

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: P929805

Luminaire Tested: DFN2DS-4P2F0-030DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929805
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-4P2F0-030DS830-FLL
Description: 2 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

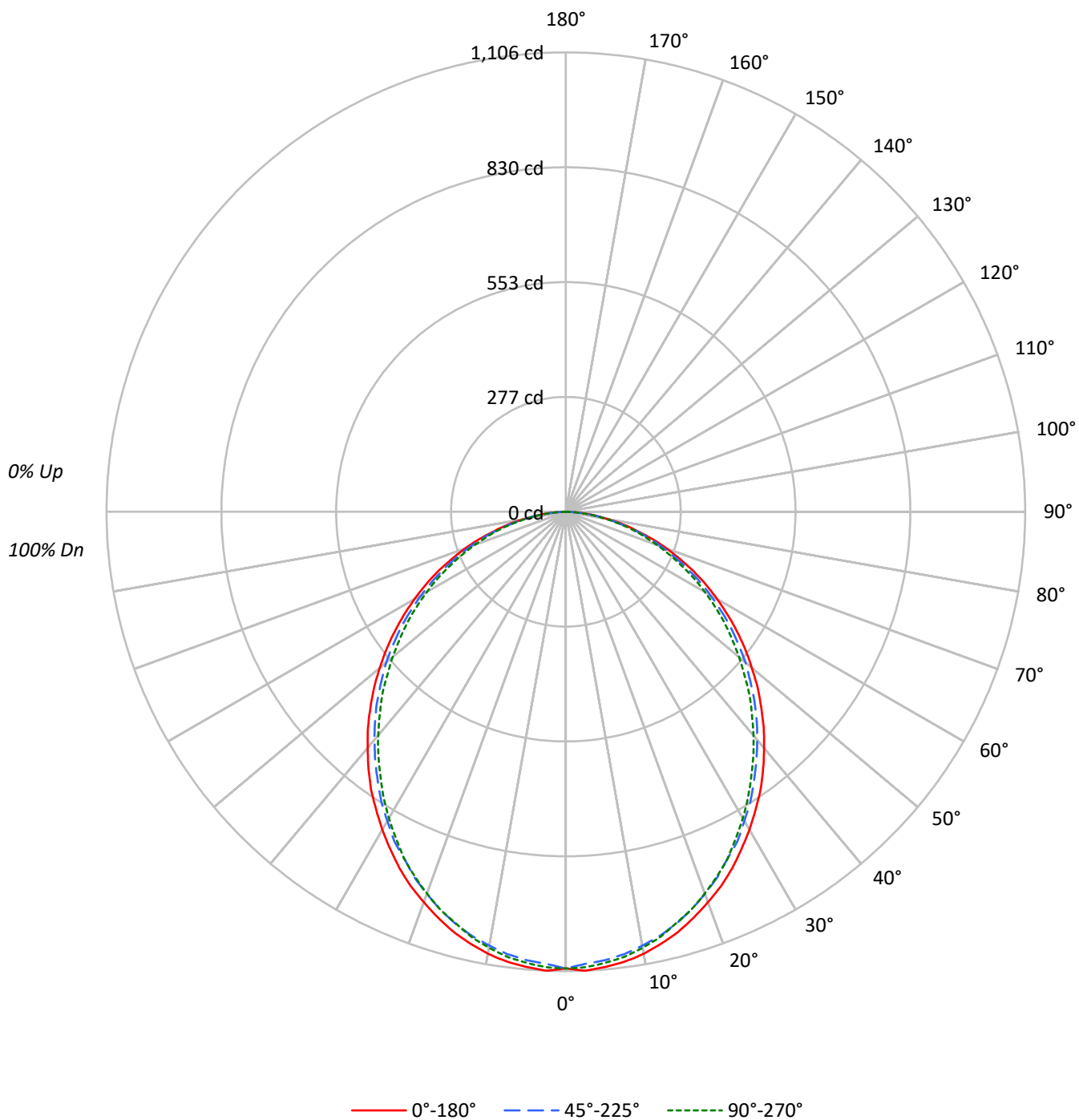
Lumens per Lamp: N/A
Luminaire Lumens: 2797.8 lumens
Efficiency: N/A
Efficacy: 92.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.07' x L: 2.07' x H: 0')
CIE Type: Direct

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°	2753	2753	2753
5°	2764	2724	2740
10°	2748	2697	2710
15°	2714	2662	2659
20°	2665	2609	2606
25°	2618	2545	2545
30°	2556	2486	2464
35°	2499	2415	2379
40°	2426	2343	2299
45°	2355	2273	2217
50°	2278	2199	2121
55°	2198	2114	2036
60°	2107	2013	1939
65°	2012	1911	1824
70°	1889	1789	1704
75°	1718	1647	1607
80°	1526	1478	1403
85°	1244	1187	1063

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2355 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.5	3.7
10°-20°	291.2	10.4
20°-30°	427.9	15.3
30°-40°	497.0	17.8
40°-50°	496.4	17.7
50°-60°	432.9	15.5
60°-70°	320.0	11.4
70°-80°	181.1	6.5
80°-90°	47.8	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°	822.6	29.4
0°-40°	1319.7	47.2
0°-60°	2249.0	80.4
0°-90°	2797.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2797.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1100	1100	1100	1100	1100	
5°	1100	1096	1084	1092	1090	104
15°	1047	1040	1027	1031	1026	295
25°	947	939	921	923	921	436
35°	817	807	790	784	778	510
45°	665	658	642	630	626	513
55°	503	497	484	472	466	450
65°	340	333	322	313	308	336
75°	178	176	170	164	166	190
85°	43	42	41	38	37	51
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1099.6	1099.6	1099.6	1099.6	1099.6
2.5°	1106.0	1100.7	1089.0	1099.6	1097.6
5°	1099.6	1095.5	1083.8	1092.2	1090.2
7.5°	1092.2	1085.9	1074.3	1082.8	1080.7
10°	1080.7	1073.2	1060.6	1069.0	1065.9
12.5°	1064.7	1058.4	1045.8	1051.0	1048.9
15°	1046.8	1040.5	1026.7	1030.9	1025.6
17.5°	1024.5	1018.3	1004.5	1009.7	1004.5
20°	1000.2	993.9	979.1	982.2	978.1
22.5°	976.0	966.5	952.6	952.6	950.5
25°	947.4	939.0	921.0	923.1	921.0
27.5°	915.6	908.2	894.5	891.4	886.1
30°	884.0	875.5	859.7	856.5	852.2
32.5°	850.2	843.8	826.9	820.5	816.2
35°	817.4	806.8	789.9	783.5	778.2
37.5°	780.4	770.8	753.9	746.4	741.2
40°	742.3	733.8	716.9	707.4	703.2
42.5°	705.3	696.8	679.9	669.3	663.0
45°	665.1	657.7	641.8	630.2	626.0
47.5°	626.0	618.6	601.7	590.0	583.7
50°	584.7	579.4	564.6	549.8	544.6
52.5°	544.6	537.1	523.5	511.8	504.3
55°	503.4	497.0	484.3	471.7	466.4
57.5°	462.1	456.8	443.0	430.3	426.1
60°	420.8	416.6	401.9	390.2	387.1
62.5°	380.7	373.2	362.7	352.1	347.9
65°	339.5	333.1	322.5	313.0	307.8
67.5°	297.2	291.8	282.3	275.0	270.7
70°	258.0	253.8	244.3	236.8	232.7
72.5°	217.9	213.6	208.3	200.9	197.8
75°	177.6	175.6	170.2	163.9	166.1
77.5°	141.7	137.4	135.3	132.2	129.1
80°	105.8	104.7	102.5	99.4	97.3
82.5°	71.9	71.9	70.9	66.6	66.6
85°	43.3	42.3	41.3	38.1	37.0
87.5°	19.0	17.0	14.8	11.7	10.6
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	14.80	16.41	15.17	16.73	17.04	14.36	15.97	14.72	16.28	16.60
	3H	16.55	18.01	16.93	18.33	18.69	16.06	17.51	16.44	17.84	18.20
	4H	17.20	18.57	17.60	18.91	19.29	16.70	18.07	17.10	18.42	18.80
	6H	17.67	18.94	18.08	19.30	19.69	17.17	18.43	17.58	18.80	19.19
	8H	17.81	19.02	18.24	19.41	19.81	17.31	18.52	17.73	18.91	19.31
	12H	17.90	19.06	18.33	19.44	19.87	17.39	18.55	17.82	18.93	19.36
4H	2H	15.36	16.73	15.76	17.08	17.45	15.01	16.38	15.41	16.73	17.10
	3H	17.34	18.48	17.75	18.88	19.28	16.93	18.08	17.34	18.47	18.87
	4H	18.11	19.15	18.55	19.56	20.00	17.69	18.73	18.12	19.14	19.58
	6H	18.71	19.62	19.16	20.06	20.51	18.28	19.18	18.73	19.62	20.08
	8H	18.90	19.75	19.36	20.19	20.65	18.46	19.31	18.92	19.75	20.22
	12H	19.03	19.79	19.51	20.27	20.74	18.58	19.34	19.06	19.82	20.28
8H	4H	18.39	19.23	18.85	19.68	20.14	18.01	18.86	18.47	19.30	19.77
	6H	19.10	19.80	19.60	20.29	20.77	18.72	19.42	19.21	19.91	20.39
	8H	19.36	19.99	19.87	20.50	20.98	18.97	19.60	19.48	20.11	20.59
	12H	19.56	20.12	20.07	20.61	21.17	19.15	19.71	19.65	20.20	20.76
12H	4H	18.41	19.17	18.89	19.65	20.12	18.05	18.81	18.53	19.28	19.75
	6H	19.15	19.78	19.66	20.29	20.77	18.78	19.41	19.29	19.92	20.40
	8H	19.46	20.02	19.97	20.51	21.07	19.08	19.64	19.59	20.13	20.69