

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: P931393

Luminaire Tested: DFN2DS-TR3F0-070DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931393
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-TR3F0-070DS840-FLL
Description: 3 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

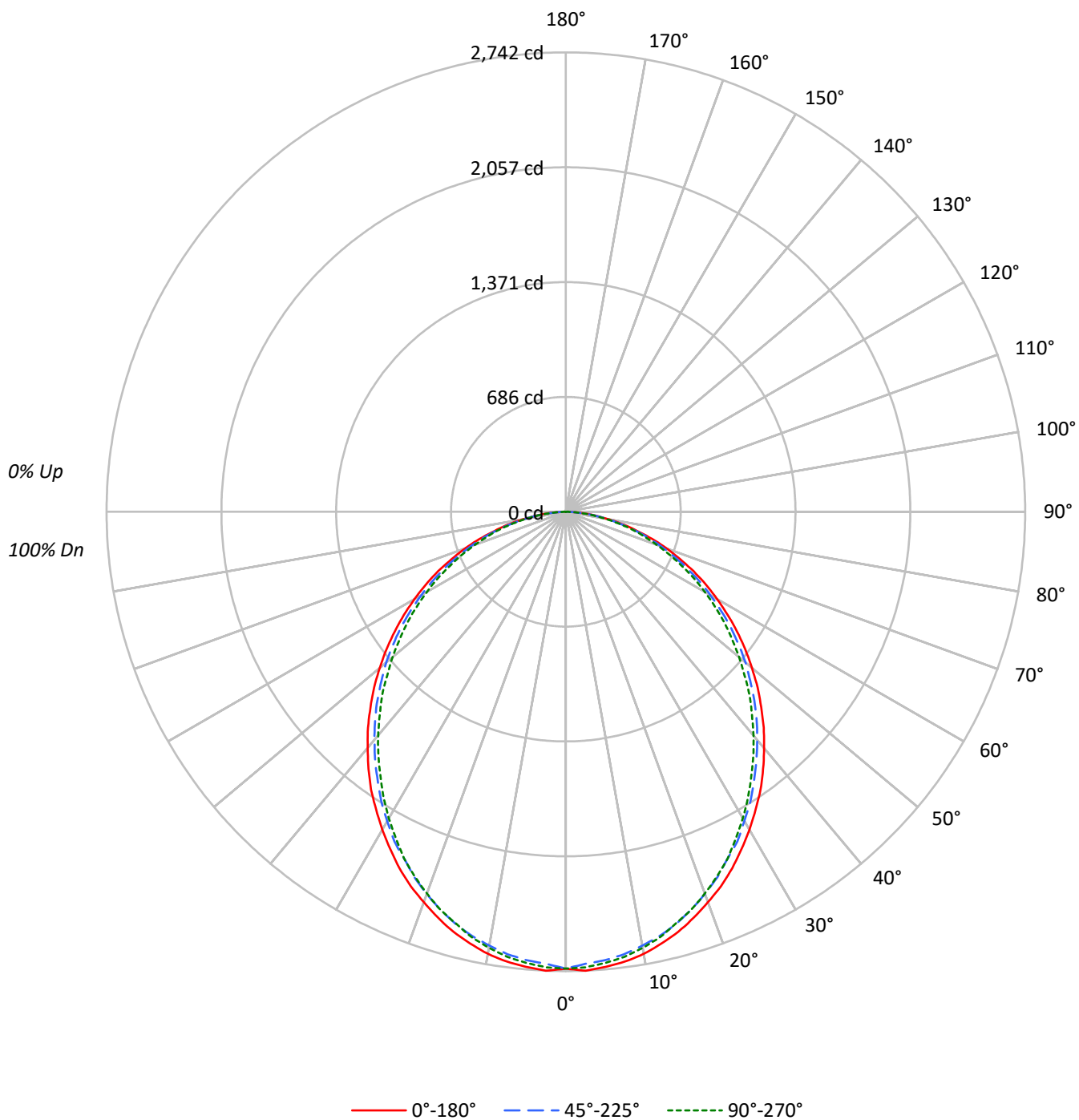
Lumens per Lamp: N/A
Luminaire Lumens: 6936.9 lumens
Efficiency: N/A
Efficacy: 93.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.16' x L: 2.74' x H: 0')
CIE Type: Direct

Input Watts (W): 74.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
Total Harmonic Distortion (THDi): 0.049
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°	3397	3397	3397
5°	3410	3361	3381
10°	3390	3327	3344
15°	3348	3284	3281
20°	3289	3219	3216
25°	3230	3140	3140
30°	3154	3067	3040
35°	3083	2979	2935
40°	2994	2891	2836
45°	2906	2804	2735
50°	2810	2714	2617
55°	2711	2609	2512
60°	2600	2483	2392
65°	2482	2358	2250
70°	2331	2206	2102
75°	2120	2031	1982
80°	1882	1825	1730
85°	1536	1464	1313

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2906 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.6	3.7
10°-20°	722.0	10.4
20°-30°	1061.1	15.3
30°-40°	1232.4	17.8
40°-50°	1230.8	17.7
50°-60°	1073.3	15.5
60°-70°	793.4	11.4
70°-80°	448.9	6.5
80°-90°	118.5	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°	2039.7	29.4
0°-40°	3272.1	47.2
0°-60°	5576.2	80.4
0°-90°	6936.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6936.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2726	2726	2726	2726	2726	
5°	2726	2716	2687	2708	2703	259
15°	2596	2580	2546	2556	2543	731
25°	2349	2328	2284	2289	2284	1081
35°	2027	2000	1958	1943	1930	1266
45°	1649	1631	1591	1563	1552	1273
55°	1248	1232	1201	1169	1156	1116
65°	842	826	800	776	763	832
75°	440	435	422	406	412	470
85°	107	105	102	94	92	126
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2726.4	2726.4	2726.4	2726.4	2726.4
2.5°	2742.3	2729.2	2700.3	2726.4	2721.4
5°	2726.4	2716.2	2687.3	2708.1	2703.1
7.5°	2708.1	2692.5	2663.6	2684.8	2679.5
10°	2679.5	2661.1	2629.6	2650.5	2642.7
12.5°	2639.9	2624.4	2593.0	2606.0	2600.7
15°	2595.5	2579.9	2545.6	2556.3	2543.1
17.5°	2540.3	2524.8	2490.6	2503.7	2490.6
20°	2480.0	2464.5	2427.7	2435.5	2425.2
22.5°	2419.9	2396.3	2362.1	2362.1	2356.8
25°	2349.0	2328.1	2283.7	2288.7	2283.7
27.5°	2270.3	2251.9	2218.0	2210.2	2197.1
30°	2191.9	2170.7	2131.5	2123.7	2113.1
32.5°	2107.8	2092.3	2050.2	2034.4	2023.8
35°	2026.6	2000.5	1958.5	1942.6	1929.5
37.5°	1934.8	1911.2	1869.2	1850.8	1837.7
40°	1840.5	1819.4	1777.4	1754.1	1743.4
42.5°	1748.7	1727.6	1685.9	1659.5	1643.8
45°	1649.1	1630.8	1591.3	1562.7	1552.1
47.5°	1552.1	1533.7	1491.7	1462.8	1447.2
50°	1449.7	1436.6	1399.9	1363.3	1350.1
52.5°	1350.1	1331.8	1297.9	1269.0	1250.5
55°	1248.0	1232.2	1200.8	1169.4	1156.3
57.5°	1145.7	1132.6	1098.4	1067.0	1056.5
60°	1043.3	1033.0	996.4	967.5	959.7
62.5°	943.7	925.4	899.3	873.2	862.6
65°	841.7	825.8	799.7	776.1	763.0
67.5°	736.8	723.5	700.1	681.8	671.2
70°	639.7	629.2	605.5	587.2	576.9
72.5°	540.1	529.6	516.5	498.2	490.4
75°	440.3	435.3	421.9	406.4	411.7
77.5°	351.4	340.7	335.4	327.6	319.9
80°	262.3	259.6	254.3	246.4	241.1
82.5°	178.3	178.3	175.8	165.3	165.3
85°	107.4	104.9	102.4	94.3	91.8
87.5°	47.2	42.0	36.7	28.9	26.1
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	15.53	17.14	15.90	17.46	17.77	15.09	16.70	15.45	17.01	17.33
	3H	17.28	18.74	17.66	19.06	19.42	16.79	18.25	17.17	18.57	18.93
	4H	17.93	19.30	18.33	19.64	20.02	17.43	18.80	17.83	19.15	19.53
	6H	18.40	19.67	18.81	20.03	20.42	17.90	19.16	18.31	19.53	19.92
	8H	18.54	19.75	18.97	20.14	20.54	18.04	19.25	18.46	19.64	20.04
	12H	18.63	19.79	19.06	20.17	20.60	18.12	19.28	18.55	19.66	20.09
4H	2H	16.09	17.46	16.49	17.81	18.19	15.74	17.11	16.14	17.46	17.83
	3H	18.07	19.21	18.48	19.61	20.01	17.66	18.81	18.07	19.20	19.60
	4H	18.84	19.88	19.27	20.29	20.73	18.42	19.46	18.85	19.87	20.31
	6H	19.44	20.35	19.89	20.79	21.24	19.01	19.91	19.46	20.35	20.81
	8H	19.63	20.48	20.09	20.92	21.38	19.19	20.04	19.65	20.48	20.95
	12H	19.76	20.52	20.24	21.00	21.47	19.31	20.07	19.79	20.55	21.01
8H	4H	19.12	19.96	19.58	20.41	20.87	18.74	19.59	19.20	20.03	20.50
	6H	19.83	20.53	20.33	21.02	21.50	19.45	20.15	19.94	20.64	21.12
	8H	20.09	20.72	20.60	21.23	21.71	19.70	20.33	20.21	20.84	21.32
	12H	20.29	20.85	20.80	21.34	21.90	19.88	20.44	20.38	20.93	21.49
12H	4H	19.14	19.90	19.62	20.38	20.85	18.78	19.54	19.26	20.01	20.48
	6H	19.88	20.51	20.39	21.02	21.50	19.51	20.14	20.02	20.65	21.13
	8H	20.19	20.75	20.70	21.24	21.80	19.81	20.37	20.32	20.86	21.42