

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: P929809

Luminaire Tested: DFN2DS-4P2F0-030DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929809
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-4P2F0-030DS840-FLL
Description: 2 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

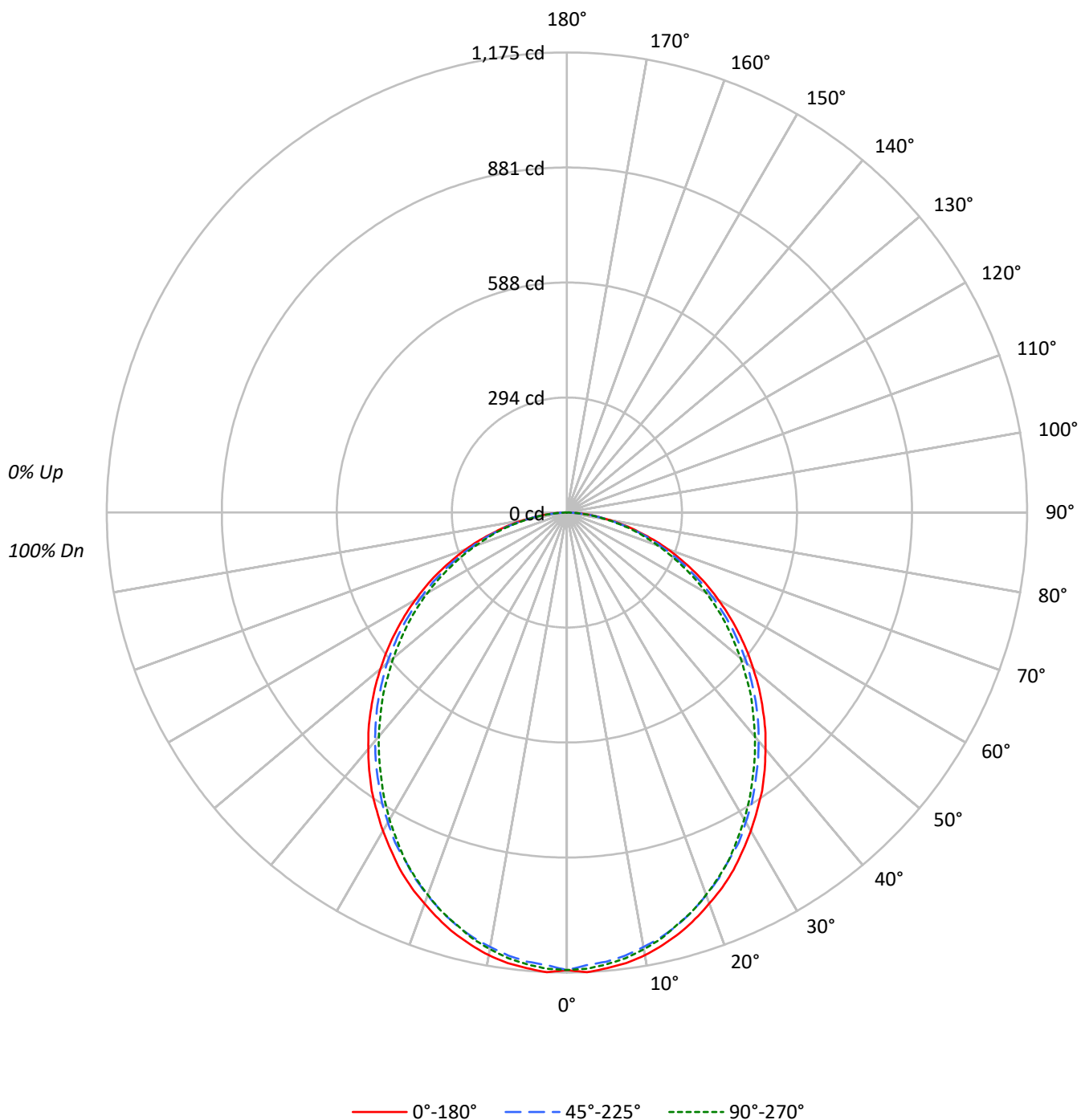
Lumens per Lamp: N/A
Luminaire Lumens: 2973.0 lumens
Efficiency: N/A
Efficacy: 98.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.07' x L: 2.07' x H: 0')
CIE Type: Direct

Input Watts (W): 30.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9954
Total Harmonic Distortion (THDi): 0.076
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°	2926	2926	2926
5°	2937	2895	2912
10°	2920	2866	2880
15°	2883	2828	2825
20°	2832	2772	2769
25°	2781	2704	2704
30°	2716	2641	2618
35°	2655	2566	2528
40°	2578	2490	2442
45°	2503	2415	2356
50°	2420	2337	2254
55°	2335	2247	2164
60°	2239	2138	2060
65°	2138	2030	1937
70°	2007	1901	1810
75°	1826	1750	1708
80°	1621	1570	1491
85°	1322	1258	1129

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2503 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	15.01	16.62	15.38	16.94	17.25	14.57	16.18	14.93	16.49	16.81
	3H	16.76	18.22	17.14	18.54	18.90	16.27	17.73	16.65	18.05	18.41
	4H	17.41	18.78	17.81	19.13	19.50	16.91	18.28	17.31	18.63	19.01
	6H	17.88	19.15	18.29	19.51	19.90	17.38	18.65	17.79	19.01	19.40
	8H	18.02	19.23	18.45	19.62	20.02	17.52	18.73	17.94	19.12	19.52
	12H	18.11	19.27	18.54	19.65	20.08	17.60	18.76	18.03	19.14	19.57
4H	2H	15.57	16.94	15.97	17.29	17.67	15.22	16.59	15.62	16.94	17.31
	3H	17.55	18.69	17.96	19.09	19.49	17.14	18.29	17.55	18.69	19.09
	4H	18.32	19.36	18.76	19.77	20.21	17.90	18.94	18.33	19.35	19.79
	6H	18.92	19.83	19.38	20.27	20.72	18.49	19.39	18.94	19.83	20.29
	8H	19.11	19.96	19.57	20.40	20.86	18.67	19.52	19.13	19.96	20.43
	12H	19.24	20.00	19.72	20.48	20.95	18.79	19.55	19.27	20.03	20.50
8H	4H	18.60	19.44	19.06	19.89	20.35	18.22	19.07	18.68	19.51	19.98
	6H	19.31	20.02	19.81	20.50	20.98	18.93	19.63	19.42	20.12	20.60
	8H	19.57	20.20	20.08	20.71	21.19	19.18	19.81	19.69	20.32	20.80
	12H	19.77	20.33	20.28	20.82	21.38	19.36	19.92	19.87	20.41	20.97
12H	4H	18.62	19.38	19.10	19.86	20.33	18.26	19.02	18.74	19.50	19.96
	6H	19.36	19.99	19.87	20.50	20.98	18.99	19.62	19.50	20.13	20.61
	8H	19.67	20.23	20.18	20.72	21.28	19.29	19.85	19.80	20.34	20.90

END OF REPORT