

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: P1439920

Luminaire Tested: S124DR-H485D940-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439920
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2509-563-1)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DR-H485D940-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

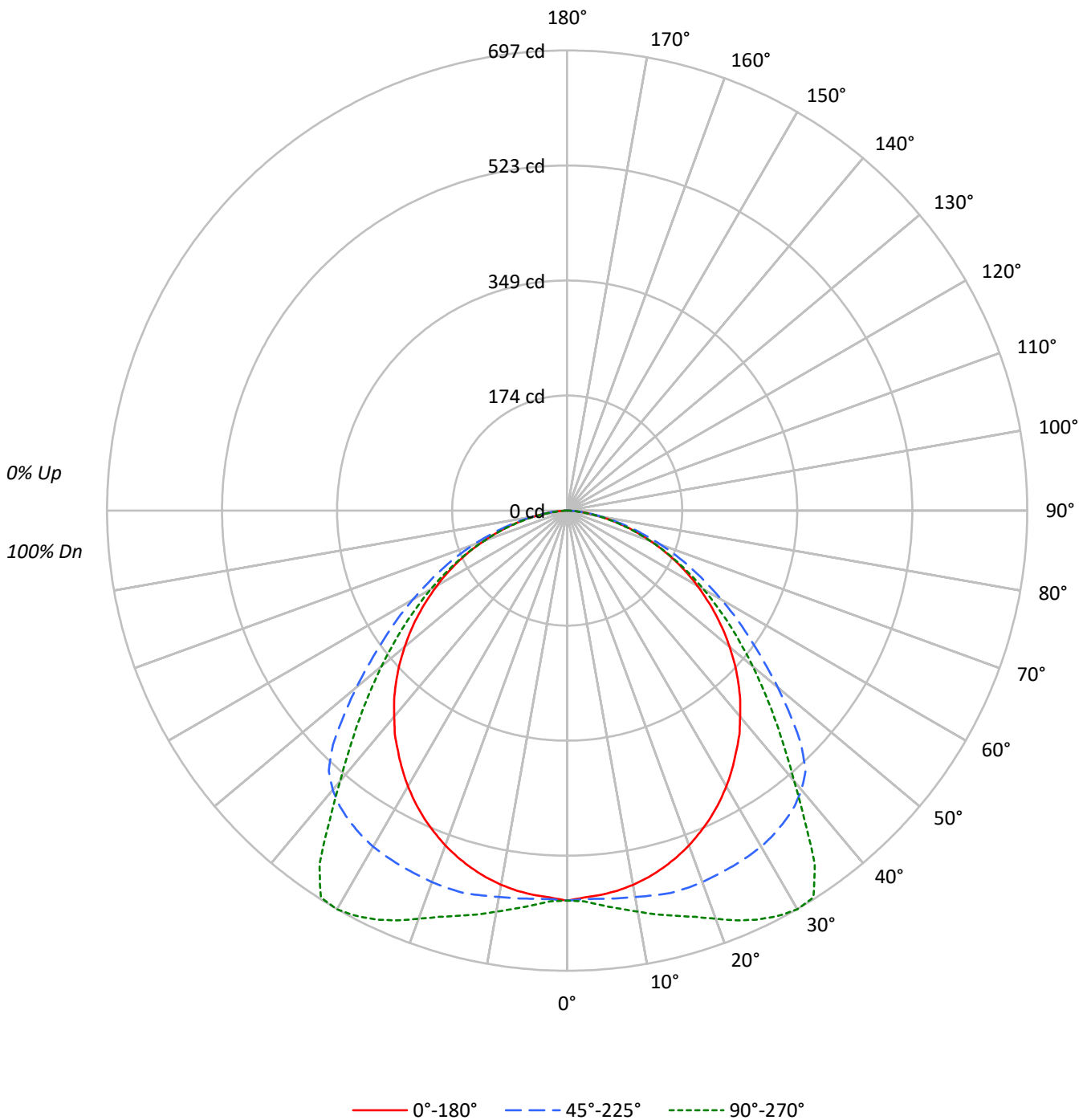
Lumens per Lamp: N/A
Luminaire Lumens: 1795.1 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
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																		
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	109	105	101	97	107	103	99	95	98	95	92	94	92	90	91	89	87	85																												
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73	71																												
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	66	63	60																												
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52																												
5	77	64	55	49	75	63	55	49	61	54	48	59	53	47	57	52	47	45																												
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39																												
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35																												
8	61	48	39	34	60	47	39	33	46	38	33	44	38	33	43	37	33	31																												
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28																												
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5223	5223	5223
5°	5186	5237	5325
10°	5168	5335	5537
15°	5130	5492	5815
20°	5078	5634	6190
25°	5010	5797	6667
30°	4924	6001	7119
35°	4817	6201	7058
40°	4703	6376	6175
45°	4581	6269	5552
50°	4417	5725	5047
55°	4236	5210	4610
60°	4028	4776	4223
65°	3785	4354	3856
70°	3461	3896	3446
75°	3051	3348	2989
80°	2510	2688	2418
85°	1765	1826	1643

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 6269 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.7	3.2
10°-20°	169.9	9.5
20°-30°	276.5	15.4
30°-40°	351.1	19.6
40°-50°	342.1	19.1
50°-60°	280.5	15.6
60°-70°	195.7	10.9
70°-80°	100.5	5.6
80°-90°	22.3	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°	503.0	28.0
0°-40°	854.1	47.6
0°-60°	1476.7	82.3
0°-90°	1795.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1795.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	591	591	591	591	591	
5°	584	593	590	594	600	56
15°	560	578	600	624	635	158
25°	514	547	594	656	683	236
35°	446	490	574	658	654	279
45°	366	412	501	460	444	282
55°	275	317	338	310	299	246
65°	181	207	208	191	184	179
75°	89	99	98	91	88	95
85°	17	18	18	17	16	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	590.7	590.7	590.7	590.7	590.7
2.5°	586.6	594.2	589.0	591.3	592.4
5°	584.3	593.0	590.1	594.2	600.0
7.5°	580.8	590.7	592.4	600.5	608.1
10°	575.6	587.2	594.2	608.1	616.8
12.5°	568.7	583.2	597.1	616.2	626.6
15°	560.5	577.9	600.0	623.7	635.3
17.5°	550.7	571.6	600.0	629.5	645.2
20°	539.7	564.0	598.8	637.1	657.9
22.5°	526.9	555.9	596.5	645.8	671.8
25°	513.6	546.6	594.2	655.6	683.4
27.5°	498.5	535.6	591.3	663.1	692.1
30°	482.3	522.3	587.8	666.6	697.3
32.5°	464.9	506.6	582.0	666.6	694.5
35°	446.3	489.8	574.5	657.9	653.9
37.5°	428.4	471.9	565.2	615.6	590.1
40°	407.5	452.7	552.4	555.9	535.0
42.5°	387.8	432.4	534.5	505.5	486.9
45°	366.4	411.6	501.4	459.7	444.0
47.5°	344.3	389.0	458.5	418.5	404.0
50°	321.1	366.4	416.2	379.7	366.9
52.5°	298.5	342.0	375.6	343.7	331.6
55°	274.8	317.1	338.0	309.5	299.1
57.5°	251.0	291.6	303.7	277.7	267.8
60°	227.8	264.3	270.1	247.5	238.8
62.5°	204.6	235.9	238.2	218.5	211.0
65°	180.9	206.9	208.1	191.3	184.3
67.5°	157.7	179.1	179.1	164.6	158.8
70°	133.9	151.9	150.7	139.1	133.3
72.5°	111.3	124.1	122.9	114.2	110.1
75°	89.3	99.1	98.0	91.0	87.5
77.5°	68.4	75.4	74.2	69.6	66.7
80°	49.3	53.3	52.8	49.3	47.5
82.5°	32.5	34.8	33.6	31.3	30.1
85°	17.4	18.0	18.0	16.8	16.2
87.5°	6.4	6.4	6.4	6.4	5.8
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	17.43	19.03	17.79	19.34	19.66	17.21	18.81	17.58	19.13	19.44
	3H	18.93	20.37	19.31	20.70	21.06	18.68	20.12	19.06	20.45	20.81
	4H	19.43	20.79	19.83	21.13	21.51	19.18	20.53	19.58	20.88	21.26
	6H	19.75	21.01	20.17	21.37	21.76	19.50	20.75	19.91	21.11	21.50
	8H	19.84	21.03	20.26	21.42	21.82	19.57	20.77	20.00	21.15	21.55
	12H	19.88	21.02	20.31	21.40	21.83	19.61	20.75	20.03	21.13	21.56
4H	2H	18.05	19.40	18.45	19.75	20.13	17.88	19.23	18.28	19.58	19.96
	3H	19.78	20.91	20.19	21.30	21.71	19.55	20.67	19.96	21.07	21.47
	4H	20.41	21.42	20.84	21.84	22.27	20.14	21.16	20.58	21.57	22.01
	6H	20.83	21.72	21.29	22.16	22.62	20.56	21.44	21.01	21.88	22.34
	8H	20.95	21.78	21.41	22.22	22.68	20.66	21.49	21.12	21.93	22.40
	12H	21.01	21.75	21.49	22.23	22.70	20.72	21.46	21.20	21.94	22.41
8H	4H	20.65	21.48	21.11	21.92	22.39	20.42	21.24	20.88	21.69	22.15
	6H	21.17	21.86	21.67	22.35	22.82	20.92	21.60	21.41	22.09	22.57
	8H	21.34	21.95	21.85	22.46	22.95	21.07	21.68	21.58	22.19	22.67
	12H	21.45	21.99	21.95	22.48	23.04	21.16	21.71	21.67	22.20	22.76
12H	4H	20.66	21.40	21.14	21.88	22.35	20.43	21.18	20.92	21.65	22.12
	6H	21.19	21.81	21.71	22.32	22.80	20.95	21.56	21.46	22.07	22.56
	8H	21.40	21.95	21.91	22.44	23.00	21.14	21.68	21.65	22.17	22.74