	306.6	302.6	294.7	286.8	282.8
67.5°	269.3	266.2	258.3	250.3	249.5
70°	235.3	229.7	223.4	217.1	214.7
72.5°	198.8	193.3	188.5	183.8	181.4
75°	163.2	159.2	155.3	152.1	151.3
77.5°	128.3	126.7	122.8	122.0	119.6
80°	97.4	95.1	93.5	91.9	91.1
82.5°	67.3	66.5	66.5	65.8	65.0
85°	42.8	42.8	41.2	41.2	40.4
87.5°	20.6	19.8	19.0	19.0	19.0
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	18.85	20.46	19.21	20.78	21.09	18.47	20.09	18.84	20.40	20.72
	3H	20.61	22.07	20.99	22.39	22.76	20.19	21.64	20.56	21.97	22.33
	4H	21.26	22.64	21.66	22.99	23.36	20.83	22.20	21.23	22.55	22.93
	6H	21.74	23.01	22.15	23.38	23.77	21.31	22.58	21.72	22.94	23.33
	8H	21.89	23.10	22.31	23.49	23.89	21.46	22.68	21.89	23.07	23.47
	12H	21.99	23.16	22.42	23.54	23.97	21.57	22.74	22.00	23.12	23.55
4H	2H	19.42	20.79	19.82	21.14	21.52	19.12	20.50	19.52	20.84	21.22
	3H	21.40	22.55	21.81	22.95	23.35	21.05	22.20	21.46	22.60	23.00
	4H	22.18	23.22	22.61	23.64	24.07	21.82	22.86	22.25	23.27	23.71
	6H	22.79	23.69	23.24	24.14	24.59	22.42	23.33	22.88	23.77	24.23
	8H	22.98	23.83	23.44	24.28	24.74	22.63	23.48	23.09	23.92	24.39
	12H	23.14	23.90	23.62	24.37	24.84	22.78	23.55	23.26	24.02	24.49
8H	4H	22.46	23.31	22.92	23.75	24.22	22.14	22.99	22.60	23.43	23.90
	6H	23.18	23.89	23.67	24.38	24.85	22.86	23.57	23.36	24.06	24.53
	8H	23.45	24.09	23.96	24.59	25.08	23.14	23.78	23.65	24.28	24.77
	12H	23.68	24.24	24.19	24.73	25.29	23.37	23.94	23.88	24.43	24.99
12H	4H	22.49	23.25	22.97	23.73	24.20	22.17	22.94	22.65	23.41	23.88
	6H	23.23	23.87	23.74	24.37	24.86	22.92	23.56	23.43	24.06	24.55
	8H	23.56	24.12	24.06	24.61	25.17	23.26	23.82	23.77	24.31	24.88