

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: P931599

Luminaire Tested: DFN2DS-TR4F0-120DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931599
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-TR4F0-120DS935-FLL
Description: 4 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

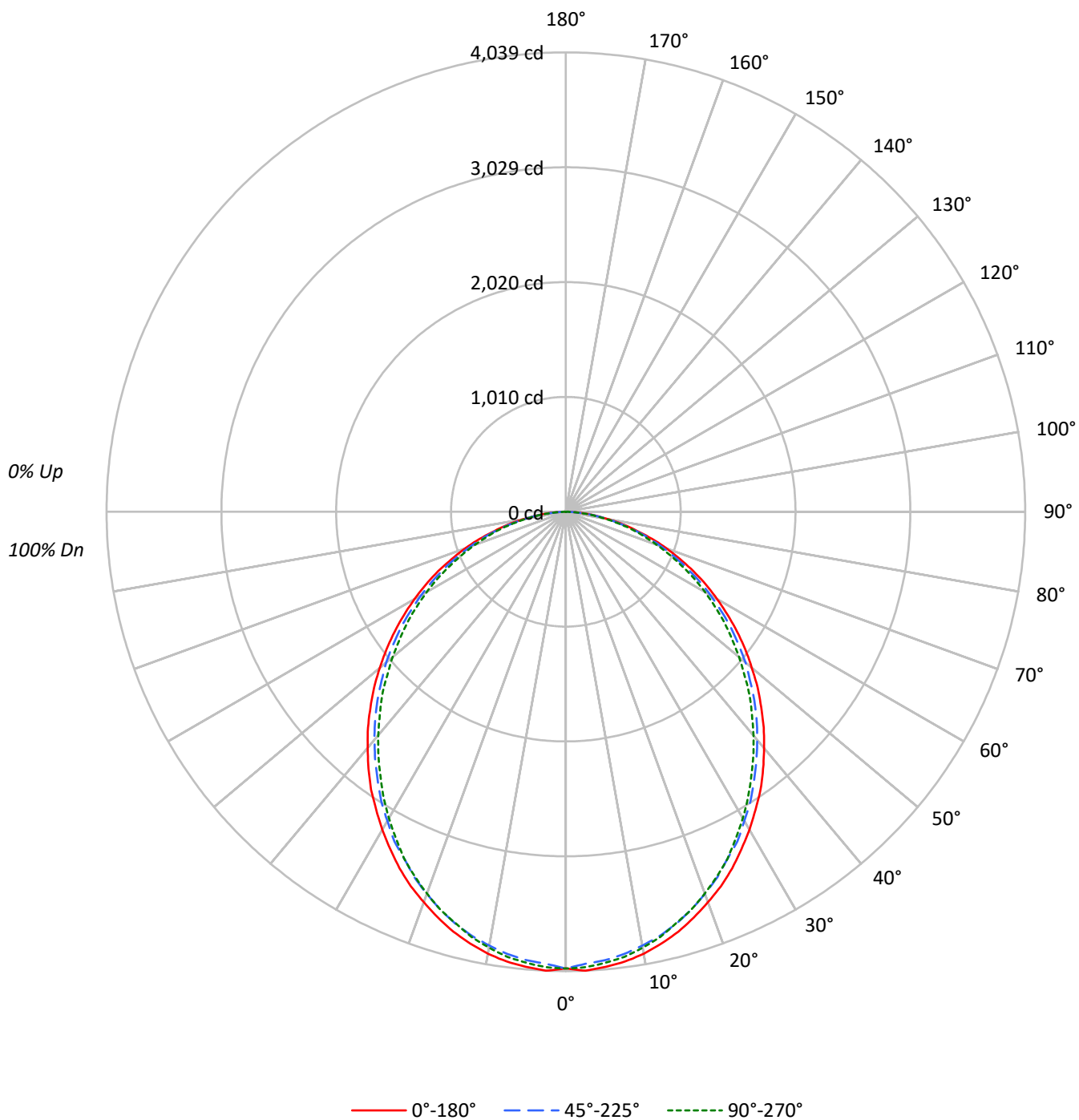
Lumens per Lamp: N/A
Luminaire Lumens: 10216.8 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 131.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9821
Total Harmonic Distortion (THDi): 0.08
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°	3190	3190	3190
5°	3202	3156	3175
10°	3184	3124	3140
15°	3144	3084	3081
20°	3088	3023	3020
25°	3033	2948	2948
30°	2961	2880	2855
35°	2895	2797	2756
40°	2811	2715	2663
45°	2729	2633	2568
50°	2639	2548	2458
55°	2546	2449	2359
60°	2441	2332	2246
65°	2330	2214	2113
70°	2189	2071	1974
75°	1991	1907	1861
80°	1767	1713	1625
85°	1442	1375	1232

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2729 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	377.9	3.7
10°-20°	1063.4	10.4
20°-30°	1562.8	15.3
30°-40°	1815.1	17.8
40°-50°	1812.8	17.7
50°-60°	1580.7	15.5
60°-70°	1168.5	11.4
70°-80°	661.1	6.5
80°-90°	174.5	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°	3004.1	29.4
0°-40°	4819.2	47.2
0°-60°	8212.7	80.4
0°-90°	10216.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10216.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4016	4016	4016	4016	4016	
5°	4016	4000	3958	3988	3981	381
15°	3823	3800	3749	3765	3746	1077
25°	3460	3429	3363	3371	3363	1592
35°	2985	2946	2884	2861	2842	1864
45°	2429	2402	2344	2302	2286	1875
55°	1838	1815	1768	1722	1703	1643
65°	1240	1216	1178	1143	1124	1226
75°	648	641	621	599	606	692
85°	158	154	151	139	135	186
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4015.6	4015.6	4015.6	4015.6	4015.6
2.5°	4038.9	4019.6	3977.1	4015.6	4008.2
5°	4015.6	4000.4	3957.8	3988.5	3981.1
7.5°	3988.5	3965.5	3923.0	3954.1	3946.4
10°	3946.4	3919.3	3873.0	3903.7	3892.3
12.5°	3888.1	3865.2	3818.9	3838.2	3830.4
15°	3822.6	3799.7	3749.3	3764.8	3745.6
17.5°	3741.5	3718.6	3668.2	3687.4	3668.2
20°	3652.6	3629.6	3575.6	3587.1	3571.9
22.5°	3564.1	3529.3	3478.9	3478.9	3471.1
25°	3459.6	3428.9	3363.4	3370.8	3363.4
27.5°	3343.7	3316.7	3266.7	3255.2	3236.0
30°	3228.2	3197.0	3139.3	3127.8	3112.3
32.5°	3104.4	3081.6	3019.6	2996.3	2980.8
35°	2984.8	2946.4	2884.4	2861.1	2841.9
37.5°	2849.6	2814.9	2752.9	2725.9	2706.7
40°	2710.8	2679.7	2617.8	2583.4	2567.8
42.5°	2575.6	2544.5	2483.0	2444.1	2421.2
45°	2428.9	2401.9	2343.7	2301.5	2286.0
47.5°	2286.0	2258.9	2197.0	2154.5	2131.5
50°	2135.2	2115.9	2061.8	2007.8	1988.5
52.5°	1988.5	1961.5	1911.5	1868.9	1841.9
55°	1838.2	1814.9	1768.5	1722.2	1703.0
57.5°	1687.4	1668.1	1617.7	1571.5	1555.9
60°	1536.6	1521.5	1467.4	1424.8	1413.3
62.5°	1390.0	1362.9	1324.5	1286.0	1270.4
65°	1239.7	1216.3	1177.8	1142.9	1123.8
67.5°	1085.2	1065.5	1031.1	1004.1	988.6
70°	942.2	926.6	891.8	864.8	849.7
72.5°	795.6	780.0	760.8	733.8	722.2
75°	648.5	641.1	621.4	598.6	606.3
77.5°	517.4	501.8	494.1	482.5	471.1
80°	386.3	382.2	374.4	363.0	355.2
82.5°	262.6	262.6	258.9	243.4	243.4
85°	158.2	154.5	150.8	138.9	135.2
87.5°	69.7	61.8	54.1	42.6	38.5
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	15.31	16.92	15.68	17.24	17.55	14.87	16.48	15.23	16.79	17.11
	3H	17.06	18.52	17.44	18.84	19.20	16.57	18.03	16.95	18.35	18.71
	4H	17.71	19.08	18.11	19.43	19.80	17.21	18.58	17.61	18.93	19.31
	6H	18.18	19.45	18.59	19.81	20.20	17.68	18.95	18.09	19.31	19.70
	8H	18.32	19.53	18.75	19.92	20.32	17.82	19.03	18.24	19.42	19.82
	12H	18.41	19.57	18.84	19.95	20.38	17.90	19.06	18.33	19.44	19.87
4H	2H	15.87	17.24	16.27	17.59	17.97	15.52	16.89	15.92	17.24	17.61
	3H	17.85	18.99	18.26	19.39	19.79	17.44	18.59	17.85	18.99	19.39
	4H	18.62	19.66	19.06	20.07	20.51	18.20	19.24	18.63	19.65	20.09
	6H	19.22	20.13	19.68	20.57	21.02	18.79	19.69	19.24	20.13	20.59
	8H	19.41	20.26	19.87	20.70	21.17	18.97	19.82	19.43	20.26	20.73
	12H	19.54	20.30	20.02	20.78	21.25	19.09	19.85	19.57	20.33	20.80
8H	4H	18.90	19.74	19.36	20.19	20.65	18.52	19.37	18.98	19.81	20.28
	6H	19.61	20.32	20.11	20.80	21.28	19.23	19.93	19.72	20.42	20.90
	8H	19.87	20.50	20.38	21.01	21.50	19.48	20.11	19.99	20.62	21.10
	12H	20.07	20.63	20.58	21.12	21.68	19.66	20.22	20.17	20.71	21.27
12H	4H	18.92	19.68	19.40	20.16	20.63	18.56	19.32	19.04	19.80	20.27
	6H	19.66	20.29	20.17	20.80	21.28	19.29	19.92	19.80	20.43	20.91
	8H	19.97	20.53	20.48	21.02	21.58	19.59	20.15	20.10	20.64	21.20

END OF REPORT