

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: P1439969

Luminaire Tested: S124DR-S675D840-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439969  
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-S675D840-X4F0-XX-UDD-FLB-W  
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

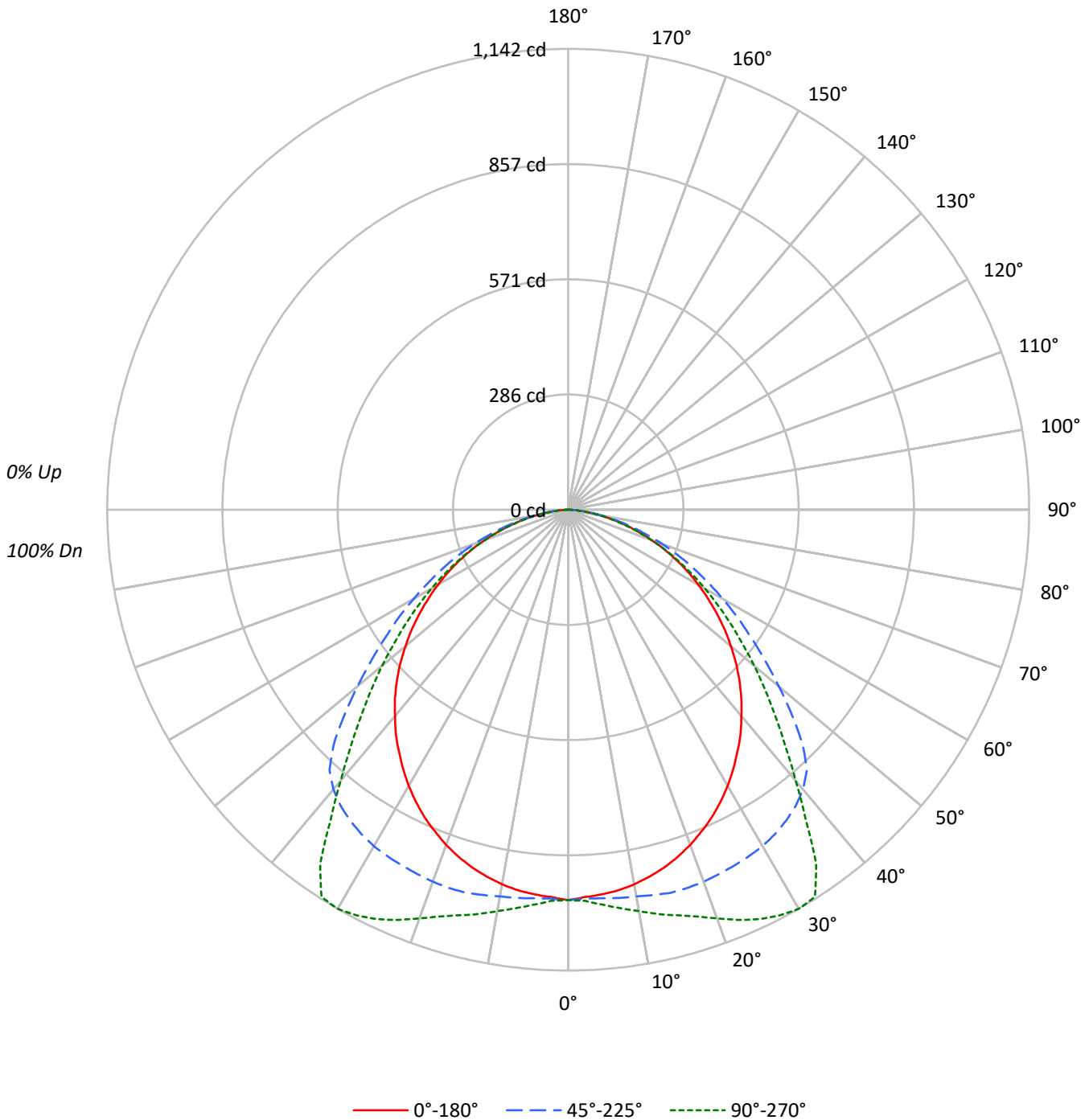
Lumens per Lamp: N/A  
Luminaire Lumens: 2940.2 lumens  
Efficiency: N/A  
Efficacy: 111.4 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct

Input Watts (W): 26.4  
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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				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°	8554	8554	8554
5°	8494	8578	8722
10°	8464	8737	9069
15°	8404	8995	9525
20°	8316	9228	10139
25°	8206	9494	10920
30°	8064	9828	11661
35°	7891	10155	11560
40°	7703	10443	10114
45°	7502	10269	9094
50°	7235	9377	8267
55°	6937	8532	7552
60°	6597	7823	6917
65°	6197	7130	6316
70°	5669	6382	5646
75°	4994	5483	4899
80°	4109	4399	3966
85°	2891	2982	2698

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 10269 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.8	3.2
10°-20°	278.2	9.5
20°-30°	452.8	15.4
30°-40°	575.0	19.6
40°-50°	560.4	19.1
50°-60°	459.4	15.6
60°-70°	320.5	10.9
70°-80°	164.5	5.6
80°-90°	36.5	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°	823.9	28.0
0°-40°	1398.9	47.6
0°-60°	2418.7	82.3
0°-90°	2940.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2940.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	968	968	968	968	968	
5°	957	971	966	973	983	91
15°	918	947	983	1022	1041	259
25°	841	895	973	1074	1119	387
35°	731	802	941	1078	1071	458
45°	600	674	821	753	727	462
55°	450	519	554	507	490	402
65°	296	339	341	313	302	293
75°	146	162	160	149	143	156
85°	28	29	29	28	27	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	967.5	967.5	967.5	967.5	967.5
2.5°	960.8	973.2	964.6	968.4	970.3
5°	957.0	971.3	966.5	973.2	982.7
7.5°	951.3	967.5	970.3	983.6	996.0
10°	942.8	961.8	973.2	996.0	1010.2
12.5°	931.4	955.1	977.9	1009.2	1026.3
15°	918.1	946.6	982.7	1021.6	1040.6
17.5°	902.0	936.1	982.7	1031.1	1056.7
20°	883.9	923.8	980.8	1043.4	1077.6
22.5°	863.0	910.5	977.0	1057.7	1100.4
25°	841.2	895.3	973.2	1073.8	1119.4
27.5°	816.5	877.3	968.4	1086.1	1133.6
30°	789.9	855.4	962.7	1091.8	1142.2
32.5°	761.4	829.8	953.2	1091.8	1137.4
35°	731.1	802.3	940.9	1077.6	1071.0
37.5°	701.6	772.8	925.7	1008.3	966.5
40°	667.4	741.5	904.8	910.5	876.3
42.5°	635.2	708.3	875.4	827.9	797.5
45°	600.0	674.1	821.3	752.9	727.3
47.5°	564.0	637.1	751.0	685.5	661.8
50°	526.0	600.0	681.7	621.9	601.0
52.5°	489.0	560.2	615.2	563.0	543.1
55°	450.0	519.3	553.5	507.0	489.9
57.5°	411.1	477.6	497.5	454.8	438.6
60°	373.1	432.9	442.4	405.4	391.2
62.5°	335.1	386.4	390.2	357.9	345.6
65°	296.2	338.9	340.8	313.3	301.9
67.5°	258.2	293.4	293.4	269.6	260.1
70°	219.3	248.8	246.9	227.9	218.4
72.5°	182.3	203.2	201.3	187.0	180.4
75°	146.2	162.4	160.5	149.1	143.4
77.5°	112.0	123.4	121.5	113.9	109.2
80°	80.7	87.3	86.4	80.7	77.9
82.5°	53.2	57.0	55.1	51.3	49.4
85°	28.5	29.4	29.4	27.5	26.6
87.5°	10.4	10.4	10.4	10.4	9.5
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	19.14	20.74	19.51	21.05	21.37	18.93	20.53	19.29	20.84	21.15
	3H	20.64	22.08	21.02	22.41	22.77	20.40	21.84	20.77	22.16	22.52
	4H	21.15	22.50	21.55	22.85	23.23	20.89	22.25	21.29	22.59	22.97
	6H	21.47	22.72	21.88	23.09	23.48	21.21	22.46	21.62	22.83	23.22
	8H	21.55	22.75	21.98	23.13	23.53	21.29	22.48	21.71	22.87	23.27
	12H	21.59	22.73	22.02	23.12	23.54	21.32	22.46	21.75	22.85	23.27
4H	2H	19.76	21.12	20.16	21.46	21.84	19.59	20.95	19.99	21.30	21.67
	3H	21.49	22.62	21.90	23.02	23.42	21.26	22.39	21.67	22.79	23.19
	4H	22.12	23.14	22.55	23.55	23.99	21.86	22.88	22.29	23.29	23.73
	6H	22.55	23.43	23.00	23.88	24.33	22.27	23.16	22.73	23.60	24.06
	8H	22.66	23.49	23.12	23.93	24.40	22.37	23.20	22.84	23.65	24.11
	12H	22.73	23.47	23.21	23.94	24.41	22.43	23.18	22.91	23.65	24.12
8H	4H	22.36	23.19	22.82	23.63	24.10	22.13	22.96	22.59	23.40	23.87
	6H	22.89	23.57	23.38	24.06	24.54	22.63	23.32	23.13	23.81	24.28
	8H	23.05	23.67	23.56	24.17	24.66	22.78	23.39	23.29	23.90	24.39
	12H	23.16	23.70	23.67	24.20	24.76	22.88	23.42	23.39	23.91	24.48
12H	4H	22.37	23.12	22.86	23.59	24.06	22.15	22.89	22.63	23.37	23.84
	6H	22.91	23.52	23.42	24.03	24.52	22.66	23.28	23.17	23.79	24.27
	8H	23.12	23.66	23.63	24.15	24.72	22.85	23.40	23.36	23.89	24.45