

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: P931404

Luminaire Tested: DFN2DS-TR3F0-070DS940-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931404
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR3F0-070DS940-RLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

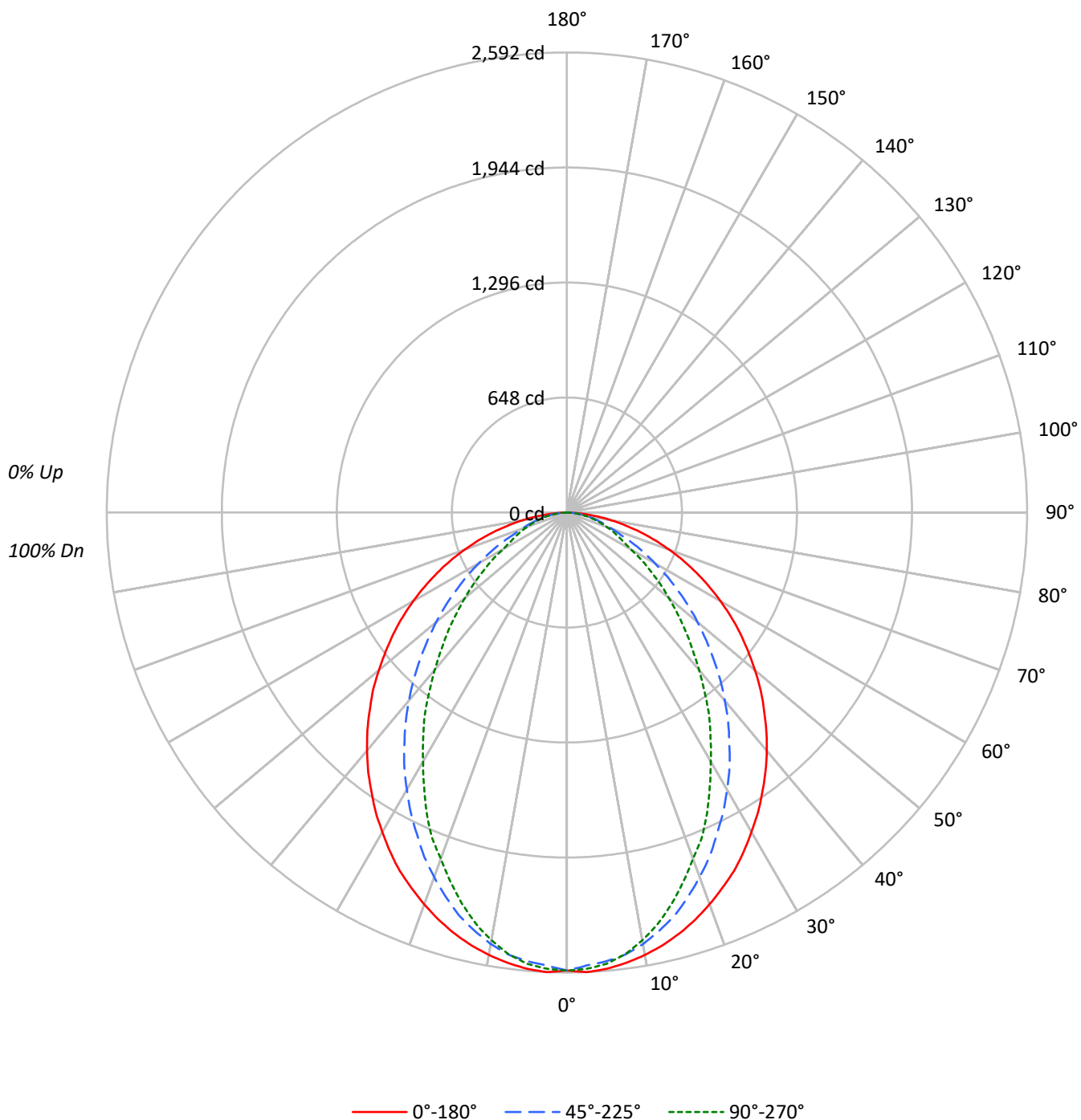
Lumens per Lamp: N/A
Luminaire Lumens: 5307.4 lumens
Efficiency: N/A
Efficacy: 71.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.16' x L: 2.74' x H: 0')
CIE Type: Direct

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	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3216	3216	3216
5°	3228	3175	3193
10°	3203	3124	3097
15°	3166	3031	2944
20°	3115	2899	2753
25°	3063	2749	2569
30°	2991	2594	2332
35°	2920	2427	2124
40°	2849	2253	1884
45°	2766	2058	1667
50°	2680	1861	1454
55°	2592	1649	1248
60°	2491	1426	1036
65°	2376	1198	943
70°	2238	987	867
75°	2069	899	810
80°	1826	804	738
85°	1435	633	633

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2766 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.9	4.6
10°-20°	664.0	12.5
20°-30°	932.2	17.6
30°-40°	1016.1	19.1
40°-50°	933.9	17.6
50°-60°	733.5	13.8
60°-70°	477.4	9.0
70°-80°	245.7	4.6
80°-90°	62.7	1.2
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°	1838.0	34.6
0°-40°	2854.1	53.8
0°-60°	4521.5	85.2
0°-90°	5307.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5307.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2581	2581	2581	2581	2581	
5°	2581	2569	2538	2560	2553	245
15°	2454	2429	2349	2305	2282	692
25°	2228	2153	1999	1903	1868	1025
35°	1920	1801	1595	1448	1396	1202
45°	1570	1413	1168	1002	946	1212
55°	1193	1011	759	619	575	1066
65°	806	616	406	327	320	799
75°	430	266	187	170	168	454
85°	100	51	44	44	44	120
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2580.6	2580.6	2580.6	2580.6	2580.6
2.5°	2592.2	2580.6	2554.9	2578.4	2573.7
5°	2580.6	2569.0	2538.5	2559.6	2552.6
7.5°	2559.6	2545.7	2513.0	2522.1	2510.5
10°	2531.6	2515.3	2468.6	2461.5	2447.6
12.5°	2496.6	2475.6	2412.4	2398.5	2372.7
15°	2454.5	2428.7	2349.4	2305.1	2281.8
17.5°	2405.5	2368.1	2270.0	2218.6	2181.2
20°	2349.4	2302.6	2185.9	2127.7	2076.1
22.5°	2288.8	2235.0	2099.4	2020.1	1985.2
25°	2228.0	2153.2	1999.1	1903.4	1868.3
27.5°	2155.7	2076.1	1905.7	1796.0	1742.2
30°	2078.6	1989.7	1802.8	1683.9	1620.8
32.5°	2003.8	1896.3	1705.0	1564.7	1506.2
35°	1919.8	1800.6	1595.3	1448.1	1396.5
37.5°	1838.1	1709.4	1492.4	1331.0	1272.9
40°	1751.5	1611.6	1384.8	1219.1	1158.4
42.5°	1662.9	1513.5	1277.5	1104.6	1046.4
45°	1569.5	1412.8	1167.8	1001.8	945.8
47.5°	1480.7	1315.0	1062.7	896.7	845.4
50°	1382.6	1216.9	959.9	798.6	749.8
52.5°	1286.7	1111.5	861.8	707.6	663.3
55°	1193.3	1011.2	758.9	619.0	574.6
57.5°	1097.7	910.8	668.0	537.2	499.8
60°	999.6	812.7	572.1	453.2	415.8
62.5°	903.9	717.1	490.3	378.4	359.7
65°	805.7	616.5	406.4	327.1	319.9
67.5°	712.4	523.1	327.1	287.1	280.3
70°	614.2	432.1	270.8	247.5	238.1
72.5°	520.8	347.9	226.5	207.9	203.2
75°	429.7	266.1	186.8	170.5	168.2
77.5°	338.7	189.0	147.2	137.7	133.1
80°	254.5	135.5	112.0	102.8	102.8
82.5°	177.4	91.2	77.1	72.3	72.3
85°	100.4	51.3	44.3	44.3	44.3
87.5°	37.4	18.6	18.6	16.3	16.3
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	15.29	16.81	15.66	17.13	17.44	11.25	12.78	11.62	13.09	13.40
	3H	17.06	18.42	17.44	18.75	19.11	12.52	13.88	12.90	14.21	14.57
	4H	17.72	19.01	18.12	19.35	19.73	13.02	14.30	13.42	14.65	15.03
	6H	18.21	19.40	18.63	19.76	20.15	13.40	14.58	13.81	14.95	15.34
	8H	18.38	19.51	18.81	19.89	20.30	13.53	14.65	13.95	15.04	15.44
	12H	18.48	19.56	18.91	19.94	20.37	13.61	14.68	14.04	15.07	15.50
4H	2H	15.40	16.68	15.80	17.03	17.40	11.95	13.23	12.35	13.58	13.96
	3H	17.33	18.39	17.74	18.79	19.19	13.39	14.45	13.80	14.85	15.26
	4H	18.08	19.04	18.51	19.45	19.89	13.99	14.95	14.42	15.36	15.80
	6H	18.67	19.50	19.13	19.95	20.41	14.48	15.31	14.94	15.75	16.21
	8H	18.89	19.66	19.35	20.11	20.57	14.64	15.42	15.10	15.86	16.33
	12H	19.04	19.73	19.52	20.21	20.68	14.76	15.45	15.24	15.93	16.40
8H	4H	18.10	18.88	18.57	19.33	19.79	14.35	15.12	14.81	15.57	16.03
	6H	18.74	19.38	19.24	19.87	20.35	14.93	15.57	15.43	16.07	16.54
	8H	18.99	19.57	19.51	20.08	20.57	15.15	15.73	15.67	16.24	16.73
	12H	19.20	19.71	19.71	20.20	20.76	15.33	15.84	15.84	16.33	16.90
12H	4H	18.09	18.78	18.57	19.26	19.73	14.39	15.08	14.87	15.56	16.03
	6H	18.72	19.30	19.24	19.81	20.30	15.00	15.57	15.51	16.08	16.57
	8H	19.01	19.52	19.52	20.01	20.57	15.27	15.78	15.78	16.27	16.83