

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: P243588

Luminaire Tested: S124RDRP-H795D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243588  
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-H795D940-X4F0-XX-UDD-F-W  
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

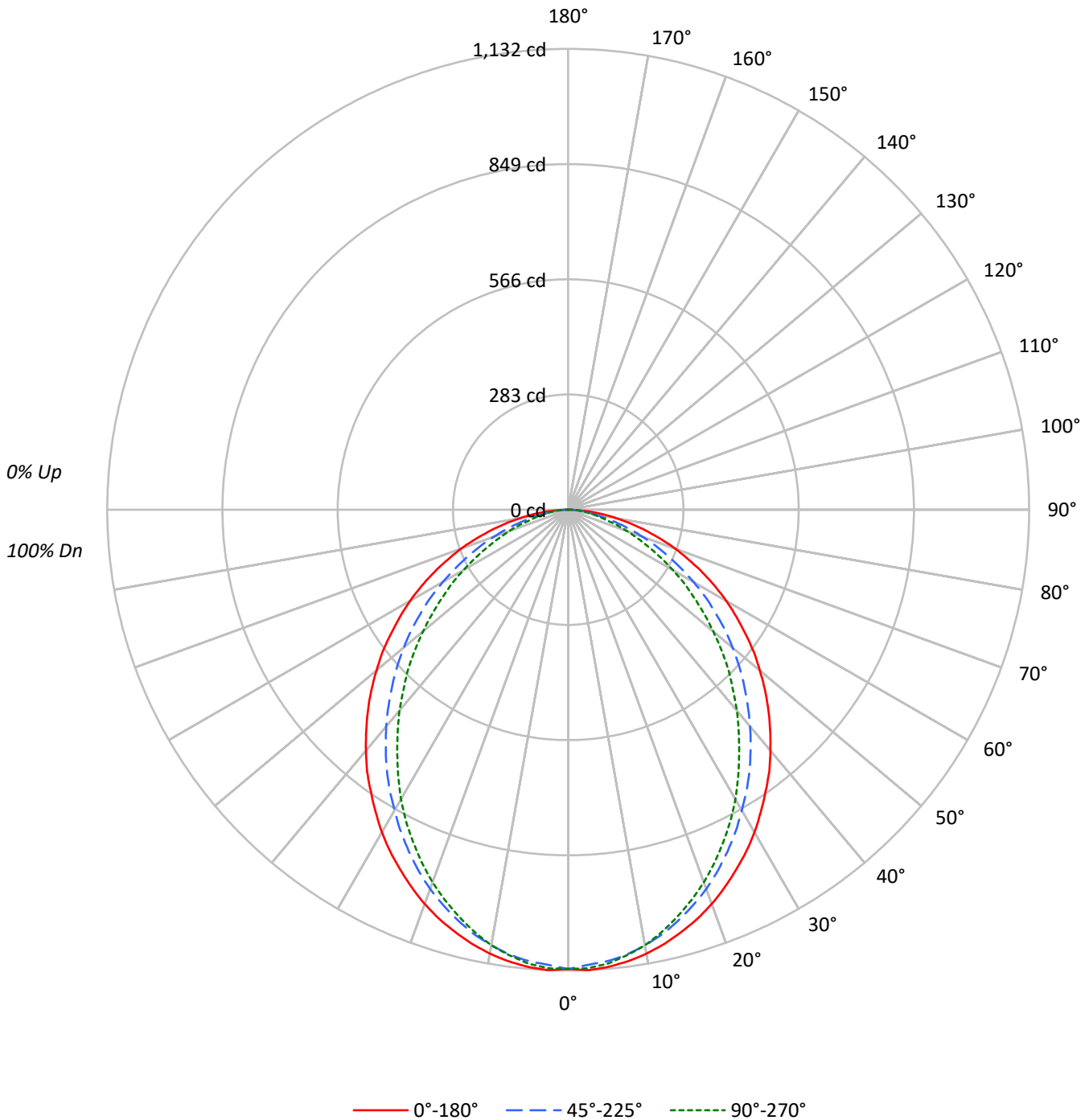
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2660.2 lumens  
Efficiency: N/A  
Efficacy: 112.7 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°	10028	10028	10028
5°	10059	9932	9985
10°	9995	9807	9807
15°	9883	9616	9524
20°	9750	9380	9214
25°	9570	9080	8835
30°	9392	8751	8426
35°	9170	8429	7941
40°	8965	8067	7477
45°	8739	7682	6992
50°	8496	7288	6425
55°	8232	6839	5858
60°	7979	6320	5269
65°	7635	5708	4606
70°	7269	5042	4002
75°	6721	4204	3259
80°	6138	3281	2984
85°	5436	3141	2968

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8739 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.1	4.0
10°-20°	296.3	11.1
20°-30°	429.7	16.2
30°-40°	489.7	18.4
40°-50°	476.5	17.9
50°-60°	400.3	15.0
60°-70°	278.8	10.5
70°-80°	144.0	5.4
80°-90°	38.9	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°	832.0	31.3
0°-40°	1321.8	49.7
0°-60°	2198.5	82.6
0°-90°	2660.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2660.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1128	1128	1128	1128	1128	
5°	1127	1124	1113	1122	1119	107
15°	1074	1066	1045	1043	1035	303
25°	976	958	926	912	901	450
35°	845	819	777	748	732	529
45°	695	662	611	572	556	536
55°	531	497	441	396	378	476
65°	363	328	271	232	219	359
75°	196	166	122	102	95	208
85°	53	34	31	29	29	61
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1128.1	1128.1	1128.1	1128.1	1128.1
2.5°	1132.3	1129.0	1119.0	1128.1	1127.3
5°	1127.3	1124.0	1113.1	1121.5	1119.0
7.5°	1119.0	1114.8	1102.3	1108.2	1104.0
10°	1107.3	1103.2	1086.5	1090.7	1086.5
12.5°	1092.3	1086.5	1068.2	1069.0	1062.4
15°	1074.0	1065.7	1044.9	1043.2	1034.9
17.5°	1054.0	1043.2	1019.1	1014.9	1005.7
20°	1030.7	1017.4	991.6	982.4	974.1
22.5°	1004.1	988.3	960.0	949.1	938.3
25°	975.8	957.5	925.8	912.5	900.8
27.5°	946.6	925.0	890.9	874.2	862.5
30°	915.0	890.0	852.6	833.4	820.9
32.5°	880.0	855.1	815.9	792.6	776.8
35°	845.1	819.3	776.8	747.6	731.8
37.5°	810.9	781.8	736.0	706.0	687.7
40°	772.6	741.8	695.2	661.1	644.4
42.5°	734.3	702.7	652.7	616.9	598.6
45°	695.2	661.9	611.1	572.0	556.2
47.5°	655.2	621.9	569.5	528.7	510.4
50°	614.4	581.1	527.0	482.1	464.6
52.5°	574.5	539.5	485.4	439.6	421.3
55°	531.2	497.0	441.3	396.3	378.0
57.5°	489.6	453.8	399.6	353.8	338.9
60°	448.8	413.0	355.5	311.4	296.4
62.5°	405.5	369.7	313.0	270.6	257.3
65°	363.0	328.0	271.4	232.3	219.0
67.5°	319.7	288.1	233.1	195.7	184.8
70°	279.7	243.9	194.0	161.5	154.0
72.5°	237.3	205.6	157.4	130.7	124.9
75°	195.7	165.7	122.4	102.4	94.9
77.5°	157.4	128.2	92.4	75.8	75.8
80°	119.9	94.1	64.1	59.9	58.3
82.5°	84.9	60.8	47.5	44.1	43.3
85°	53.3	34.1	30.8	29.1	29.1
87.5°	25.8	15.8	15.8	15.0	15.0
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	19.46	21.04	19.83	21.35	21.67	17.56	19.14	17.93	19.45	19.77
	3H	21.28	22.70	21.65	23.02	23.38	18.83	20.25	19.20	20.57	20.93
	4H	21.96	23.29	22.36	23.64	24.02	19.22	20.56	19.62	20.90	21.28
	6H	22.47	23.71	22.89	24.07	24.46	19.50	20.73	19.91	21.10	21.49
	8H	22.64	23.82	23.07	24.21	24.61	19.60	20.78	20.03	21.17	21.57
	12H	22.76	23.89	23.19	24.27	24.70	19.68	20.81	20.11	21.19	21.62
4H	2H	19.81	21.15	20.21	21.49	21.87	18.27	19.60	18.66	19.95	20.32
	3H	21.83	22.94	22.24	23.34	23.74	19.72	20.83	20.13	21.23	21.63
	4H	22.64	23.64	23.07	24.06	24.50	20.20	21.20	20.63	21.61	22.05
	6H	23.28	24.16	23.74	24.60	25.06	20.56	21.43	21.02	21.88	22.33
	8H	23.50	24.32	23.96	24.76	25.23	20.70	21.51	21.16	21.96	22.42
	12H	23.67	24.40	24.15	24.87	25.34	20.82	21.55	21.30	22.02	22.49
8H	4H	22.75	23.56	23.21	24.01	24.47	20.53	21.34	20.99	21.79	22.25
	6H	23.47	24.15	23.97	24.64	25.11	20.98	21.66	21.47	22.14	22.62
	8H	23.75	24.35	24.26	24.86	25.35	21.17	21.78	21.68	22.29	22.77
	12H	23.97	24.51	24.48	25.00	25.56	21.36	21.89	21.86	22.38	22.95
12H	4H	22.74	23.47	23.22	23.95	24.42	20.57	21.30	21.05	21.78	22.25
	6H	23.47	24.07	23.98	24.58	25.07	21.04	21.65	21.55	22.16	22.64
	8H	23.78	24.32	24.29	24.81	25.37	21.29	21.83	21.80	22.32	22.88