

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P929935

Luminaire Tested: DFN2DS-4P4F0-030DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929935
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-4P4F0-030DS840-FLL
Description: 4 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

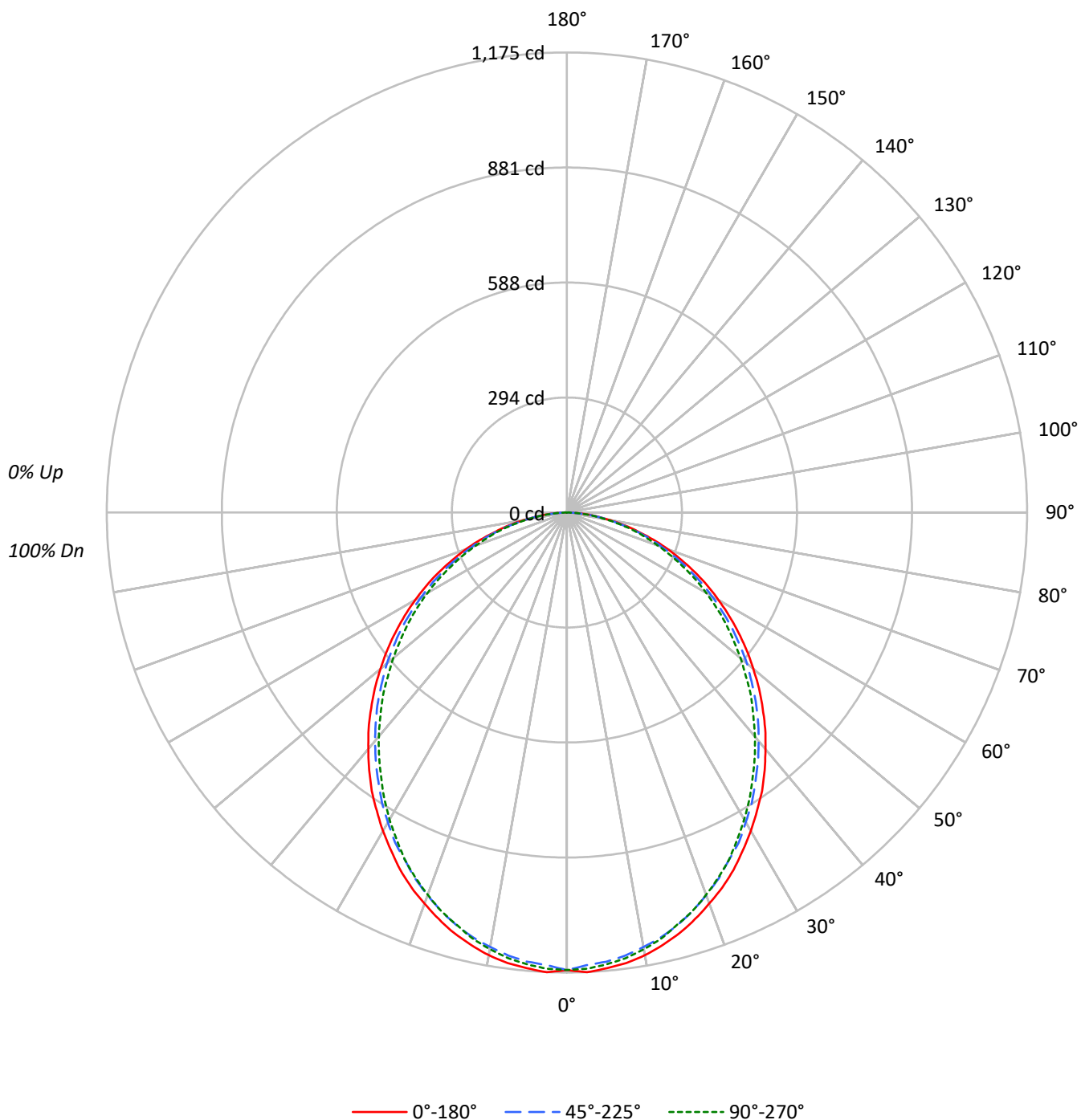
Lumens per Lamp: N/A
Luminaire Lumens: 2973.0 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 4.07' x L: 4.07' x H: 0')
CIE Type: Direct

Input Watts (W): 28.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.983
Total Harmonic Distortion (THDi): 0.073
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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	758	758	758
5°	761	750	754
10°	756	742	746
15°	747	733	732
20°	734	718	718
25°	721	701	701
30°	704	684	678
35°	688	665	655
40°	668	645	633
45°	648	626	610
50°	627	606	584
55°	605	582	561
60°	580	554	534
65°	554	526	502
70°	520	492	469
75°	473	453	442
80°	420	407	386
85°	342	326	293

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 648 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.0	3.7
10°-20°	309.4	10.4
20°-30°	454.7	15.3
30°-40°	528.2	17.8
40°-50°	527.5	17.7
50°-60°	460.0	15.5
60°-70°	340.0	11.4
70°-80°	192.4	6.5
80°-90°	50.8	1.7
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°	874.2	29.4
0°-40°	1402.3	47.2
0°-60°	2389.8	80.4
0°-90°	2973.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2973.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1168	1168	1168	1168	1168	
5°	1168	1164	1152	1161	1158	111
15°	1112	1106	1091	1096	1090	313
25°	1007	998	979	981	979	463
35°	869	857	839	832	827	542
45°	707	699	682	670	665	545
55°	535	528	515	501	496	478
65°	361	354	343	333	327	357
75°	189	187	181	174	176	201
85°	46	45	44	40	39	54
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1168.5	1168.5	1168.5	1168.5	1168.5
2.5°	1175.3	1169.7	1157.3	1168.5	1166.4
5°	1168.5	1164.1	1151.7	1160.7	1158.5
7.5°	1160.7	1154.0	1141.5	1150.6	1148.3
10°	1148.3	1140.4	1127.0	1135.9	1132.6
12.5°	1131.4	1124.7	1111.3	1116.8	1114.6
15°	1112.3	1105.7	1091.0	1095.5	1089.9
17.5°	1088.7	1082.1	1067.4	1073.0	1067.4
20°	1062.9	1056.2	1040.4	1043.7	1039.3
22.5°	1037.1	1027.0	1012.3	1012.3	1010.0
25°	1006.7	997.8	978.7	980.9	978.7
27.5°	973.0	965.1	950.5	947.2	941.6
30°	939.3	930.3	913.5	910.1	905.6
32.5°	903.4	896.7	878.7	871.9	867.4
35°	868.6	857.4	839.3	832.5	826.9
37.5°	829.2	819.1	801.1	793.2	787.6
40°	788.8	779.8	761.8	751.8	747.2
42.5°	749.4	740.4	722.5	711.2	704.5
45°	706.8	698.9	682.0	669.7	665.2
47.5°	665.2	657.4	639.3	626.9	620.2
50°	621.3	615.7	600.0	584.3	578.7
52.5°	578.7	570.8	556.3	543.8	535.9
55°	534.9	528.1	514.6	501.2	495.6
57.5°	491.0	485.4	470.8	457.3	452.8
60°	447.1	442.7	427.0	414.6	411.3
62.5°	404.5	396.6	385.4	374.2	369.7
65°	360.8	354.0	342.7	332.6	327.0
67.5°	315.8	310.1	300.0	292.2	287.7
70°	274.2	269.7	259.6	251.7	247.2
72.5°	231.5	226.9	221.3	213.5	210.2
75°	188.7	186.6	180.9	174.2	176.5
77.5°	150.6	146.0	143.7	140.4	137.1
80°	112.4	111.2	108.9	105.6	103.4
82.5°	76.4	76.4	75.4	70.8	70.8
85°	46.0	44.9	43.8	40.4	39.3
87.5°	20.2	18.0	15.7	12.4	11.2
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	10.32	11.93	10.68	12.24	12.56	9.88	11.49	10.24	11.80	12.12
	3H	12.07	13.52	12.45	13.85	14.21	11.58	13.03	11.96	13.36	13.72
	4H	12.72	14.09	13.11	14.43	14.81	12.22	13.59	12.62	13.94	14.32
	6H	13.19	14.45	13.60	14.82	15.21	12.68	13.95	13.10	14.32	14.71
	8H	13.33	14.54	13.75	14.93	15.33	12.83	14.04	13.25	14.43	14.83
	12H	13.42	14.58	13.85	14.96	15.39	12.91	14.07	13.34	14.45	14.88
4H	2H	10.88	12.25	11.28	12.60	12.97	10.53	11.90	10.93	12.24	12.62
	3H	12.86	14.00	13.27	14.40	14.80	12.45	13.60	12.86	13.99	14.39
	4H	13.63	14.67	14.06	15.08	15.52	13.21	14.24	13.64	14.66	15.09
	6H	14.23	15.13	14.68	15.57	16.03	13.80	14.70	14.25	15.14	15.60
	8H	14.42	15.26	14.88	15.71	16.17	13.98	14.83	14.44	15.27	15.73
	12H	14.55	15.31	15.03	15.79	16.26	14.10	14.86	14.58	15.33	15.80
8H	4H	13.91	14.75	14.37	15.19	15.66	13.53	14.38	13.99	14.82	15.29
	6H	14.62	15.32	15.11	15.81	16.29	14.24	14.94	14.73	15.43	15.91
	8H	14.88	15.51	15.39	16.02	16.50	14.49	15.12	15.00	15.63	16.11
	12H	15.08	15.64	15.59	16.13	16.69	14.67	15.22	15.17	15.71	16.28
12H	4H	13.93	14.69	14.41	15.17	15.64	13.57	14.33	14.05	14.80	15.27
	6H	14.66	15.30	15.17	15.80	16.29	14.30	14.93	14.81	15.44	15.92
	8H	14.98	15.54	15.49	16.03	16.59	14.60	15.16	15.11	15.65	16.21