

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: P930215

Luminaire Tested: DFN2DS-HX3F0-070DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930215
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-HX3F0-070DS940-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

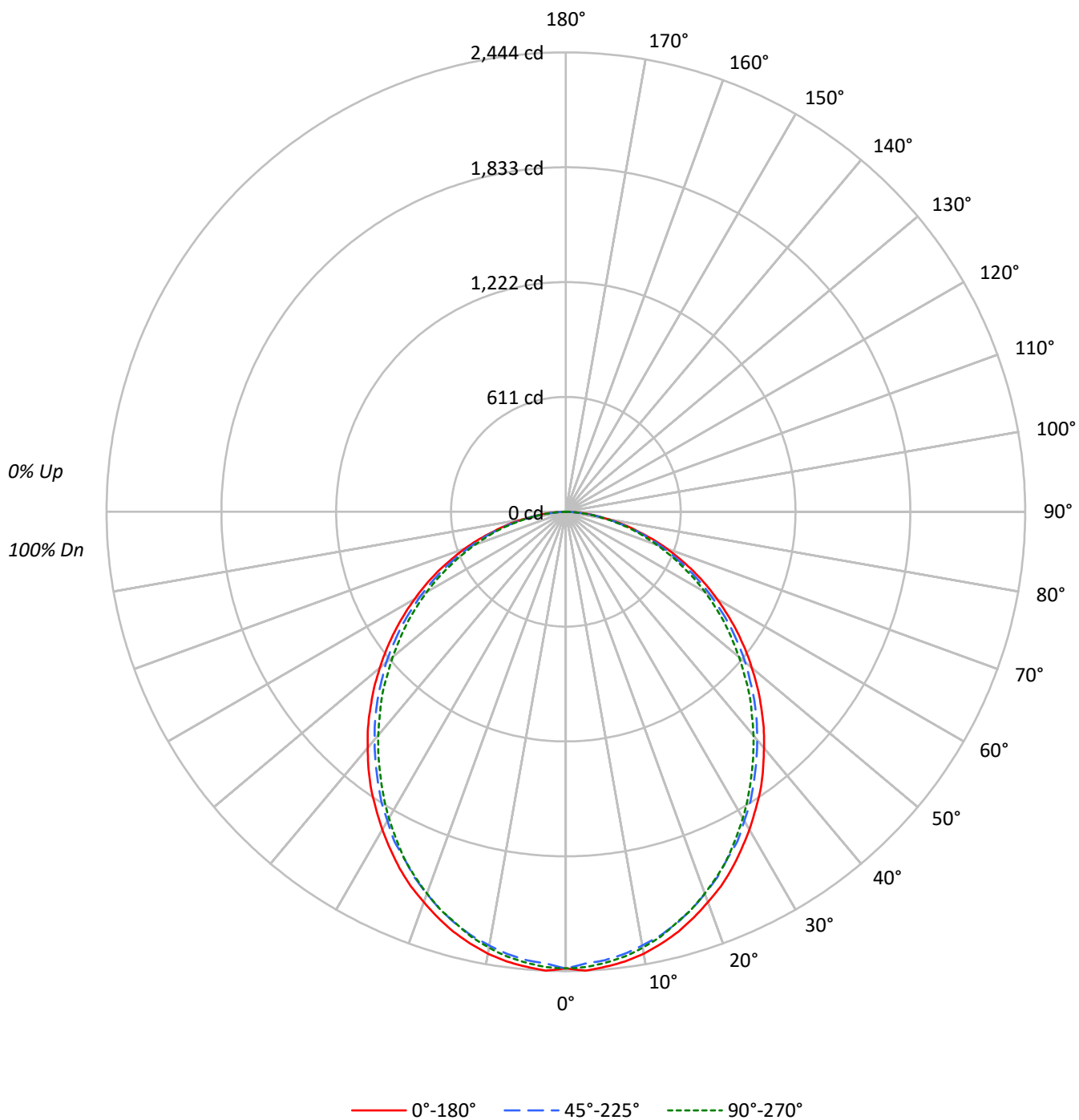
Lumens per Lamp: N/A
Luminaire Lumens: 6181.6 lumens
Efficiency: N/A
Efficacy: 84.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 73.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
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				20
RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10		0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102		100
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90	88	86		84
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80	76	73		71
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71	66	62		60
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63	58	54		51
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57	51	47		45
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52	46	41		39
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47	41	37		35
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44	38	33		31
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40	34	30		28
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37	32	27		26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2814	2814	2814
5°	2825	2784	2801
10°	2808	2756	2770
15°	2774	2720	2718
20°	2724	2667	2664
25°	2675	2601	2601
30°	2612	2541	2519
35°	2554	2468	2431
40°	2480	2395	2349
45°	2407	2323	2266
50°	2328	2248	2168
55°	2246	2161	2081
60°	2154	2057	1981
65°	2056	1953	1864
70°	1931	1828	1741
75°	1756	1683	1642
80°	1559	1512	1434
85°	1272	1213	1087

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2407 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.7	3.7
10°-20°	643.4	10.4
20°-30°	945.5	15.3
30°-40°	1098.2	17.8
40°-50°	1096.8	17.7
50°-60°	956.4	15.5
60°-70°	707.0	11.4
70°-80°	400.0	6.5
80°-90°	105.6	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°	1817.6	29.4
0°-40°	2915.8	47.2
0°-60°	4969.0	80.4
0°-90°	6181.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6181.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2430	2430	2430	2430	2430	
5°	2430	2420	2395	2413	2409	231
15°	2313	2299	2268	2278	2266	651
25°	2093	2075	2035	2040	2035	963
35°	1806	1783	1745	1731	1719	1128
45°	1470	1453	1418	1392	1383	1134
55°	1112	1098	1070	1042	1030	994
65°	750	736	713	692	680	742
75°	392	388	376	362	367	419
85°	96	94	91	84	82	112
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2429.5	2429.5	2429.5	2429.5	2429.5
2.5°	2443.7	2432.0	2406.3	2429.5	2425.1
5°	2429.5	2420.4	2394.7	2413.2	2408.8
7.5°	2413.2	2399.3	2373.5	2392.4	2387.7
10°	2387.7	2371.3	2343.3	2361.9	2355.0
12.5°	2352.5	2338.6	2310.6	2322.2	2317.5
15°	2312.9	2299.0	2268.4	2277.9	2266.2
17.5°	2263.7	2249.9	2219.4	2231.1	2219.4
20°	2209.9	2196.1	2163.4	2170.3	2161.1
22.5°	2156.4	2135.4	2104.9	2104.9	2100.1
25°	2093.3	2074.6	2035.0	2039.5	2035.0
27.5°	2023.1	2006.7	1976.5	1969.5	1957.9
30°	1953.2	1934.3	1899.4	1892.5	1883.0
32.5°	1878.3	1864.5	1827.0	1812.9	1803.4
35°	1805.9	1782.7	1745.2	1731.1	1719.4
37.5°	1724.1	1703.1	1665.6	1649.3	1637.6
40°	1640.1	1621.3	1583.8	1563.1	1553.6
42.5°	1558.3	1539.5	1502.3	1478.8	1464.8
45°	1469.6	1453.2	1418.0	1392.5	1383.0
47.5°	1383.0	1366.7	1329.3	1303.5	1289.7
50°	1291.9	1280.2	1247.5	1214.8	1203.1
52.5°	1203.1	1186.8	1156.6	1130.8	1114.4
55°	1112.1	1098.1	1070.0	1042.0	1030.3
57.5°	1021.0	1009.3	978.8	950.8	941.4
60°	929.7	920.5	887.9	862.1	855.2
62.5°	841.0	824.7	801.4	778.1	768.6
65°	750.1	735.9	712.6	691.6	679.9
67.5°	656.6	644.7	623.9	607.5	598.1
70°	570.1	560.7	539.6	523.2	514.1
72.5°	481.3	472.0	460.3	443.9	437.0
75°	392.4	387.9	376.0	362.2	366.9
77.5°	313.1	303.6	298.9	292.0	285.1
80°	233.7	231.3	226.6	219.6	214.9
82.5°	158.9	158.9	156.6	147.3	147.3
85°	95.7	93.5	91.3	84.0	81.8
87.5°	42.1	37.5	32.7	25.8	23.3
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	14.88	16.49	15.24	16.80	17.12	14.43	16.04	14.80	16.36	16.67
	3H	16.63	18.08	17.00	18.41	18.77	16.14	17.59	16.51	17.92	18.28
	4H	17.27	18.64	17.67	18.99	19.37	16.78	18.15	17.18	18.50	18.87
	6H	17.74	19.01	18.15	19.38	19.77	17.24	18.51	17.65	18.87	19.27
	8H	17.89	19.10	18.31	19.49	19.89	17.38	18.59	17.81	18.98	19.38
	12H	17.98	19.14	18.41	19.52	19.95	17.46	18.62	17.89	19.01	19.43
4H	2H	15.44	16.81	15.84	17.15	17.53	15.08	16.45	15.48	16.80	17.18
	3H	17.41	18.56	17.82	18.96	19.36	17.01	18.15	17.42	18.55	18.95
	4H	18.19	19.23	18.62	19.64	20.08	17.77	18.80	18.20	19.22	19.65
	6H	18.79	19.69	19.24	20.13	20.59	18.35	19.26	18.81	19.70	20.16
	8H	18.98	19.82	19.44	20.26	20.73	18.54	19.38	19.00	19.83	20.29
	12H	19.11	19.87	19.59	20.34	20.81	18.66	19.42	19.14	19.89	20.36
8H	4H	18.46	19.31	18.92	19.75	20.22	18.09	18.94	18.55	19.38	19.84
	6H	19.18	19.88	19.67	20.37	20.84	18.80	19.50	19.29	19.99	20.46
	8H	19.44	20.07	19.95	20.57	21.06	19.05	19.68	19.55	20.18	20.67
	12H	19.64	20.19	20.14	20.68	21.25	19.22	19.78	19.73	20.27	20.83
12H	4H	18.49	19.25	18.97	19.72	20.19	18.12	18.88	18.60	19.36	19.83
	6H	19.22	19.85	19.73	20.36	20.85	18.85	19.49	19.36	19.99	20.48
	8H	19.54	20.09	20.04	20.58	21.15	19.16	19.72	19.67	20.21	20.77