

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: P930957

Luminaire Tested: DFN2DS-SQ3F0-070DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930957
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-SQ3F0-070DS830-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

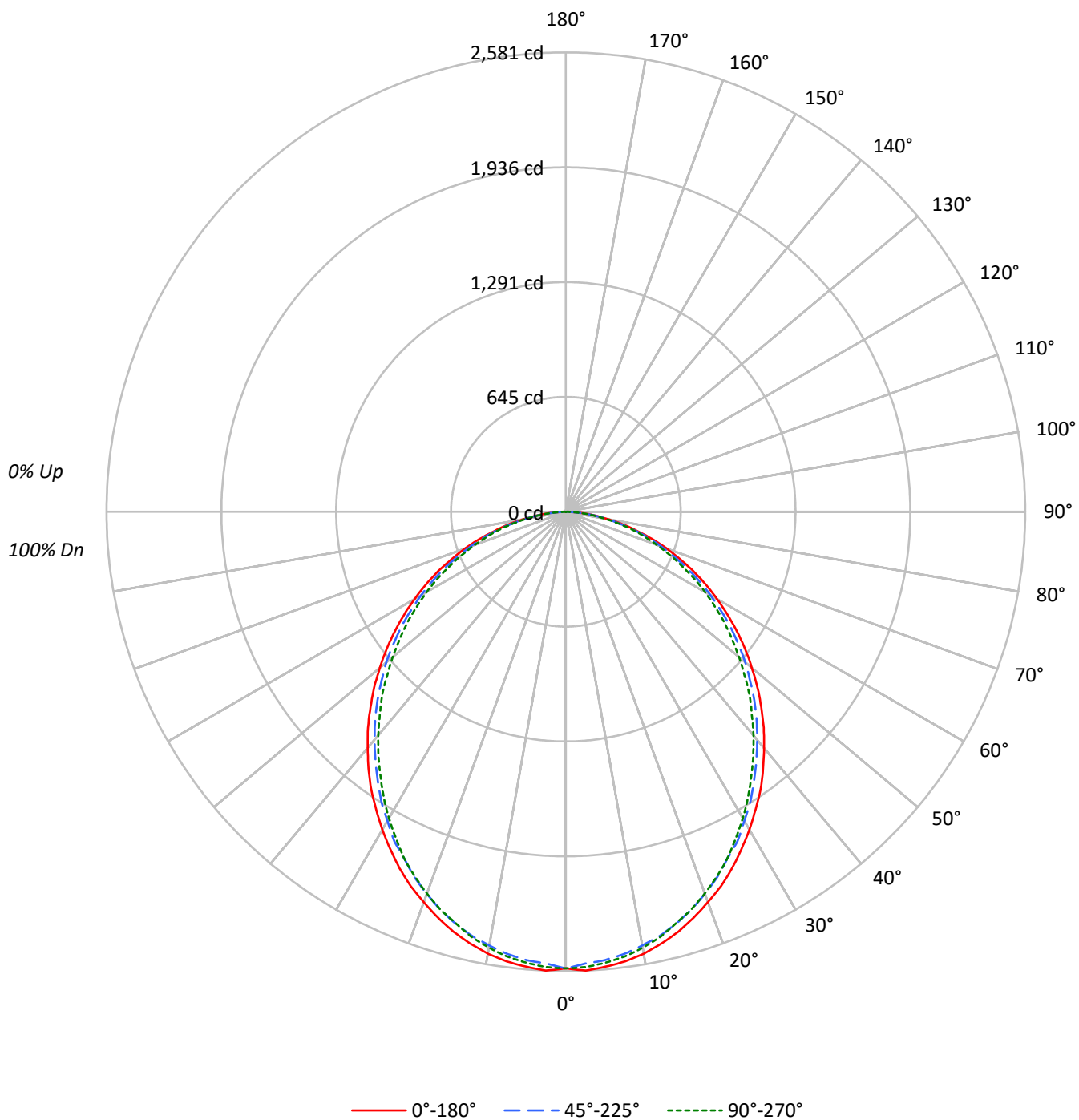
Lumens per Lamp: N/A
Luminaire Lumens: 6528.1 lumens
Efficiency: N/A
Efficacy: 91.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 71.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9963
Total Harmonic Distortion (THDi): 0.065
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°	2940	2940	2940
5°	2951	2909	2926
10°	2934	2879	2894
15°	2897	2842	2839
20°	2846	2786	2783
25°	2795	2717	2717
30°	2729	2654	2631
35°	2668	2578	2540
40°	2591	2502	2454
45°	2515	2427	2367
50°	2432	2348	2265
55°	2346	2257	2174
60°	2250	2149	2070
65°	2148	2040	1947
70°	2017	1909	1819
75°	1835	1758	1715
80°	1628	1579	1497
85°	1329	1267	1136

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2515 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.5	3.7
10°-20°	679.5	10.4
20°-30°	998.5	15.3
30°-40°	1159.7	17.8
40°-50°	1158.3	17.7
50°-60°	1010.0	15.5
60°-70°	746.6	11.4
70°-80°	422.4	6.5
80°-90°	111.5	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°	1919.5	29.4
0°-40°	3079.2	47.2
0°-60°	5247.5	80.4
0°-90°	6528.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6528.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2566	2566	2566	2566	2566	
5°	2566	2556	2529	2548	2544	244
15°	2442	2428	2396	2406	2393	688
25°	2211	2191	2149	2154	2149	1017
35°	1907	1883	1843	1828	1816	1191
45°	1552	1535	1498	1471	1461	1198
55°	1174	1160	1130	1100	1088	1050
65°	792	777	753	730	718	783
75°	414	410	397	382	387	442
85°	101	99	96	89	86	119
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2565.7	2565.7	2565.7	2565.7	2565.7
2.5°	2580.7	2568.4	2541.1	2565.7	2561.0
5°	2565.7	2556.1	2528.9	2548.5	2543.8
7.5°	2548.5	2533.8	2506.6	2526.5	2521.5
10°	2521.5	2504.2	2474.6	2494.3	2487.0
12.5°	2484.3	2469.7	2440.2	2452.4	2447.4
15°	2442.5	2427.8	2395.6	2405.6	2393.2
17.5°	2390.6	2376.0	2343.8	2356.1	2343.8
20°	2333.8	2319.2	2284.6	2292.0	2282.3
22.5°	2277.3	2255.1	2222.8	2222.8	2217.8
25°	2210.6	2190.9	2149.1	2153.8	2149.1
27.5°	2136.5	2119.2	2087.3	2079.9	2067.6
30°	2062.7	2042.7	2005.9	1998.5	1988.6
32.5°	1983.6	1969.0	1929.4	1914.5	1904.5
35°	1907.2	1882.6	1843.0	1828.1	1815.8
37.5°	1820.8	1798.6	1759.0	1741.8	1729.4
40°	1732.1	1712.2	1672.6	1650.7	1640.7
42.5°	1645.7	1625.8	1586.5	1561.6	1547.0
45°	1551.9	1534.7	1497.5	1470.6	1460.6
47.5°	1460.6	1443.3	1403.8	1376.5	1361.9
50°	1364.3	1352.0	1317.4	1282.9	1270.6
52.5°	1270.6	1253.3	1221.4	1194.2	1176.8
55°	1174.5	1159.6	1130.0	1100.4	1088.1
57.5°	1078.2	1065.9	1033.7	1004.1	994.2
60°	981.8	972.1	937.7	910.4	903.1
62.5°	888.1	870.9	846.3	821.7	811.7
65°	792.1	777.2	752.6	730.3	718.0
67.5°	693.4	680.9	658.8	641.6	631.6
70°	602.0	592.1	569.8	552.6	542.9
72.5°	508.3	498.4	486.1	468.8	461.5
75°	414.4	409.7	397.1	382.5	387.4
77.5°	330.6	320.7	315.7	308.3	301.1
80°	246.8	244.3	239.3	231.9	226.9
82.5°	167.8	167.8	165.4	155.5	155.5
85°	101.1	98.7	96.4	88.7	86.4
87.5°	44.5	39.6	34.6	27.2	24.6
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	15.03	16.64	15.39	16.95	17.27	14.58	16.20	14.95	16.51	16.82
	3H	16.78	18.23	17.16	18.56	18.92	16.29	17.74	16.67	18.07	18.43
	4H	17.43	18.79	17.82	19.14	19.52	16.93	18.30	17.33	18.65	19.02
	6H	17.89	19.16	18.31	19.53	19.92	17.39	18.66	17.80	19.03	19.42
	8H	18.04	19.25	18.46	19.64	20.04	17.53	18.75	17.96	19.13	19.53
	12H	18.13	19.29	18.56	19.67	20.10	17.62	18.78	18.05	19.16	19.59
4H	2H	15.59	16.96	15.99	17.31	17.68	15.24	16.61	15.64	16.95	17.33
	3H	17.56	18.71	17.97	19.11	19.51	17.16	18.30	17.57	18.70	19.10
	4H	18.34	19.38	18.77	19.79	20.23	17.92	18.95	18.35	19.37	19.80
	6H	18.94	19.84	19.39	20.28	20.74	18.51	19.41	18.96	19.85	20.31
	8H	19.13	19.97	19.59	20.42	20.88	18.69	19.54	19.15	19.98	20.44
	12H	19.26	20.02	19.74	20.50	20.96	18.81	19.57	19.29	20.04	20.51
8H	4H	18.61	19.46	19.08	19.90	20.37	18.24	19.09	18.70	19.53	19.99
	6H	19.33	20.03	19.82	20.52	21.00	18.95	19.65	19.44	20.14	20.61
	8H	19.59	20.22	20.10	20.73	21.21	19.20	19.83	19.71	20.33	20.82
	12H	19.79	20.35	20.30	20.84	21.40	19.37	19.93	19.88	20.42	20.98
12H	4H	18.64	19.40	19.12	19.88	20.35	18.28	19.04	18.76	19.51	19.98
	6H	19.37	20.01	19.88	20.51	21.00	19.01	19.64	19.52	20.14	20.63
	8H	19.69	20.25	20.20	20.74	21.30	19.31	19.87	19.82	20.36	20.92