

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: P931439

Luminaire Tested: DFN2DS-TR3F0-090DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931439
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-TR3F0-090DS940-FLL
Description: 3 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

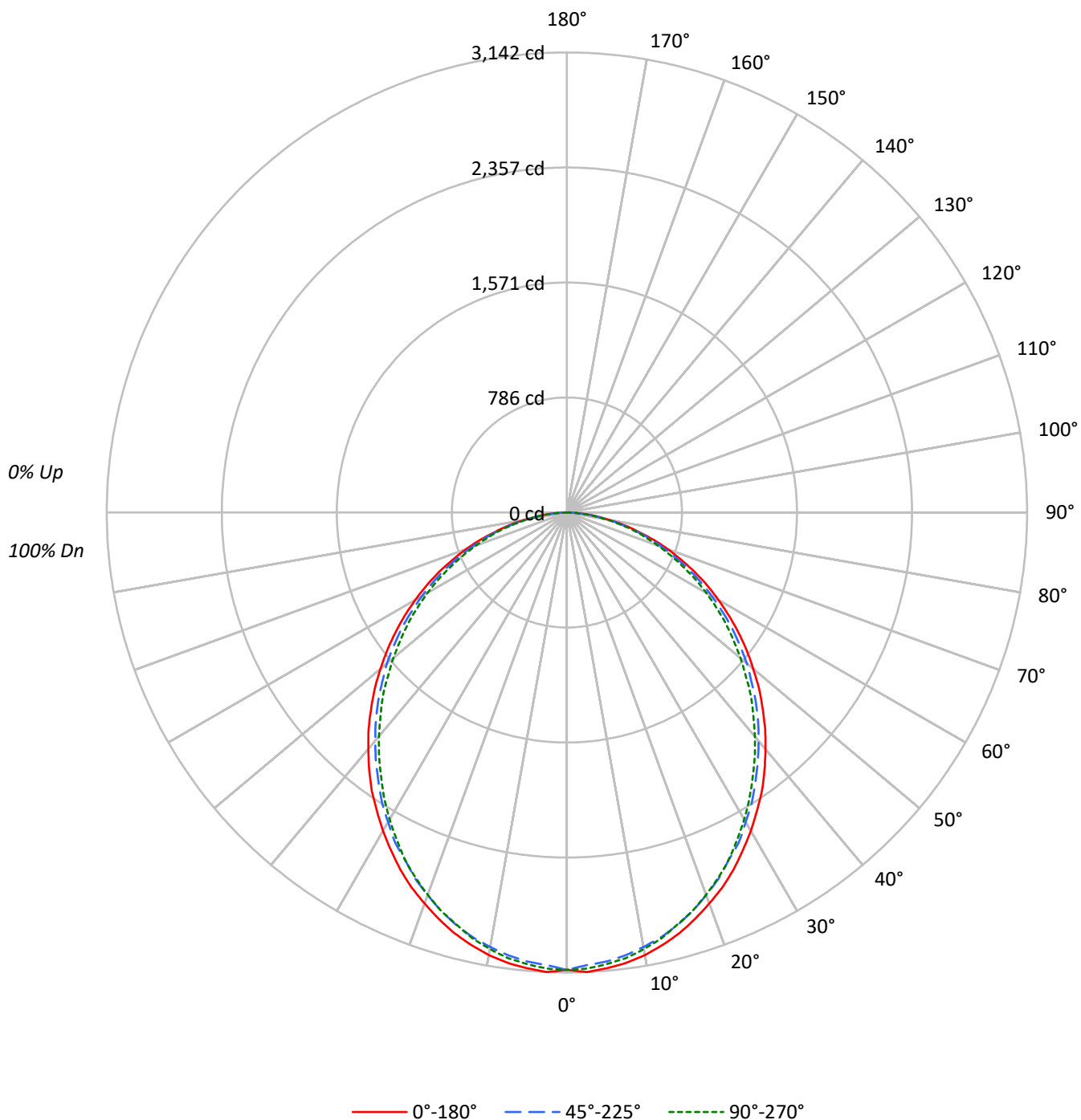
Lumens per Lamp: N/A
Luminaire Lumens: 7947.7 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.16' x L: 2.74' x H: 0')
CIE Type: Direct

Input Watts (W): 99.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931439

CATALOG NUMBER: DFN2DS-TR3F0-090DS940-FLL

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°	3892	3892	3892
5°	3907	3851	3874
10°	3884	3812	3831
15°	3836	3763	3759
20°	3768	3688	3685
25°	3700	3597	3597
30°	3613	3514	3484
35°	3532	3413	3363
40°	3430	3312	3249
45°	3330	3213	3134
50°	3220	3109	2999
55°	3107	2989	2878
60°	2979	2845	2740
65°	2843	2701	2578
70°	2671	2528	2408
75°	2429	2328	2271
80°	2156	2090	1983
85°	1759	1677	1504

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3330 cd/sqm

TEST NUMBER: P931439

CATALOG NUMBER: DFN2DS-TR3F0-090DS940-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	294.0	3.7
10°-20°	827.2	10.4
20°-30°	1215.7	15.3
30°-40°	1412.0	17.8
40°-50°	1410.2	17.7
50°-60°	1229.7	15.5
60°-70°	909.0	11.4
70°-80°	514.3	6.5
80°-90°	135.7	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°	2336.9	29.4
0°-40°	3748.9	47.2
0°-60°	6388.7	80.4
0°-90°	7947.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7947.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3124	3124	3124	3124	3124	
5°	3124	3112	3079	3103	3097	297
15°	2974	2956	2917	2929	2914	837
25°	2691	2667	2616	2622	2616	1238
35°	2322	2292	2244	2226	2211	1450
45°	1889	1868	1823	1790	1778	1458
55°	1430	1412	1376	1340	1325	1278
65°	964	946	916	889	874	953
75°	504	499	484	466	472	539
85°	123	120	117	108	105	145
90°	0	0	0	0	0	

TEST NUMBER: P931439

CATALOG NUMBER: DFN2DS-TR3F0-090DS940-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3123.7	3123.7	3123.7	3123.7	3123.7
2.5°	3141.9	3126.9	3093.8	3123.7	3118.0
5°	3123.7	3111.9	3078.8	3102.7	3096.9
7.5°	3102.7	3084.9	3051.7	3076.0	3069.9
10°	3069.9	3048.9	3012.8	3036.7	3027.8
12.5°	3024.6	3006.8	2970.8	2985.7	2979.7
15°	2973.7	2955.8	2916.6	2928.7	2913.7
17.5°	2910.5	2892.7	2853.5	2868.5	2853.5
20°	2841.4	2823.5	2781.4	2790.4	2778.6
22.5°	2772.5	2745.5	2706.2	2706.2	2700.2
25°	2691.3	2667.3	2616.4	2622.1	2616.4
27.5°	2601.1	2580.0	2541.2	2532.3	2517.3
30°	2511.2	2487.0	2442.0	2433.1	2421.1
32.5°	2415.0	2397.2	2349.0	2330.9	2318.8
35°	2322.0	2292.0	2243.8	2225.7	2210.7
37.5°	2216.8	2189.7	2141.5	2120.6	2105.6
40°	2108.7	2084.5	2036.3	2009.6	1997.5
42.5°	2003.5	1979.3	1931.5	1901.3	1883.5
45°	1889.4	1868.5	1823.2	1790.3	1778.3
47.5°	1778.3	1757.2	1709.1	1676.0	1658.1
50°	1661.0	1646.0	1603.9	1561.9	1546.9
52.5°	1546.9	1525.9	1487.0	1453.9	1432.8
55°	1430.0	1411.8	1375.7	1339.8	1324.8
57.5°	1312.7	1297.7	1258.5	1222.5	1210.4
60°	1195.4	1183.6	1141.5	1108.4	1099.5
62.5°	1081.3	1060.2	1030.3	1000.4	988.2
65°	964.3	946.1	916.2	889.1	874.2
67.5°	844.2	828.9	802.1	781.1	769.0
70°	733.0	720.8	693.8	672.7	661.0
72.5°	618.9	606.7	591.8	570.8	561.9
75°	504.5	498.7	483.5	465.6	471.7
77.5°	402.5	390.4	384.4	375.4	366.5
80°	300.5	297.3	291.2	282.3	276.3
82.5°	204.3	204.3	201.4	189.3	189.3
85°	123.0	120.2	117.3	108.0	105.2
87.5°	54.1	48.1	42.1	33.2	30.0
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	16.00	17.62	16.37	17.93	18.24	15.56	17.17	15.93	17.48	17.80
	3H	17.75	19.21	18.13	19.54	19.90	17.26	18.72	17.64	19.04	19.41
	4H	18.40	19.77	18.80	20.12	20.49	17.91	19.28	18.30	19.62	20.00
	6H	18.87	20.14	19.28	20.50	20.89	18.37	19.64	18.78	20.00	20.39
	8H	19.01	20.22	19.44	20.61	21.01	18.51	19.72	18.93	20.11	20.51
	12H	19.10	20.26	19.53	20.64	21.07	18.59	19.75	19.02	20.13	20.56
4H	2H	16.56	17.93	16.96	18.28	18.66	16.21	17.58	16.61	17.93	18.31
	3H	18.54	19.69	18.95	20.08	20.48	18.13	19.28	18.54	19.68	20.08
	4H	19.32	20.35	19.75	20.77	21.20	18.89	19.93	19.32	20.34	20.78
	6H	19.91	20.82	20.37	21.26	21.71	19.48	20.39	19.93	20.83	21.28
	8H	20.10	20.95	20.56	21.39	21.86	19.66	20.51	20.13	20.95	21.42
	12H	20.23	20.99	20.71	21.47	21.94	19.78	20.54	20.26	21.02	21.49
8H	4H	19.59	20.44	20.05	20.88	21.34	19.22	20.06	19.68	20.50	20.97
	6H	20.30	21.01	20.80	21.50	21.97	19.92	20.63	20.42	21.11	21.59
	8H	20.56	21.19	21.07	21.70	22.19	20.17	20.80	20.68	21.31	21.80
	12H	20.76	21.32	21.27	21.81	22.37	20.35	20.91	20.86	21.40	21.96
12H	4H	19.62	20.38	20.10	20.85	21.32	19.25	20.01	19.73	20.49	20.96
	6H	20.35	20.98	20.86	21.49	21.97	19.98	20.61	20.49	21.12	21.61
	8H	20.66	21.22	21.17	21.71	22.27	20.29	20.84	20.79	21.33	21.89