

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: P243559

Luminaire Tested: S124RDRP-H795D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243559  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-65)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-H795D927-X4F0-XX-UDD-F-W  
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

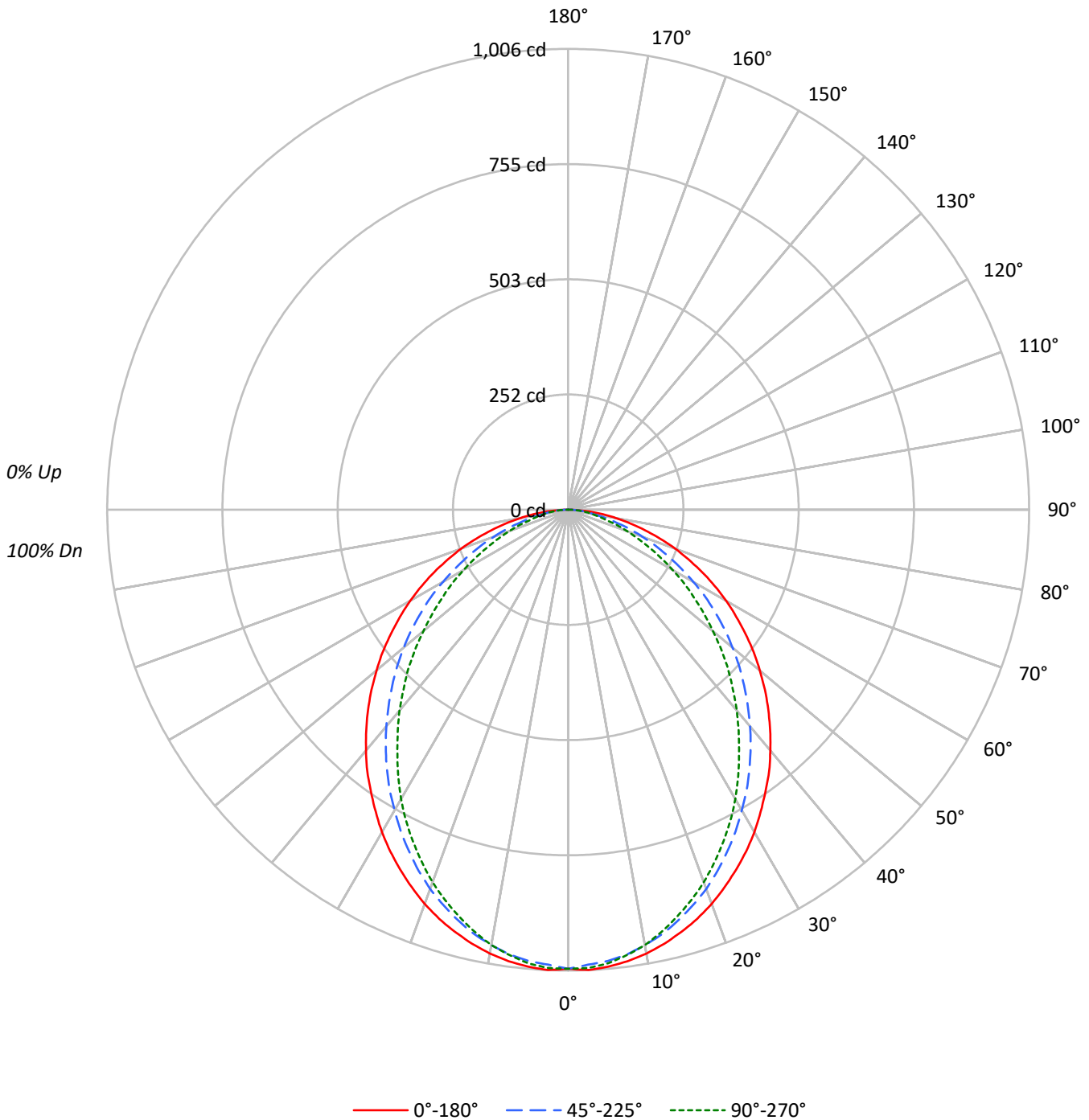
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2363.3 lumens  
Efficiency: N/A  
Efficacy: 100.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.6  
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	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	34	33
9	58	45	37	32	57	45	37	32	44	37	32	42	36	31	41	36	31	30
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27

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

	0°	45°	90°
0°	8908	8908	8908
5°	8936	8824	8870
10°	8879	8712	8712
15°	8780	8543	8461
20°	8662	8333	8186
25°	8502	8067	7849
30°	8344	7774	7486
35°	8146	7489	7054
40°	7965	7166	6643
45°	7764	6825	6211
50°	7549	6475	5707
55°	7313	6075	5204
60°	7088	5614	4681
65°	6783	5071	4091
70°	6458	4478	3555
75°	5969	3733	2895
80°	5452	2918	2652
85°	4824	2794	2642

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7764 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.3	4.0
10°-20°	263.2	11.1
20°-30°	381.7	16.2
30°-40°	435.0	18.4
40°-50°	423.3	17.9
50°-60°	355.6	15.0
60°-70°	247.7	10.5
70°-80°	127.9	5.4
80°-90°	34.6	1.5
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°	739.2	31.3
0°-40°	1174.2	49.7
0°-60°	1953.1	82.6
0°-90°	2363.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2363.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1002	1002	1002	1002	1002	
5°	1002	998	989	996	994	95
15°	954	947	928	927	919	269
25°	867	851	822	811	800	399
35°	751	728	690	664	650	470
45°	618	588	543	508	494	476
55°	472	442	392	352	336	423
65°	322	291	241	206	194	319
75°	174	147	109	91	84	185
85°	47	30	27	26	26	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1002.2	1002.2	1002.2	1002.2	1002.2
2.5°	1005.9	1003.0	994.1	1002.2	1001.5
5°	1001.5	998.5	988.9	996.3	994.1
7.5°	994.1	990.4	979.3	984.5	980.8
10°	983.7	980.0	965.2	968.9	965.2
12.5°	970.4	965.2	949.0	949.7	943.8
15°	954.1	946.7	928.3	926.8	919.4
17.5°	936.4	926.8	905.3	901.6	893.5
20°	915.7	903.8	880.9	872.8	865.4
22.5°	892.0	878.0	852.8	843.2	833.6
25°	866.9	850.6	822.5	810.7	800.3
27.5°	841.0	821.7	791.4	776.6	766.3
30°	812.9	790.7	757.4	740.4	729.3
32.5°	781.8	759.6	724.9	704.1	690.1
35°	750.7	727.8	690.1	664.2	650.1
37.5°	720.4	694.5	653.8	627.2	610.9
40°	686.4	659.0	617.6	587.3	572.5
42.5°	652.4	624.3	579.9	548.1	531.8
45°	617.6	588.0	542.9	508.1	494.1
47.5°	582.1	552.5	505.9	469.7	453.4
50°	545.9	516.3	468.2	428.3	412.7
52.5°	510.4	479.3	431.2	390.5	374.3
55°	471.9	441.6	392.0	352.1	335.8
57.5°	434.9	403.1	355.0	314.3	301.0
60°	398.7	366.9	315.8	276.6	263.3
62.5°	360.2	328.4	278.1	240.4	228.6
65°	322.5	291.4	241.1	206.4	194.5
67.5°	284.0	255.9	207.1	173.8	164.2
70°	248.5	216.7	172.3	143.5	136.8
72.5°	210.8	182.7	139.8	116.1	110.9
75°	173.8	147.2	108.7	91.0	84.3
77.5°	139.8	113.9	82.1	67.3	67.3
80°	106.5	83.6	57.0	53.3	51.8
82.5°	75.4	54.0	42.2	39.2	38.5
85°	47.3	30.3	27.4	25.9	25.9
87.5°	22.9	14.1	14.1	13.3	13.3
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	19.05	20.63	19.41	20.94	21.25	17.15	18.73	17.52	19.04	19.36
	3H	20.86	22.28	21.24	22.61	22.97	18.41	19.83	18.79	20.16	20.52
	4H	21.55	22.88	21.95	23.23	23.61	18.81	20.14	19.21	20.49	20.87
	6H	22.06	23.30	22.47	23.66	24.05	19.09	20.32	19.50	20.69	21.08
	8H	22.23	23.41	22.66	23.80	24.20	19.19	20.37	19.62	20.76	21.16
	12H	22.35	23.48	22.78	23.86	24.29	19.27	20.40	19.70	20.78	21.21
4H	2H	19.40	20.73	19.80	21.08	21.46	17.85	19.19	18.25	19.54	19.91
	3H	21.42	22.53	21.83	22.93	23.33	19.31	20.42	19.72	20.81	21.22
	4H	22.23	23.23	22.66	23.65	24.08	19.78	20.79	20.22	21.20	21.64
	6H	22.87	23.74	23.33	24.19	24.64	20.15	21.02	20.61	21.46	21.92
	8H	23.09	23.91	23.55	24.35	24.81	20.29	21.10	20.75	21.55	22.01
	12H	23.25	23.99	23.74	24.46	24.93	20.40	21.14	20.89	21.61	22.08
8H	4H	22.34	23.15	22.80	23.60	24.06	20.12	20.93	20.58	21.38	21.84
	6H	23.06	23.74	23.56	24.23	24.70	20.57	21.24	21.06	21.73	22.21
	8H	23.33	23.94	23.85	24.45	24.94	20.76	21.37	21.27	21.88	22.36
	12H	23.56	24.10	24.07	24.59	25.15	20.95	21.48	21.45	21.97	22.54
12H	4H	22.33	23.06	22.81	23.54	24.01	20.16	20.89	20.64	21.37	21.84
	6H	23.05	23.66	23.57	24.17	24.66	20.63	21.24	21.14	21.75	22.23
	8H	23.37	23.91	23.88	24.40	24.96	20.88	21.41	21.39	21.91	22.47