

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: P242359

Luminaire Tested: S122RDRP-S485D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242359  
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-S485D830-X4F0-XX-UDD-F-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

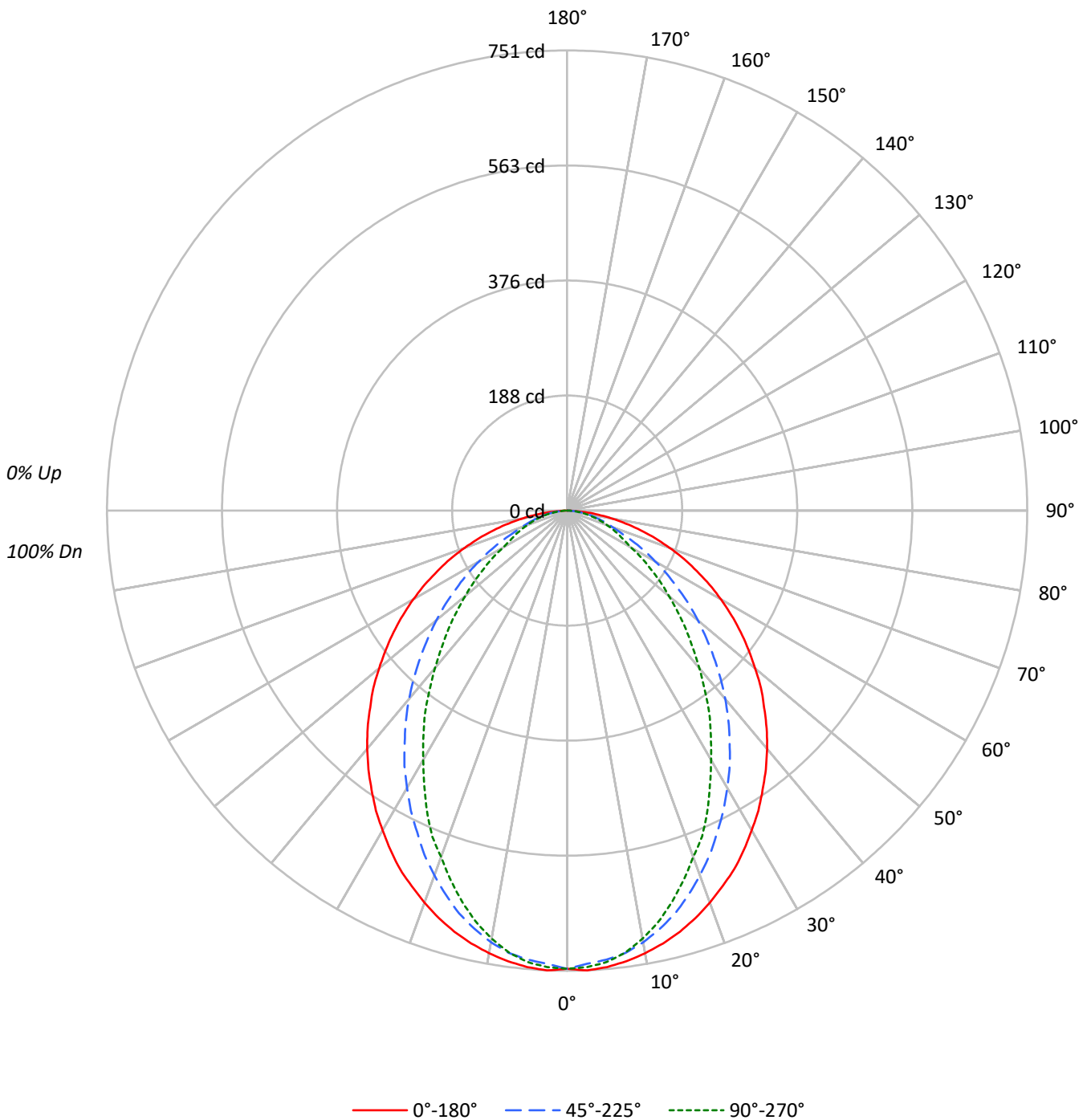
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1538.0 lumens  
Efficiency: N/A  
Efficacy: 81.8 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°	14244	14244	14244
5°	14298	14065	14143
10°	14189	13835	13719
15°	14027	13425	13039
20°	13800	12841	12195
25°	13568	12175	11379
30°	13247	11492	10331
35°	12936	10748	9410
40°	12621	9978	8347
45°	12251	9116	7384
50°	11871	8244	6436
55°	11484	7303	5529
60°	11036	6316	4590
65°	10524	5309	4178
70°	9913	4372	3843
75°	9163	3981	3584
80°	8095	3565	3269
85°	6360	2819	2819

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12251 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.1	4.6
10°-20°	192.4	12.5
20°-30°	270.1	17.6
30°-40°	294.5	19.1
40°-50°	270.6	17.6
50°-60°	212.5	13.8
60°-70°	138.3	9.0
70°-80°	71.2	4.6
80°-90°	18.2	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°	532.6	34.6
0°-40°	827.1	53.8
0°-60°	1310.2	85.2
0°-90°	1538.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1538.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	748	748	748	748	748	
5°	748	744	736	742	740	71
15°	711	704	681	668	661	200
25°	646	624	579	552	541	297
35°	556	522	462	420	405	348
45°	455	409	338	290	274	351
55°	346	293	220	179	166	309
65°	234	179	118	95	93	231
75°	124	77	54	49	49	132
85°	29	15	13	13	13	35
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	747.8	747.8	747.8	747.8	747.8
2.5°	751.2	747.8	740.4	747.2	745.8
5°	747.8	744.4	735.6	741.7	739.7
7.5°	741.7	737.7	728.2	730.9	727.5
10°	733.6	728.9	715.3	713.3	709.3
12.5°	723.5	717.4	699.1	695.0	687.6
15°	711.3	703.8	680.8	668.0	661.2
17.5°	697.1	686.2	657.8	642.9	632.1
20°	680.8	667.3	633.5	616.5	601.6
22.5°	663.2	647.7	608.4	585.4	575.3
25°	645.6	624.0	579.3	551.6	541.4
27.5°	624.7	601.6	552.2	520.4	504.9
30°	602.3	576.6	522.5	488.0	469.7
32.5°	580.7	549.5	494.0	453.4	436.5
35°	556.3	521.8	462.2	419.6	404.7
37.5°	532.6	495.4	432.5	385.8	368.8
40°	507.6	467.0	401.3	353.3	335.7
42.5°	481.9	438.5	370.2	320.1	303.2
45°	454.8	409.4	338.4	290.3	274.1
47.5°	429.1	381.0	307.9	259.9	245.0
50°	400.6	352.6	278.2	231.5	217.2
52.5°	372.9	322.1	249.7	205.1	192.2
55°	345.8	293.0	219.9	179.3	166.5
57.5°	318.1	263.9	193.6	155.7	144.8
60°	289.7	235.5	165.8	131.3	120.5
62.5°	261.9	207.8	142.1	109.6	104.2
65°	233.5	178.7	117.8	94.7	92.7
67.5°	206.4	151.6	94.7	83.2	81.2
70°	178.0	125.2	78.5	71.7	69.0
72.5°	150.9	100.8	65.6	60.2	58.9
75°	124.5	77.2	54.1	49.4	48.7
77.5°	98.1	54.8	42.6	39.9	38.6
80°	73.8	39.3	32.5	29.8	29.8
82.5°	51.4	26.4	22.3	21.0	21.0
85°	29.1	14.9	12.9	12.9	12.9
87.5°	10.8	5.4	5.4	4.7	4.7
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	20.46	21.98	20.83	22.30	22.61	16.43	17.95	16.79	18.26	18.58
	3H	22.23	23.59	22.61	23.92	24.28	17.69	19.06	18.07	19.38	19.74
	4H	22.90	24.18	23.29	24.52	24.90	18.19	19.47	18.59	19.82	20.20
	6H	23.38	24.57	23.80	24.93	25.33	18.57	19.76	18.98	20.12	20.51
	8H	23.55	24.68	23.98	25.07	25.47	18.70	19.82	19.12	20.21	20.61
	12H	23.65	24.73	24.08	25.11	25.54	18.78	19.86	19.21	20.24	20.67
4H	2H	20.57	21.85	20.97	22.20	22.58	17.12	18.40	17.52	18.75	19.13
	3H	22.50	23.56	22.91	23.96	24.36	18.56	19.63	18.97	20.03	20.43
	4H	23.25	24.21	23.68	24.62	25.06	19.16	20.12	19.59	20.53	20.97
	6H	23.84	24.67	24.30	25.12	25.58	19.65	20.48	20.11	20.93	21.38
	8H	24.06	24.83	24.52	25.28	25.75	19.81	20.59	20.28	21.03	21.50
	12H	24.21	24.91	24.69	25.38	25.85	19.93	20.63	20.41	21.10	21.57
8H	4H	23.27	24.05	23.74	24.50	24.96	19.52	20.29	19.98	20.74	21.20
	6H	23.91	24.55	24.41	25.05	25.52	20.10	20.75	20.60	21.24	21.71
	8H	24.16	24.74	24.68	25.25	25.74	20.32	20.90	20.84	21.41	21.90
	12H	24.37	24.88	24.88	25.37	25.93	20.50	21.01	21.01	21.51	22.07
12H	4H	23.26	23.95	23.74	24.43	24.90	19.56	20.25	20.04	20.73	21.20
	6H	23.89	24.47	24.41	24.98	25.47	20.17	20.74	20.68	21.25	21.74
	8H	24.18	24.69	24.69	25.18	25.74	20.44	20.95	20.95	21.44	22.01