

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: P1055199

Luminaire Tested: S122R3DR-S485D830-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055199
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S485D830-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

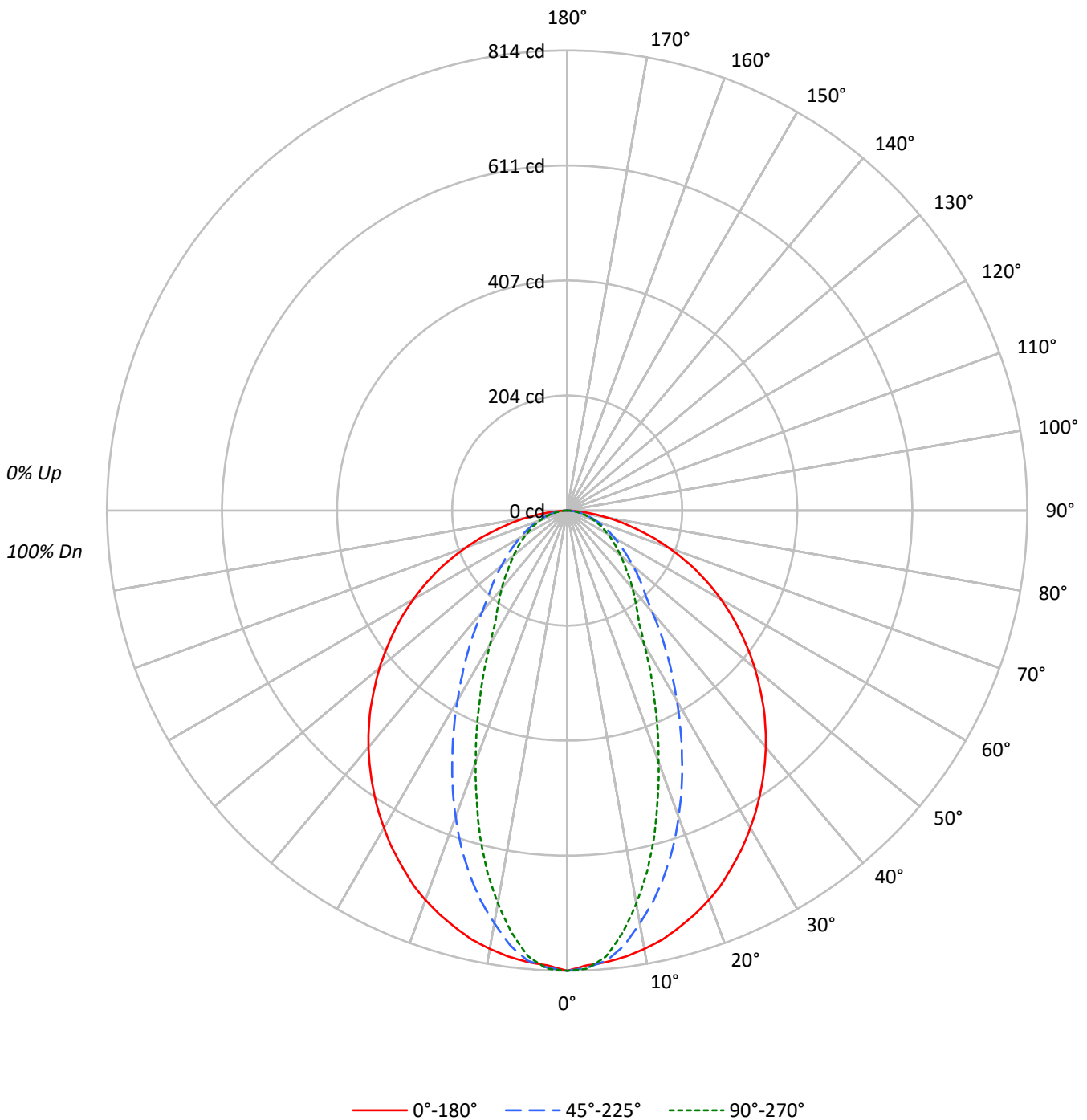
Lumens per Lamp: N/A
Luminaire Lumens: 1231.3 lumens
Efficiency: N/A
Efficacy: 64.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
Input Voltage (V): 120
Input Current (A_{in}): 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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89				87	
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77				75	
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68				66	
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60				58	
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54				52	
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48				46	
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44				42	
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40				38	
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37				35	
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34				32	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15424	15424	15424
5°	15249	15197	15055
10°	15150	14259	13578
15°	14979	13071	11682
20°	14781	11623	9539
25°	14485	10045	7611
30°	14176	8488	5942
35°	13854	7100	4991
40°	13519	5758	4444
45°	13166	5034	3976
50°	12780	4454	3631
55°	12344	4023	3372
60°	11917	3664	3145
65°	11351	3358	2959
70°	10519	3130	2792
75°	9319	2840	2643
80°	7943	2673	2455
85°	5478	2369	2217

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13166 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.6	6.1
10°-20°	188.3	15.3
20°-30°	232.1	18.8
30°-40°	222.7	18.1
40°-50°	192.1	15.6
50°-60°	149.0	12.1
60°-70°	102.0	8.3
70°-80°	55.4	4.5
80°-90°	15.2	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°	495.0	40.2
0°-40°	717.7	58.3
0°-60°	1058.7	86.0
0°-90°	1231.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1231.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	814	814	814	814	814	
5°	802	813	799	789	792	76
15°	764	740	666	612	596	215
25°	693	619	480	392	364	319
35°	599	475	307	229	216	375
45°	491	331	188	155	148	379
55°	374	199	122	106	102	334
65°	253	108	75	68	66	250
75°	127	50	39	37	36	136
85°	25	12	11	11	10	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	814.1	814.1	814.1	814.1	814.1
2.5°	805.2	818.8	809.3	809.3	811.3
5°	801.8	813.4	799.1	788.9	791.6
7.5°	795.7	803.8	775.3	753.5	752.8
10°	787.5	788.2	741.2	712.6	705.8
12.5°	777.3	766.4	706.5	663.6	653.4
15°	763.7	740.5	666.4	611.9	595.6
17.5°	749.4	714.0	623.5	555.4	532.9
20°	733.1	682.0	576.5	498.9	473.1
22.5°	714.7	651.4	529.5	444.5	417.2
25°	692.9	618.7	480.5	392.1	364.1
27.5°	671.8	585.4	433.6	345.8	317.2
30°	648.0	549.3	388.0	301.5	271.6
32.5°	624.2	512.5	345.8	259.3	236.9
35°	599.0	475.1	307.0	228.7	215.8
37.5°	573.1	438.3	270.2	208.3	196.7
40°	546.6	401.6	232.8	188.5	179.7
42.5°	519.3	365.5	206.9	172.2	164.0
45°	491.4	330.8	187.9	155.2	148.4
47.5°	461.5	296.1	169.5	140.9	134.8
50°	433.6	262.7	151.1	128.0	123.2
52.5°	403.6	230.1	136.1	116.4	112.3
55°	373.7	198.7	121.8	105.5	102.1
57.5°	344.4	168.8	108.2	95.3	92.6
60°	314.5	145.0	96.7	85.8	83.0
62.5°	283.8	125.9	85.8	76.9	74.2
65°	253.2	108.2	74.9	68.1	66.0
67.5°	221.2	91.2	65.3	59.9	58.5
70°	189.9	76.2	56.5	51.7	50.4
72.5°	159.3	61.9	47.6	44.2	42.9
75°	127.3	49.7	38.8	36.8	36.1
77.5°	99.4	38.8	31.3	29.9	29.3
80°	72.8	28.6	24.5	23.1	22.5
82.5°	48.3	19.7	17.7	17.0	16.3
85°	25.2	12.3	10.9	10.9	10.2
87.5°	8.2	5.4	5.4	5.4	4.8
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	19.11	20.58	19.48	20.90	21.21	13.92	15.39	14.29	15.70	16.02
	3H	21.44	22.76	21.82	23.09	23.45	15.57	16.88	15.95	17.21	17.58
	4H	22.34	23.57	22.74	23.92	24.30	16.20	17.44	16.60	17.79	18.17
	6H	23.00	24.14	23.41	24.51	24.90	16.70	17.84	17.11	18.20	18.60
	8H	23.21	24.29	23.64	24.68	25.09	16.87	17.95	17.29	18.34	18.74
	12H	23.33	24.36	23.76	24.75	25.17	16.98	18.02	17.41	18.40	18.83
4H	2H	19.13	20.37	19.53	20.71	21.09	14.64	15.87	15.04	16.22	16.60
	3H	21.54	22.57	21.95	22.97	23.37	16.48	17.51	16.89	17.91	18.31
	4H	22.47	23.39	22.91	23.81	24.25	17.23	18.15	17.66	18.57	19.01
	6H	23.25	24.05	23.71	24.50	24.96	17.85	18.65	18.30	19.09	19.55
	8H	23.52	24.27	23.98	24.71	25.18	18.06	18.81	18.53	19.26	19.72
	12H	23.70	24.37	24.18	24.84	25.32	18.22	18.89	18.71	19.37	19.84
8H	4H	22.47	23.21	22.93	23.66	24.13	17.61	18.36	18.07	18.80	19.27
	6H	23.27	23.89	23.77	24.38	24.86	18.35	18.96	18.84	19.46	19.94
	8H	23.57	24.13	24.09	24.64	25.13	18.64	19.20	19.16	19.71	20.20
	12H	23.81	24.29	24.32	24.79	25.35	18.89	19.37	19.40	19.87	20.43
12H	4H	22.45	23.11	22.93	23.59	24.06	17.67	18.34	18.15	18.81	19.29
	6H	23.25	23.80	23.76	24.31	24.80	18.43	18.99	18.95	19.50	19.99
	8H	23.58	24.07	24.09	24.56	25.13	18.79	19.28	19.30	19.77	20.34