

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: P931553

Luminaire Tested: DFN2DS-TR4F0-100DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931553
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-TR4F0-100DS835-FLL
Description: 4 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

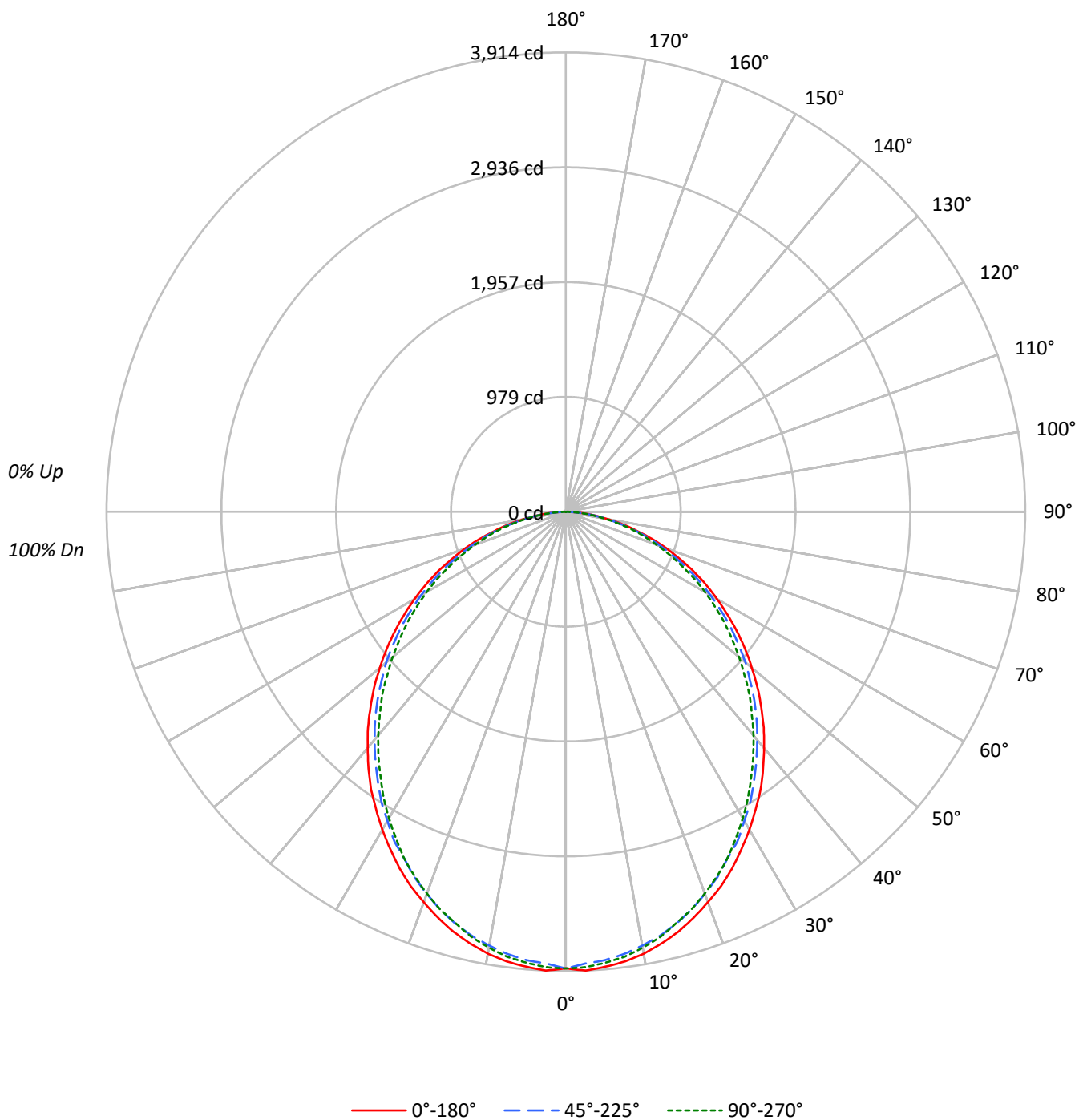
Lumens per Lamp: N/A
Luminaire Lumens: 9900.0 lumens
Efficiency: N/A
Efficacy: 92.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 107.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
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°	3091	3091	3091
5°	3103	3058	3076
10°	3085	3027	3043
15°	3046	2988	2985
20°	2992	2929	2926
25°	2939	2857	2857
30°	2870	2790	2766
35°	2805	2711	2671
40°	2724	2631	2580
45°	2644	2551	2489
50°	2557	2469	2381
55°	2467	2374	2286
60°	2366	2259	2176
65°	2258	2145	2047
70°	2121	2007	1912
75°	1929	1848	1803
80°	1712	1660	1575
85°	1396	1332	1194

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 2644 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	366.2	3.7
10°-20°	1030.4	10.4
20°-30°	1514.3	15.3
30°-40°	1758.8	17.8
40°-50°	1756.6	17.7
50°-60°	1531.7	15.5
60°-70°	1132.3	11.4
70°-80°	640.6	6.5
80°-90°	169.1	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°	2911.0	29.4
0°-40°	4669.7	47.2
0°-60°	7958.0	80.4
0°-90°	9900.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9900.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3891	3891	3891	3891	3891	
5°	3891	3876	3835	3865	3858	369
15°	3704	3682	3633	3648	3630	1043
25°	3352	3323	3259	3266	3259	1543
35°	2892	2855	2795	2772	2754	1806
45°	2354	2327	2271	2230	2215	1816
55°	1781	1759	1714	1669	1650	1592
65°	1201	1179	1141	1108	1089	1188
75°	628	621	602	580	588	671
85°	153	150	146	135	131	180
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3891.1	3891.1	3891.1	3891.1	3891.1
2.5°	3913.7	3895.0	3853.7	3891.1	3883.9
5°	3891.1	3876.4	3835.1	3864.9	3857.7
7.5°	3864.9	3842.6	3801.3	3831.5	3824.0
10°	3824.0	3797.8	3752.9	3782.7	3771.6
12.5°	3767.6	3745.4	3700.5	3719.2	3711.6
15°	3704.1	3681.9	3633.0	3648.1	3629.5
17.5°	3625.5	3603.3	3554.4	3573.1	3554.4
20°	3539.3	3517.1	3464.7	3475.8	3461.1
22.5°	3453.6	3419.9	3371.0	3371.0	3363.5
25°	3352.4	3322.6	3259.1	3266.2	3259.1
27.5°	3240.0	3213.8	3165.4	3154.3	3135.6
30°	3128.1	3097.9	3041.9	3030.8	3015.7
32.5°	3008.2	2986.0	2926.0	2903.4	2888.3
35°	2892.3	2855.0	2795.0	2772.4	2753.7
37.5°	2761.3	2727.5	2667.6	2641.4	2622.7
40°	2626.7	2596.5	2536.6	2503.3	2488.2
42.5°	2495.7	2465.5	2406.0	2368.3	2346.1
45°	2353.6	2327.4	2271.0	2230.1	2215.1
47.5°	2215.1	2188.9	2128.9	2087.6	2065.4
50°	2069.0	2050.3	1997.9	1945.5	1926.9
52.5°	1926.9	1900.7	1852.2	1811.0	1784.8
55°	1781.2	1758.6	1713.7	1668.8	1650.2
57.5°	1635.1	1616.4	1567.6	1522.8	1507.7
60°	1489.0	1474.3	1421.9	1380.6	1369.5
62.5°	1346.9	1320.7	1283.4	1246.1	1231.0
65°	1201.2	1178.6	1141.3	1107.5	1088.9
67.5°	1051.6	1032.5	999.2	973.0	957.9
70°	913.0	897.9	864.2	838.0	823.3
72.5°	770.9	755.8	737.2	711.0	699.8
75°	628.4	621.3	602.2	580.0	587.5
77.5°	501.4	486.3	478.7	467.6	456.5
80°	374.3	370.4	362.8	351.7	344.2
82.5°	254.5	254.5	250.9	235.8	235.8
85°	153.2	149.7	146.1	134.6	131.0
87.5°	67.5	59.9	52.4	41.3	37.3
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	15.20	16.81	15.57	17.13	17.44	14.76	16.37	15.12	16.68	17.00
	3H	16.95	18.41	17.33	18.73	19.10	16.46	17.92	16.84	18.24	18.60
	4H	17.60	18.97	18.00	19.32	19.69	17.11	18.47	17.50	18.82	19.20
	6H	18.07	19.34	18.48	19.70	20.09	17.57	18.84	17.98	19.20	19.59
	8H	18.21	19.42	18.64	19.81	20.21	17.71	18.92	18.13	19.31	19.71
	12H	18.30	19.46	18.73	19.84	20.27	17.79	18.95	18.22	19.33	19.76
4H	2H	15.76	17.13	16.16	17.48	17.86	15.41	16.78	15.81	17.13	17.50
	3H	17.74	18.89	18.15	19.28	19.68	17.33	18.48	17.74	18.88	19.28
	4H	18.52	19.55	18.95	19.97	20.40	18.09	19.13	18.52	19.54	19.98
	6H	19.11	20.02	19.57	20.46	20.91	18.68	19.58	19.13	20.03	20.48
	8H	19.30	20.15	19.76	20.59	21.06	18.86	19.71	19.32	20.15	20.62
	12H	19.43	20.19	19.91	20.67	21.14	18.98	19.74	19.46	20.22	20.69
8H	4H	18.79	19.64	19.25	20.08	20.54	18.41	19.26	18.88	19.70	20.17
	6H	19.50	20.21	20.00	20.69	21.17	19.12	19.82	19.62	20.31	20.79
	8H	19.76	20.39	20.27	20.90	21.39	19.37	20.00	19.88	20.51	20.99
	12H	19.96	20.52	20.47	21.01	21.57	19.55	20.11	20.06	20.60	21.16
12H	4H	18.81	19.57	19.30	20.05	20.52	18.45	19.21	18.93	19.69	20.16
	6H	19.55	20.18	20.06	20.69	21.17	19.18	19.81	19.69	20.32	20.80
	8H	19.86	20.42	20.37	20.91	21.47	19.48	20.04	19.99	20.53	21.09

END OF REPORT