

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: P929807

Luminaire Tested: DFN2DS-4P2F0-030DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929807
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-4P2F0-030DS835-FLL
Description: 2 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

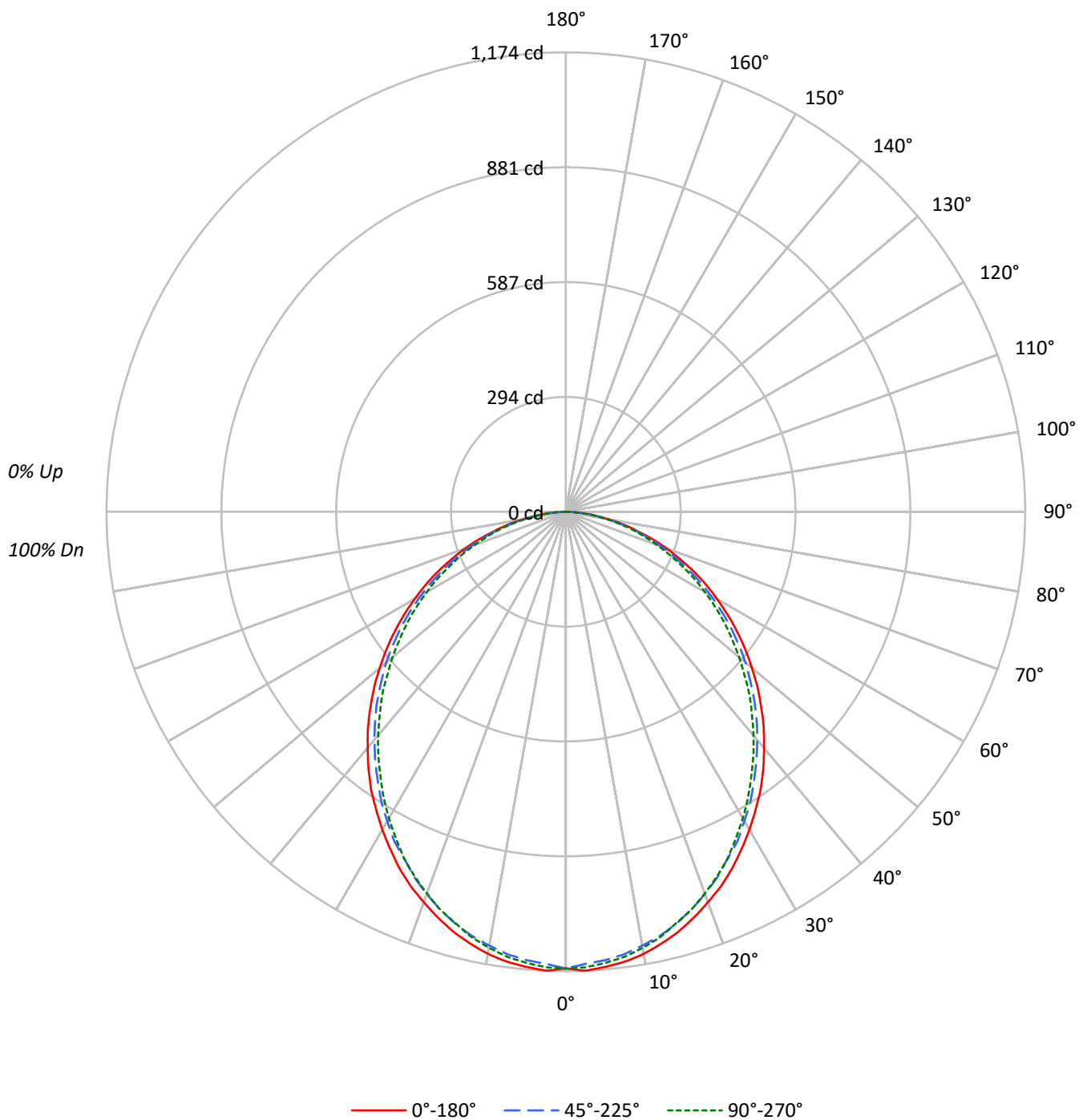
Lumens per Lamp: N/A
Luminaire Lumens: 2970.0 lumens
Efficiency: N/A
Efficacy: 98.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.07' x L: 2.07' x H: 0')
CIE Type: Direct

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°	2923	2923	2923
5°	2934	2892	2909
10°	2917	2863	2877
15°	2881	2825	2823
20°	2829	2770	2767
25°	2779	2701	2701
30°	2713	2639	2616
35°	2652	2563	2525
40°	2576	2487	2440
45°	2500	2413	2353
50°	2418	2335	2252
55°	2333	2244	2161
60°	2237	2136	2058
65°	2135	2029	1936
70°	2005	1898	1808
75°	1824	1748	1706
80°	1619	1569	1490
85°	1322	1258	1129

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2500 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.9	3.7
10°-20°	309.1	10.4
20°-30°	454.3	15.3
30°-40°	527.6	17.8
40°-50°	527.0	17.7
50°-60°	459.5	15.5
60°-70°	339.7	11.4
70°-80°	192.2	6.5
80°-90°	50.7	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°	873.3	29.4
0°-40°	1400.9	47.2
0°-60°	2387.4	80.4
0°-90°	2970.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2970.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1167	1167	1167	1167	1167	
5°	1167	1163	1150	1160	1157	111
15°	1111	1105	1090	1094	1089	313
25°	1006	997	978	980	978	463
35°	868	856	838	832	826	542
45°	706	698	681	669	664	545
55°	534	528	514	501	495	478
65°	360	354	342	332	327	356
75°	188	186	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°	1167.3	1167.3	1167.3	1167.3	1167.3
2.5°	1174.1	1168.5	1156.1	1167.3	1165.2
5°	1167.3	1162.9	1150.5	1159.5	1157.3
7.5°	1159.5	1152.8	1140.4	1149.5	1147.2
10°	1147.2	1139.3	1125.9	1134.8	1131.5
12.5°	1130.3	1123.6	1110.2	1115.7	1113.5
15°	1111.2	1104.6	1089.9	1094.4	1088.8
17.5°	1087.6	1081.0	1066.3	1071.9	1066.3
20°	1061.8	1055.1	1039.4	1042.7	1038.3
22.5°	1036.1	1026.0	1011.3	1011.3	1009.0
25°	1005.7	996.8	977.7	979.9	977.7
27.5°	972.0	964.1	949.6	946.3	940.7
30°	938.4	929.4	912.6	909.2	904.7
32.5°	902.5	895.8	877.8	871.0	866.5
35°	867.7	856.5	838.5	831.7	826.1
37.5°	828.4	818.3	800.3	792.4	786.8
40°	788.0	779.0	761.0	751.0	746.5
42.5°	748.7	739.7	721.8	710.5	703.8
45°	706.1	698.2	681.3	669.0	664.5
47.5°	664.5	656.7	638.7	626.3	619.6
50°	620.7	615.1	599.4	583.7	578.1
52.5°	578.1	570.2	555.7	543.3	535.4
55°	534.4	527.6	514.1	500.7	495.1
57.5°	490.5	484.9	470.3	456.8	452.3
60°	446.7	442.3	426.6	414.2	410.9
62.5°	404.1	396.2	385.0	373.8	369.3
65°	360.4	353.6	342.4	332.3	326.7
67.5°	315.5	309.8	299.7	291.9	287.4
70°	273.9	269.4	259.3	251.4	247.0
72.5°	231.3	226.7	221.1	213.3	210.0
75°	188.5	186.4	180.7	174.0	176.3
77.5°	150.4	145.9	143.6	140.3	137.0
80°	112.3	111.1	108.8	105.5	103.3
82.5°	76.3	76.3	75.3	70.7	70.7
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	15.37	16.93	17.25	14.56	16.18	14.93	16.49	16.80
	3H	16.76	18.21	17.14	18.54	18.90	16.27	17.72	16.65	18.05	18.41
	4H	17.41	18.77	17.80	19.12	19.50	16.91	18.28	17.31	18.63	19.00
	6H	17.87	19.14	18.29	19.51	19.90	17.37	18.64	17.78	19.01	19.40
	8H	18.02	19.23	18.44	19.62	20.02	17.52	18.73	17.94	19.11	19.51
	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	17.66	15.22	16.59	15.61	16.93	17.31
	3H	17.54	18.69	17.95	19.09	19.49	17.14	18.28	17.55	18.68	19.08
	4H	18.32	19.36	18.75	19.77	20.21	17.90	18.93	18.33	19.35	19.78
	6H	18.92	19.82	19.37	20.26	20.72	18.49	19.39	18.94	19.83	20.29
	8H	19.11	19.95	19.57	20.40	20.86	18.67	19.52	19.13	19.96	20.42
	12H	19.24	20.00	19.72	20.47	20.94	18.79	19.55	19.27	20.02	20.49
8H	4H	18.59	19.44	19.06	19.88	20.35	18.22	19.07	18.68	19.51	19.97
	6H	19.31	20.01	19.80	20.50	20.98	18.93	19.63	19.42	20.12	20.59
	8H	19.57	20.20	20.08	20.71	21.19	19.18	19.81	19.69	20.31	20.80
	12H	19.77	20.33	20.27	20.82	21.38	19.35	19.91	19.86	20.40	20.96
12H	4H	18.62	19.38	19.10	19.86	20.33	18.26	19.02	18.74	19.49	19.96
	6H	19.35	19.99	19.86	20.49	20.98	18.99	19.62	19.50	20.12	20.61
	8H	19.67	20.23	20.17	20.72	21.28	19.29	19.85	19.80	20.34	20.90