

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: P242718

Luminaire Tested: S124RDRP-S795D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242718  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-26)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-S795D930-X4F0-XX-UDD-F-W  
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

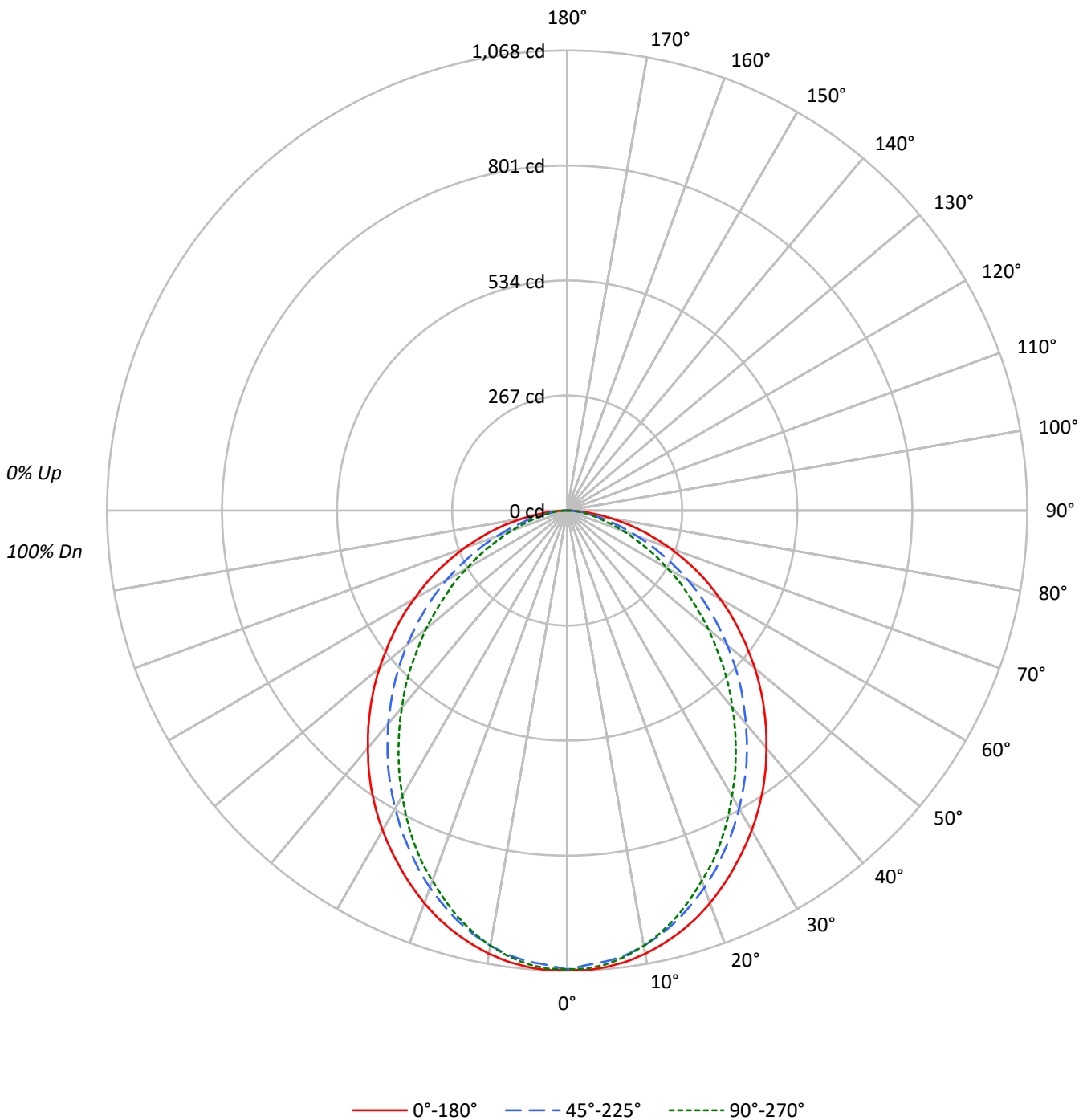
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2460.3 lumens  
Efficiency: N/A  
Efficacy: 93.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
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 (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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85																												
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72																												
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62																												
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	54																												
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47																												
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41																												
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37																												
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33																												
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30																												
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27																												

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

	0°	45°	90°
0°	9465	9465	9465
5°	9486	9370	9428
10°	9427	9257	9257
15°	9318	9064	8995
20°	9170	8808	8646
25°	8980	8508	8293
30°	8795	8193	7850
35°	8591	7865	7405
40°	8344	7492	6925
45°	8117	7123	6436
50°	7859	6697	5919
55°	7581	6255	5357
60°	7276	5769	4782
65°	6996	5161	4219
70°	6591	4491	3581
75°	6075	3723	2912
80°	5298	2836	2672
85°	4488	2580	2407

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8117 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.1	4.1
10°-20°	279.2	11.3
20°-30°	403.1	16.4
30°-40°	456.8	18.6
40°-50°	441.0	17.9
50°-60°	366.7	14.9
60°-70°	253.1	10.3
70°-80°	127.9	5.2
80°-90°	32.5	1.3
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°	782.3	31.8
0°-40°	1239.1	50.4
0°-60°	2046.9	83.2
0°-90°	2460.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2460.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1065	1065	1065	1065	1065	
5°	1063	1060	1050	1058	1057	101
15°	1013	1005	985	983	978	285
25°	916	901	868	854	846	422
35°	792	766	725	697	682	495
45°	646	616	567	527	512	498
55°	489	457	404	361	346	438
65°	333	298	245	210	201	328
75°	177	147	108	90	85	187
85°	44	28	25	24	24	51
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1064.8	1064.8	1064.8	1064.8	1064.8
2.5°	1068.0	1064.8	1055.8	1064.8	1064.0
5°	1063.1	1059.9	1050.1	1058.3	1056.6
7.5°	1055.8	1052.6	1040.3	1046.0	1043.6
10°	1044.4	1040.3	1025.6	1028.9	1025.6
12.5°	1029.7	1024.8	1006.9	1008.5	1003.6
15°	1012.6	1005.3	984.9	983.3	977.5
17.5°	993.0	982.4	958.8	954.7	946.6
20°	969.4	958.8	931.1	924.5	914.0
22.5°	943.3	931.1	900.9	890.3	882.2
25°	915.6	900.9	867.5	853.6	845.5
27.5°	887.0	869.1	834.1	817.7	806.3
30°	856.9	836.5	798.2	777.8	764.8
32.5°	825.1	801.4	761.5	737.0	724.8
35°	791.7	765.6	724.8	697.1	682.4
37.5°	756.6	729.7	684.9	654.7	640.0
40°	719.1	692.2	645.7	611.5	596.8
42.5°	683.2	654.7	605.8	570.7	555.2
45°	645.7	615.6	566.6	526.7	512.0
47.5°	607.4	576.4	525.9	484.3	468.0
50°	568.3	536.5	484.3	443.5	428.0
52.5°	528.3	497.3	443.5	401.9	385.6
55°	489.2	456.6	403.6	361.2	345.7
57.5°	450.9	416.6	364.4	321.2	309.8
60°	409.3	376.7	324.5	282.1	269.0
62.5°	371.8	337.5	283.7	245.4	235.6
65°	332.6	297.6	245.4	210.3	200.6
67.5°	291.9	258.4	209.5	178.6	167.1
70°	253.6	219.3	172.8	145.9	137.8
72.5°	212.8	182.6	139.4	117.4	110.1
75°	176.9	146.8	108.4	89.7	84.8
77.5°	139.4	113.3	80.7	67.7	66.0
80°	103.5	79.9	55.4	53.0	52.2
82.5°	72.6	51.4	39.9	38.3	37.5
85°	44.0	27.7	25.3	23.6	23.6
87.5°	18.8	12.2	11.4	10.6	11.4
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	19.15	20.72	19.52	21.03	21.35	17.18	18.75	17.55	19.06	19.38
	3H	20.92	22.33	21.30	22.66	23.02	18.44	19.84	18.81	20.17	20.53
	4H	21.58	22.91	21.98	23.25	23.63	18.81	20.14	19.21	20.48	20.86
	6H	22.06	23.28	22.47	23.65	24.04	19.07	20.30	19.49	20.66	21.06
	8H	22.21	23.37	22.63	23.76	24.16	19.17	20.33	19.59	20.72	21.12
	12H	22.31	23.42	22.74	23.81	24.23	19.23	20.35	19.66	20.73	21.16
4H	2H	19.49	20.81	19.89	21.16	21.54	17.88	19.20	18.28	19.55	19.93
	3H	21.46	22.56	21.87	22.96	23.36	19.31	20.41	19.72	20.81	21.21
	4H	22.24	23.23	22.67	23.64	24.08	19.77	20.76	20.20	21.17	21.61
	6H	22.83	23.70	23.29	24.14	24.60	20.11	20.98	20.57	21.42	21.88
	8H	23.03	23.83	23.49	24.28	24.74	20.24	21.05	20.70	21.49	21.96
	12H	23.17	23.89	23.65	24.37	24.84	20.34	21.06	20.82	21.54	22.01
8H	4H	22.33	23.14	22.79	23.58	24.05	20.08	20.89	20.54	21.33	21.80
	6H	23.00	23.67	23.50	24.16	24.64	20.51	21.18	21.01	21.67	22.15
	8H	23.25	23.85	23.76	24.35	24.84	20.69	21.29	21.20	21.80	22.29
	12H	23.44	23.97	23.95	24.46	25.03	20.85	21.38	21.35	21.87	22.43
12H	4H	22.32	23.05	22.80	23.52	23.99	20.12	20.84	20.60	21.32	21.79
	6H	22.99	23.59	23.50	24.10	24.59	20.56	21.16	21.08	21.67	22.16
	8H	23.27	23.80	23.78	24.30	24.86	20.79	21.32	21.30	21.81	22.38