

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: P242378

Luminaire Tested: S122RDRP-S485D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242378  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-24)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDRP-S485D935-X4F0-XX-UDD-F-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

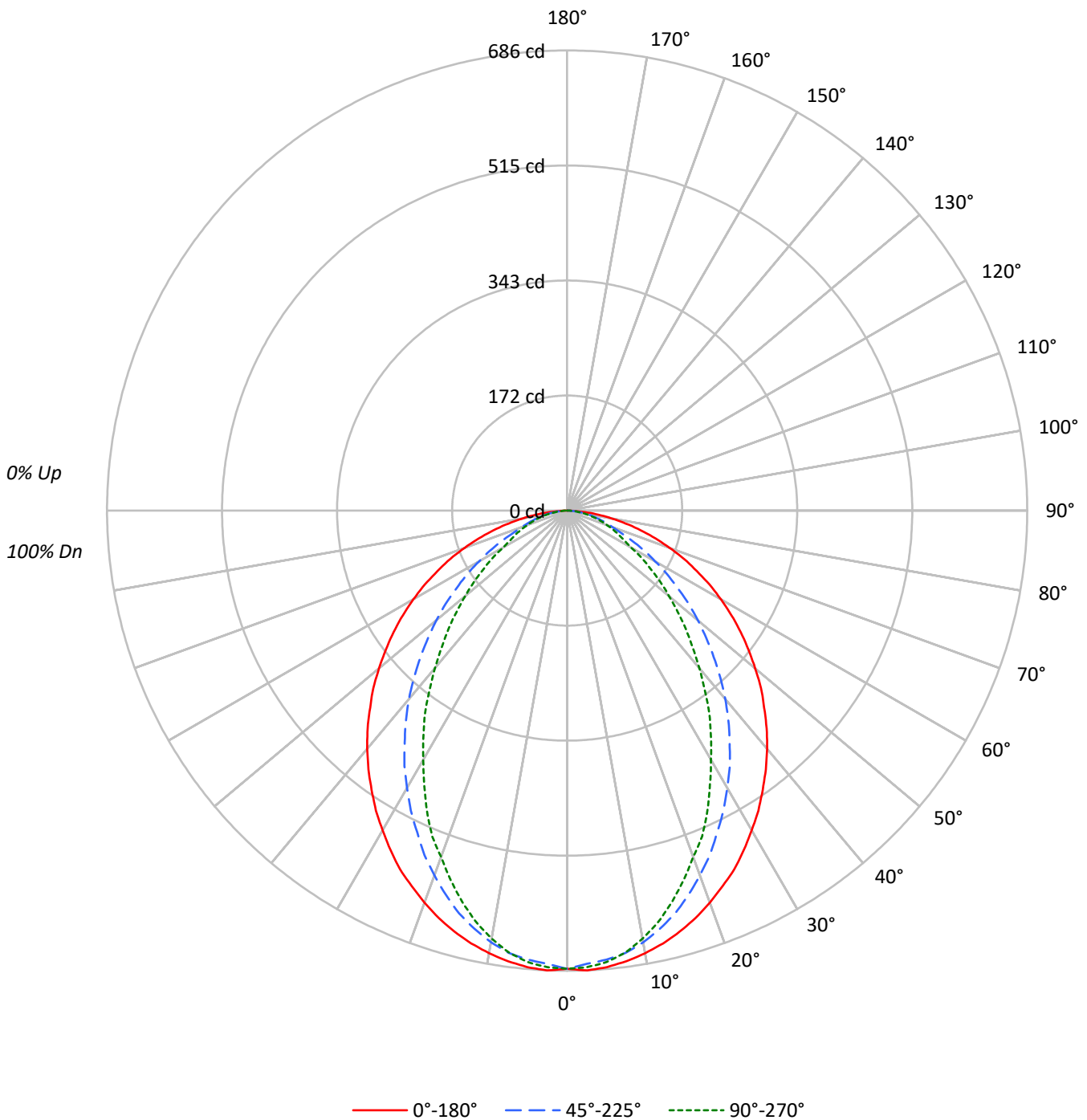
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1404.9 lumens  
Efficiency: N/A  
Efficacy: 74.7 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): 18.8  
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	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	78	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°	13011	13011	13011
5°	13061	12849	12920
10°	12961	12640	12531
15°	12812	12264	11911
20°	12606	11730	11140
25°	12396	11122	10395
30°	12101	10498	9436
35°	11817	9817	8597
40°	11530	9116	7624
45°	11190	8326	6745
50°	10846	7530	5879
55°	10491	6672	5051
60°	10080	5771	4190
65°	9614	4850	3817
70°	9055	3993	3514
75°	8375	3643	3275
80°	7393	3258	2984
85°	5813	2557	2557

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11190 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.0	4.6
10°-20°	175.8	12.5
20°-30°	246.8	17.6
30°-40°	269.0	19.1
40°-50°	247.2	17.6
50°-60°	194.1	13.8
60°-70°	126.4	9.0
70°-80°	65.1	4.6
80°-90°	16.6	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°	486.5	34.6
0°-40°	755.5	53.8
0°-60°	1196.9	85.2
0°-90°	1404.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1404.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	683	683	683	683	683	
5°	683	680	672	678	676	65
15°	650	643	622	610	604	183
25°	590	570	529	504	495	271
35°	508	477	422	383	370	318
45°	415	374	309	265	250	321
55°	316	268	201	164	152	282
65°	213	163	108	87	85	211
75°	114	70	50	45	44	120
85°	27	14	12	12	12	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	683.1	683.1	683.1	683.1	683.1
2.5°	686.2	683.1	676.3	682.5	681.3
5°	683.1	680.0	672.0	677.6	675.7
7.5°	677.6	673.9	665.2	667.7	664.6
10°	670.1	665.8	653.5	651.6	647.9
12.5°	660.9	655.3	638.6	634.9	628.1
15°	649.7	642.9	621.9	610.2	604.0
17.5°	636.8	626.9	600.9	587.3	577.4
20°	621.9	609.6	578.7	563.2	549.6
22.5°	605.9	591.6	555.8	534.8	525.5
25°	589.8	570.0	529.2	503.8	494.6
27.5°	570.6	549.6	504.5	475.4	461.2
30°	550.2	526.7	477.3	445.7	429.0
32.5°	530.4	502.0	451.3	414.2	398.8
35°	508.2	476.6	422.2	383.3	369.7
37.5°	486.5	452.5	395.0	352.4	336.9
40°	463.7	426.6	366.6	322.7	306.6
42.5°	440.2	400.6	338.2	292.4	277.0
45°	415.4	374.0	309.1	265.2	250.4
47.5°	392.0	348.1	281.3	237.4	223.8
50°	366.0	322.1	254.1	211.4	198.4
52.5°	340.6	294.3	228.1	187.3	175.6
55°	315.9	267.7	200.9	163.8	152.1
57.5°	290.6	241.1	176.8	142.2	132.3
60°	264.6	215.1	151.5	119.9	110.0
62.5°	239.3	189.8	129.8	100.2	95.2
65°	213.3	163.2	107.6	86.6	84.7
67.5°	188.6	138.5	86.6	76.0	74.2
70°	162.6	114.4	71.7	65.5	63.1
72.5°	137.9	92.1	60.0	55.0	53.8
75°	113.8	70.5	49.5	45.1	44.5
77.5°	89.6	50.1	38.9	36.5	35.2
80°	67.4	35.9	29.7	27.2	27.2
82.5°	47.0	24.1	20.4	19.2	19.2
85°	26.6	13.6	11.7	11.7	11.7
87.5°	9.9	4.9	4.9	4.3	4.3
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	20.15	21.67	20.51	21.98	22.30	16.11	17.63	16.47	17.95	18.26
	3H	21.92	23.28	22.29	23.61	23.97	17.38	18.74	17.75	19.07	19.43
	4H	22.58	23.86	22.98	24.21	24.59	17.88	19.16	18.28	19.51	19.88
	6H	23.07	24.25	23.48	24.62	25.01	18.26	19.44	18.67	19.81	20.20
	8H	23.24	24.36	23.66	24.75	25.15	18.38	19.51	18.81	19.90	20.30
	12H	23.34	24.42	23.77	24.80	25.23	18.46	19.54	18.89	19.92	20.35
4H	2H	20.25	21.53	20.65	21.88	22.26	16.81	18.09	17.21	18.44	18.81
	3H	22.19	23.25	22.60	23.65	24.05	18.25	19.31	18.66	19.71	20.11
	4H	22.94	23.89	23.37	24.31	24.75	18.85	19.80	19.28	20.22	20.66
	6H	23.53	24.36	23.99	24.80	25.26	19.34	20.17	19.79	20.61	21.07
	8H	23.74	24.52	24.21	24.97	25.43	19.50	20.28	19.96	20.72	21.19
	12H	23.90	24.59	24.38	25.07	25.54	19.62	20.31	20.10	20.79	21.26
8H	4H	22.96	23.74	23.42	24.18	24.65	19.20	19.98	19.67	20.42	20.89
	6H	23.60	24.24	24.10	24.73	25.21	19.79	20.43	20.28	20.92	21.40
	8H	23.85	24.43	24.36	24.94	25.42	20.01	20.59	20.52	21.10	21.58
	12H	24.05	24.56	24.56	25.06	25.62	20.19	20.70	20.70	21.19	21.76
12H	4H	22.95	23.64	23.43	24.12	24.59	19.25	19.94	19.73	20.42	20.89
	6H	23.58	24.16	24.09	24.67	25.16	19.85	20.43	20.37	20.94	21.43
	8H	23.86	24.37	24.37	24.87	25.43	20.13	20.64	20.64	21.13	21.69