

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: P931567

Luminaire Tested: DFN2DS-TR4F0-100DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931567
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-TR4F0-100DS950-FLL
Description: 4 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

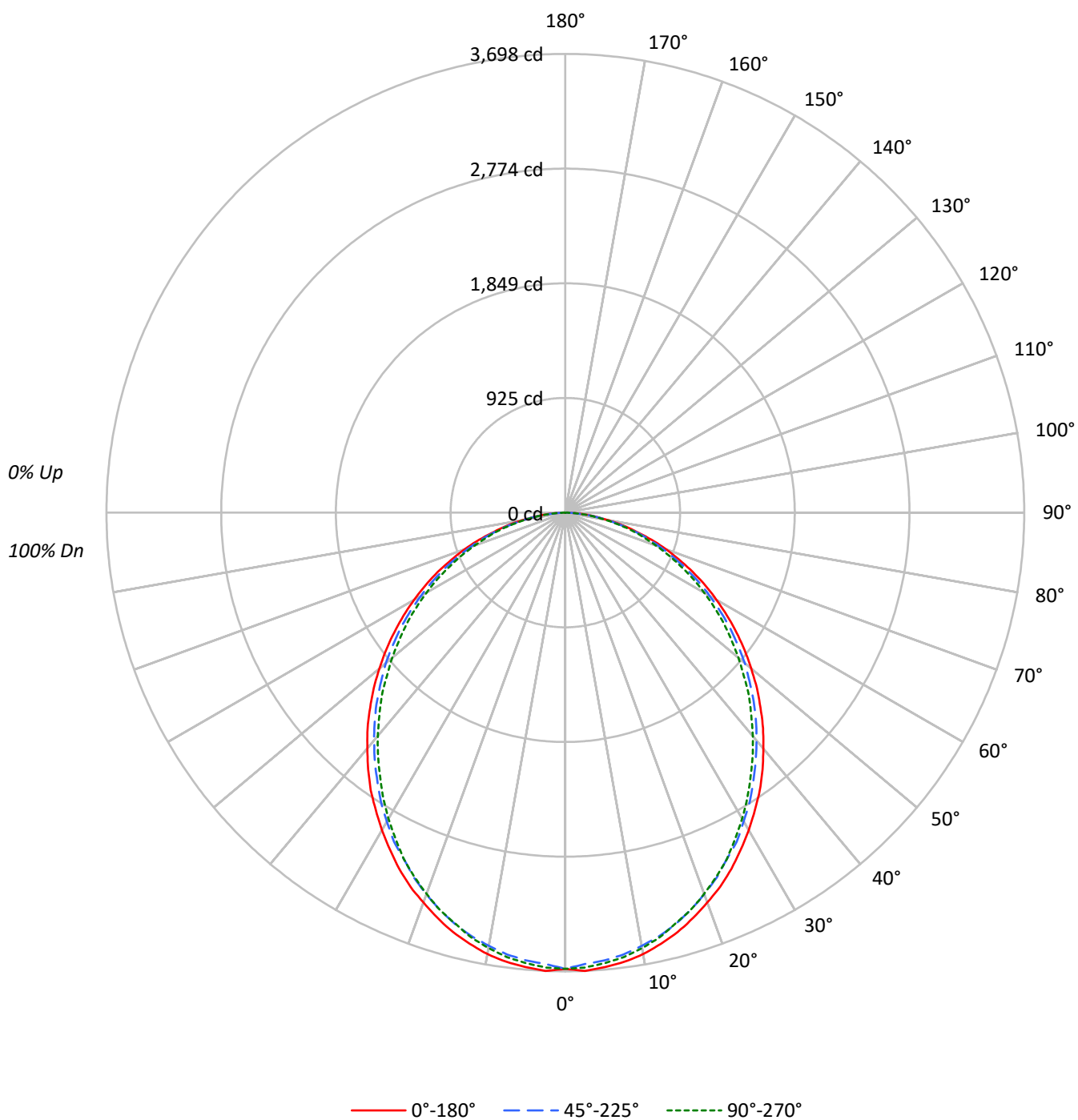
Lumens per Lamp: N/A
Luminaire Lumens: 9355.5 lumens
Efficiency: N/A
Efficacy: 87.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

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°	2921	2921	2921
5°	2932	2890	2907
10°	2915	2861	2875
15°	2879	2824	2821
20°	2828	2768	2765
25°	2777	2700	2700
30°	2712	2637	2614
35°	2651	2562	2524
40°	2574	2486	2438
45°	2499	2411	2352
50°	2416	2333	2250
55°	2331	2243	2160
60°	2236	2135	2056
65°	2134	2027	1934
70°	2004	1897	1807
75°	1823	1747	1704
80°	1618	1568	1488
85°	1320	1259	1128

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 2499 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	346.1	3.7
10°-20°	973.8	10.4
20°-30°	1431.0	15.3
30°-40°	1662.0	17.8
40°-50°	1660.0	17.7
50°-60°	1447.4	15.5
60°-70°	1070.0	11.4
70°-80°	605.4	6.5
80°-90°	159.8	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°	2750.9	29.4
0°-40°	4412.9	47.2
0°-60°	7520.3	80.4
0°-90°	9355.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9355.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3677	3677	3677	3677	3677	
5°	3677	3663	3624	3652	3646	349
15°	3500	3479	3433	3448	3430	986
25°	3168	3140	3080	3087	3080	1458
35°	2733	2698	2641	2620	2602	1707
45°	2224	2199	2146	2107	2093	1717
55°	1683	1662	1619	1577	1559	1505
65°	1135	1114	1078	1047	1029	1122
75°	594	587	569	548	555	634
85°	145	142	138	127	124	170
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3677.1	3677.1	3677.1	3677.1	3677.1
2.5°	3698.4	3680.8	3641.7	3677.1	3670.3
5°	3677.1	3663.2	3624.2	3652.3	3645.5
7.5°	3652.3	3631.3	3592.2	3620.8	3613.7
10°	3613.7	3588.9	3546.5	3574.7	3564.2
12.5°	3560.4	3539.4	3497.0	3514.6	3507.5
15°	3500.4	3479.4	3433.2	3447.5	3429.9
17.5°	3426.1	3405.1	3358.9	3376.6	3358.9
20°	3344.6	3323.7	3274.1	3284.6	3270.7
22.5°	3263.7	3231.8	3185.6	3185.6	3178.5
25°	3168.0	3139.9	3079.8	3086.6	3079.8
27.5°	3061.8	3037.0	2991.3	2980.8	2963.1
30°	2956.1	2927.5	2874.6	2864.1	2849.8
32.5°	2842.7	2821.8	2765.1	2743.7	2729.4
35°	2733.2	2698.0	2641.3	2619.9	2602.2
37.5°	2609.4	2577.5	2520.9	2496.1	2478.5
40°	2482.2	2453.7	2397.1	2365.6	2351.3
42.5°	2358.4	2329.9	2273.7	2238.0	2217.1
45°	2224.2	2199.4	2146.1	2107.4	2093.3
47.5°	2093.3	2068.5	2011.8	1972.8	1951.8
50°	1955.2	1937.5	1888.0	1838.5	1820.9
52.5°	1820.9	1796.2	1750.3	1711.4	1686.6
55°	1683.2	1661.9	1619.4	1577.0	1559.4
57.5°	1545.2	1527.5	1481.4	1439.0	1424.8
60°	1407.1	1393.2	1343.7	1304.7	1294.2
62.5°	1272.8	1248.1	1212.8	1177.6	1163.3
65°	1135.1	1113.8	1078.5	1046.6	1029.0
67.5°	993.8	975.7	944.2	919.5	905.2
70°	862.8	848.5	816.7	791.9	778.0
72.5°	728.5	714.2	696.7	671.9	661.3
75°	593.8	587.1	569.1	548.1	555.2
77.5°	473.8	459.6	452.4	441.9	431.4
80°	353.7	350.0	342.8	332.4	325.3
82.5°	240.5	240.5	237.1	222.8	222.8
85°	144.8	141.5	138.1	127.2	123.8
87.5°	63.8	56.6	49.5	39.0	35.2
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	15.01	16.62	15.37	16.93	17.25	14.56	16.17	14.93	16.49	16.80
	3H	16.76	18.21	17.13	18.54	18.90	16.27	17.72	16.64	18.05	18.41
	4H	17.40	18.77	17.80	19.12	19.50	16.91	18.28	17.31	18.63	19.00
	6H	17.87	19.14	18.28	19.51	19.90	17.37	18.64	17.78	19.00	19.40
	8H	18.02	19.23	18.44	19.62	20.01	17.51	18.72	17.94	19.11	19.51
	12H	18.11	19.27	18.54	19.65	20.08	17.59	18.75	18.02	19.14	19.56
4H	2H	15.57	16.94	15.97	17.28	17.66	15.21	16.58	15.61	16.93	17.31
	3H	17.54	18.69	17.95	19.09	19.49	17.14	18.28	17.55	18.68	19.08
	4H	18.32	19.35	18.75	19.77	20.20	17.90	18.93	18.33	19.34	19.78
	6H	18.92	19.82	19.37	20.26	20.72	18.48	19.39	18.94	19.83	20.28
	8H	19.11	19.95	19.57	20.39	20.86	18.67	19.51	19.13	19.96	20.42
	12H	19.24	20.00	19.72	20.47	20.94	18.78	19.54	19.27	20.02	20.49
8H	4H	18.59	19.44	19.05	19.88	20.35	18.22	19.06	18.68	19.51	19.97
	6H	19.31	20.01	19.80	20.50	20.97	18.93	19.63	19.42	20.12	20.59
	8H	19.57	20.20	20.08	20.70	21.19	19.17	19.81	19.68	20.31	20.80
	12H	19.77	20.32	20.27	20.81	21.38	19.35	19.91	19.86	20.40	20.96
12H	4H	18.62	19.38	19.10	19.85	20.32	18.25	19.01	18.73	19.49	19.96
	6H	19.35	19.98	19.86	20.49	20.98	18.98	19.62	19.49	20.12	20.61
	8H	19.67	20.22	20.17	20.71	21.28	19.29	19.85	19.80	20.34	20.90