

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: P930233

Luminaire Tested: DFN2DS-HX3F0-080DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930233
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-HX3F0-080DS940-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

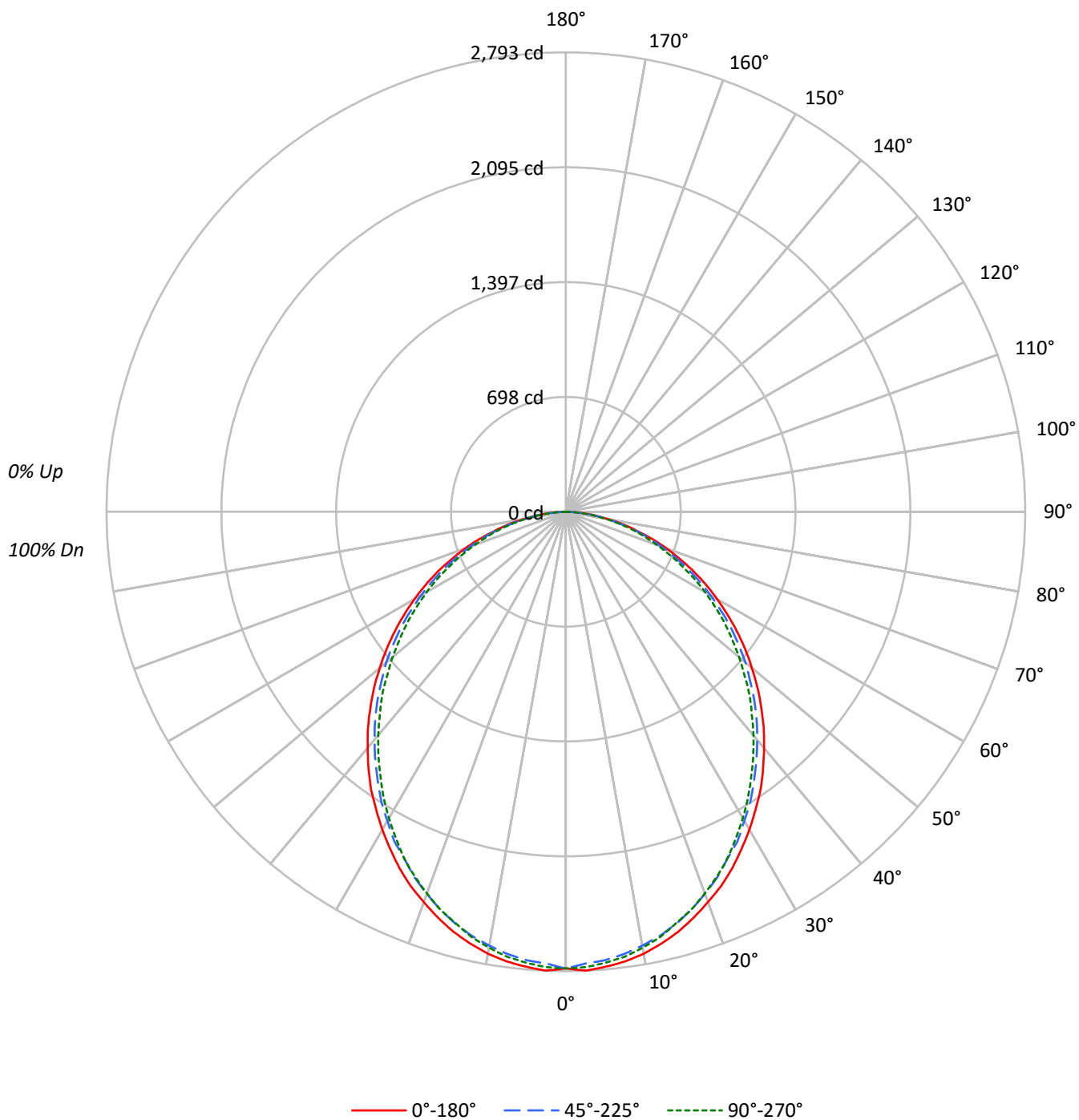
Lumens per Lamp: N/A
Luminaire Lumens: 7064.6 lumens
Efficiency: N/A
Efficacy: 83.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 84.4
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°	3216	3216	3216
5°	3229	3182	3201
10°	3210	3150	3166
15°	3170	3109	3106
20°	3113	3048	3045
25°	3058	2972	2972
30°	2986	2904	2878
35°	2919	2820	2779
40°	2834	2737	2685
45°	2751	2655	2589
50°	2661	2569	2478
55°	2567	2470	2378
60°	2462	2351	2264
65°	2349	2232	2130
70°	2206	2089	1990
75°	2007	1924	1876
80°	1782	1727	1638
85°	1454	1386	1243

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2751 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.3	3.7
10°-20°	735.3	10.4
20°-30°	1080.6	15.3
30°-40°	1255.1	17.8
40°-50°	1253.5	17.7
50°-60°	1093.0	15.5
60°-70°	808.0	11.4
70°-80°	457.1	6.5
80°-90°	120.7	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°	2077.3	29.4
0°-40°	3332.3	47.2
0°-60°	5678.8	80.4
0°-90°	7064.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7064.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2777	2777	2777	2777	2777	
5°	2777	2766	2737	2758	2753	264
15°	2643	2627	2592	2603	2590	744
25°	2392	2371	2326	2331	2326	1101
35°	2064	2037	1994	1978	1965	1289
45°	1680	1661	1621	1591	1581	1296
55°	1271	1255	1223	1191	1178	1136
65°	857	841	814	790	777	847
75°	448	443	430	414	419	479
85°	109	107	104	96	94	129
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2776.6	2776.6	2776.6	2776.6	2776.6
2.5°	2792.8	2779.5	2750.0	2776.6	2771.5
5°	2776.6	2766.2	2736.7	2758.0	2752.9
7.5°	2758.0	2742.1	2712.7	2734.2	2728.8
10°	2728.8	2710.1	2678.1	2699.3	2691.4
12.5°	2688.6	2672.7	2640.7	2654.0	2648.6
15°	2643.3	2627.4	2592.5	2603.3	2590.0
17.5°	2587.2	2571.3	2536.4	2549.8	2536.4
20°	2525.7	2509.8	2472.4	2480.4	2469.9
22.5°	2464.5	2440.4	2405.5	2405.5	2400.2
25°	2392.3	2371.0	2325.7	2330.8	2325.7
27.5°	2312.1	2293.4	2258.8	2250.9	2237.6
30°	2232.2	2210.6	2170.8	2162.8	2152.0
32.5°	2146.7	2130.8	2088.0	2071.8	2061.1
35°	2063.9	2037.3	1994.5	1978.4	1965.1
37.5°	1970.4	1946.3	1903.6	1884.9	1871.6
40°	1874.4	1852.9	1810.1	1786.3	1775.5
42.5°	1781.0	1759.4	1716.9	1690.0	1674.2
45°	1679.5	1660.8	1620.6	1591.4	1580.7
47.5°	1580.7	1562.0	1519.2	1489.7	1473.9
50°	1476.4	1463.1	1425.7	1388.3	1375.0
52.5°	1375.0	1356.3	1321.8	1292.3	1273.6
55°	1271.0	1254.9	1222.9	1190.9	1177.5
57.5°	1166.8	1153.5	1118.7	1086.6	1075.8
60°	1062.6	1052.1	1014.6	985.2	977.3
62.5°	961.1	942.5	915.8	889.2	878.4
65°	857.2	841.1	814.4	790.3	777.0
67.5°	750.4	736.8	713.0	694.3	683.5
70°	651.5	640.7	616.7	598.0	587.5
72.5°	550.1	539.4	526.0	507.4	499.4
75°	448.4	443.3	429.8	413.9	419.2
77.5°	357.8	347.0	341.6	333.7	325.8
80°	267.2	264.3	258.9	251.0	245.6
82.5°	181.6	181.6	179.0	168.2	168.2
85°	109.4	106.8	104.3	96.1	93.5
87.5°	48.2	42.8	37.4	29.4	26.7
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	15.34	16.95	15.71	17.27	17.58	14.90	16.51	15.26	16.82	17.14
	3H	17.09	18.55	17.47	18.87	19.23	16.60	18.05	16.98	18.38	18.74
	4H	17.74	19.11	18.14	19.45	19.83	17.24	18.61	17.64	18.96	19.34
	6H	18.21	19.48	18.62	19.84	20.23	17.71	18.97	18.12	19.34	19.73
	8H	18.35	19.56	18.77	19.95	20.35	17.85	19.06	18.27	19.45	19.85
	12H	18.44	19.60	18.87	19.98	20.41	17.93	19.09	18.36	19.47	19.90
4H	2H	15.90	17.27	16.30	17.62	17.99	15.55	16.92	15.95	17.27	17.64
	3H	17.88	19.02	18.29	19.42	19.82	17.47	18.62	17.88	19.01	19.41
	4H	18.65	19.69	19.08	20.10	20.54	18.23	19.27	18.66	19.68	20.12
	6H	19.25	20.15	19.70	20.60	21.05	18.82	19.72	19.27	20.16	20.62
	8H	19.44	20.29	19.90	20.73	21.19	19.00	19.85	19.46	20.29	20.76
	12H	19.57	20.33	20.05	20.81	21.28	19.12	19.88	19.60	20.35	20.82
8H	4H	18.93	19.77	19.39	20.22	20.68	18.55	19.40	19.01	19.84	20.31
	6H	19.64	20.34	20.13	20.83	21.31	19.26	19.96	19.75	20.45	20.93
	8H	19.90	20.53	20.41	21.04	21.52	19.51	20.14	20.02	20.65	21.13
	12H	20.10	20.66	20.61	21.15	21.71	19.69	20.24	20.19	20.74	21.30
12H	4H	18.95	19.71	19.43	20.19	20.66	18.59	19.35	19.07	19.82	20.29
	6H	19.69	20.32	20.20	20.83	21.31	19.32	19.95	19.83	20.46	20.94
	8H	20.00	20.56	20.51	21.05	21.61	19.62	20.18	20.13	20.67	21.23