

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: P243240

Luminaire Tested: S122RDRP-H865D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243240  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-63)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDRP-H865D935-X4F0-XX-UDD-F-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

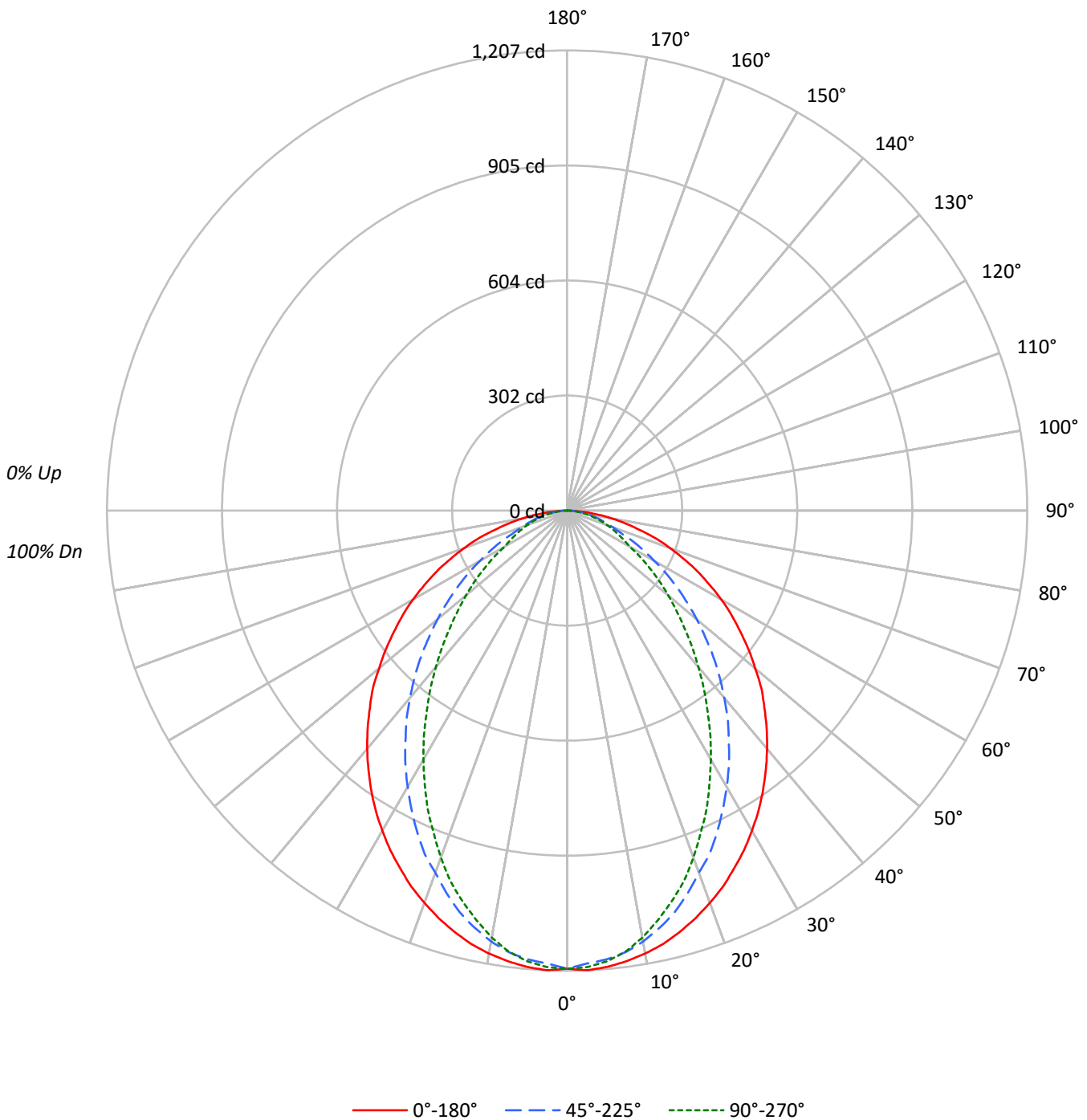
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2464.2 lumens  
Efficiency: N/A  
Efficacy: 78.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.5  
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	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	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86																												
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74																												
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64																												
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55																												
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49																												
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43																												
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39																												
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35																												
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32																												
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29																												

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

	0°	45°	90°
0°	22888	22888	22888
5°	22975	22598	22698
10°	22819	22198	21997
15°	22549	21506	20915
20°	22192	20489	19628
25°	21767	19567	18171
30°	21319	18401	16577
35°	20828	17189	14921
40°	20287	15931	13303
45°	19716	14606	11702
50°	19078	13148	10262
55°	18421	11706	8847
60°	17813	10072	7227
65°	17010	8505	6684
70°	15995	7045	6237
75°	14572	6410	5726
80°	13075	5682	5123
85°	10884	4764	4524

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 19716 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.5	4.6
10°-20°	308.4	12.5
20°-30°	432.7	17.6
30°-40°	471.3	19.1
40°-50°	433.2	17.6
50°-60°	339.9	13.8
60°-70°	221.8	9.0
70°-80°	114.7	4.7
80°-90°	29.7	1.2
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°	853.7	34.6
0°-40°	1325.0	53.8
0°-60°	2098.1	85.1
0°-90°	2464.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2464.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1202	1202	1202	1202	1202	
5°	1202	1195	1182	1190	1187	114
15°	1144	1130	1091	1069	1061	322
25°	1036	999	931	885	865	477
35°	896	837	739	671	642	560
45°	732	657	542	463	434	565
55°	555	472	352	286	266	497
65°	377	286	189	153	148	373
75°	198	123	87	80	78	212
85°	50	24	22	21	21	57
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1201.6	1201.6	1201.6	1201.6	1201.6
2.5°	1206.8	1201.6	1189.1	1200.5	1198.5
5°	1201.6	1195.3	1181.9	1190.2	1187.1
7.5°	1192.2	1186.0	1168.4	1172.5	1167.4
10°	1179.8	1171.5	1147.7	1143.5	1137.3
12.5°	1164.2	1152.8	1120.7	1108.3	1100.0
15°	1143.5	1130.0	1090.6	1068.9	1060.6
17.5°	1120.7	1101.0	1052.3	1027.4	1019.1
20°	1094.8	1072.0	1010.8	984.9	968.3
22.5°	1067.8	1038.8	975.6	935.1	915.4
25°	1035.7	999.4	931.0	885.4	864.6
27.5°	1004.6	962.1	884.3	831.5	808.6
30°	969.3	922.7	836.6	775.5	753.7
32.5°	934.1	880.2	790.0	723.6	698.8
35°	895.7	836.6	739.2	670.8	641.7
37.5°	856.3	795.2	692.5	616.9	588.9
40°	815.9	747.5	640.7	561.9	535.0
42.5°	774.4	705.0	592.0	511.1	485.2
45°	731.9	657.3	542.2	463.4	434.4
47.5°	691.5	610.6	491.4	416.8	388.8
50°	643.8	564.0	443.7	368.0	346.3
52.5°	600.3	517.3	397.1	324.5	305.8
55°	554.7	471.7	352.5	286.1	266.4
57.5°	512.1	424.0	307.9	247.8	229.1
60°	467.6	378.4	264.4	209.4	189.7
62.5°	420.9	331.8	226.0	174.2	168.0
65°	377.4	286.1	188.7	153.4	148.3
67.5°	330.7	243.6	150.3	134.8	129.6
70°	287.2	202.2	126.5	115.1	112.0
72.5°	244.7	162.8	106.8	97.5	94.3
75°	198.0	123.4	87.1	79.8	77.8
77.5°	157.6	87.1	69.5	64.3	62.2
80°	119.2	63.2	51.8	48.7	46.7
82.5°	81.9	42.5	36.3	34.2	33.2
85°	49.8	23.8	21.8	20.7	20.7
87.5°	19.7	9.3	9.3	8.3	8.3
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	22.12	23.64	22.49	23.96	24.27	18.01	19.53	18.37	19.85	20.16
	3H	23.89	25.26	24.27	25.58	25.94	19.30	20.67	19.68	21.00	21.36
	4H	24.55	25.83	24.95	26.18	26.56	19.81	21.09	20.21	21.44	21.82
	6H	25.04	26.22	25.45	26.59	26.98	20.19	21.38	20.61	21.74	22.14
	8H	25.21	26.33	25.63	26.72	27.12	20.32	21.44	20.74	21.83	22.23
	12H	25.32	26.39	25.75	26.78	27.21	20.40	21.48	20.83	21.86	22.29
4H	2H	22.22	23.51	22.62	23.85	24.23	18.72	20.00	19.12	20.35	20.72
	3H	24.16	25.23	24.57	25.63	26.03	20.19	21.25	20.60	21.65	22.05
	4H	24.91	25.86	25.34	26.28	26.72	20.79	21.75	21.23	22.17	22.61
	6H	25.50	26.33	25.96	26.77	27.23	21.29	22.12	21.74	22.56	23.02
	8H	25.71	26.49	26.17	26.93	27.40	21.45	22.23	21.91	22.67	23.14
	12H	25.87	26.57	26.36	27.05	27.52	21.56	22.26	22.05	22.74	23.21
8H	4H	24.93	25.71	25.40	26.15	26.62	21.16	21.93	21.62	22.38	22.84
	6H	25.57	26.21	26.07	26.70	27.18	21.75	22.39	22.25	22.88	23.36
	8H	25.82	26.40	26.33	26.90	27.39	21.97	22.55	22.48	23.06	23.55
	12H	26.03	26.54	26.54	27.04	27.60	22.15	22.66	22.66	23.15	23.72
12H	4H	24.92	25.61	25.40	26.09	26.56	21.20	21.89	21.68	22.37	22.84
	6H	25.55	26.13	26.06	26.64	27.13	21.81	22.39	22.33	22.90	23.39
	8H	25.83	26.34	26.34	26.84	27.40	22.09	22.60	22.60	23.09	23.66