

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: P930257

Luminaire Tested: DFN2DS-HX4F0-040DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930257
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-HX4F0-040DS835-FLL
Description: 4 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

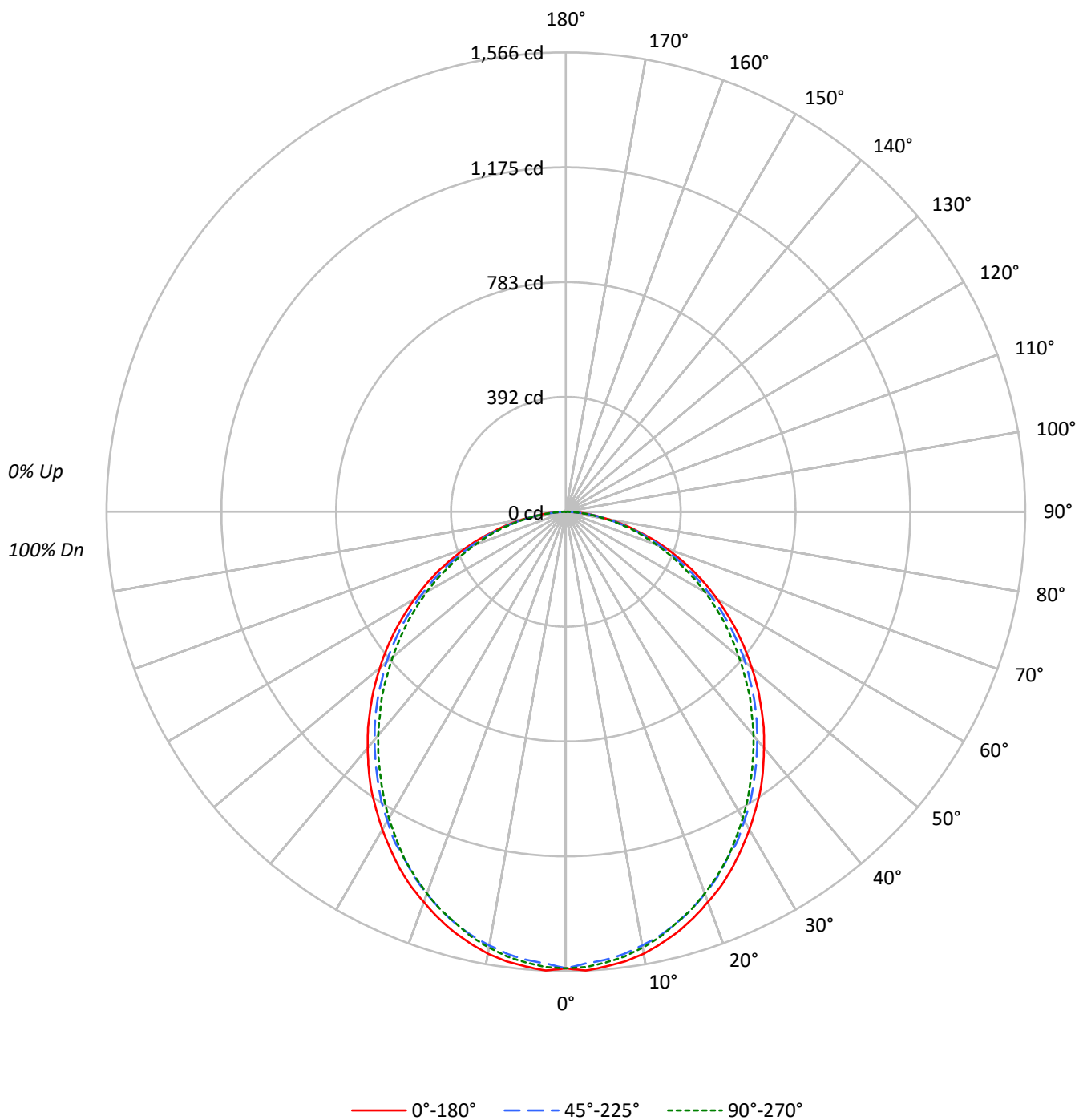
Lumens per Lamp: N/A
Luminaire Lumens: 3960.0 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 4.09' x L: 3.54' x H: 0')
CIE Type: Direct

Input Watts (W): 38.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9977
Total Harmonic Distortion (THDi): 0.049
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930257

CATALOG NUMBER: DFN2DS-HX4F0-040DS835-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P930257

CATALOG NUMBER: DFN2DS-HX4F0-040DS835-FLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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°	1157	1157	1157
5°	1162	1145	1152
10°	1155	1133	1139
15°	1141	1119	1118
20°	1120	1097	1096
25°	1100	1070	1070
30°	1074	1045	1036
35°	1050	1015	1000
40°	1020	985	966
45°	990	955	932
50°	957	924	892
55°	924	889	856
60°	886	846	815
65°	845	803	766
70°	794	752	716
75°	722	692	675
80°	641	621	590
85°	523	498	447

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 990 cd/sqm

TEST NUMBER: P930257

CATALOG NUMBER: DFN2DS-HX4F0-040DS835-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.5	3.7
10°-20°	412.2	10.4
20°-30°	605.7	15.3
30°-40°	703.5	17.8
40°-50°	702.6	17.7
50°-60°	612.7	15.5
60°-70°	452.9	11.4
70°-80°	256.2	6.5
80°-90°	67.6	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°	1164.4	29.4
0°-40°	1867.9	47.2
0°-60°	3183.2	80.4
0°-90°	3960.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3960.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1556	1556	1556	1556	1556	
5°	1556	1550	1534	1546	1543	148
15°	1482	1473	1453	1459	1452	417
25°	1341	1329	1304	1306	1304	617
35°	1157	1142	1118	1109	1102	722
45°	941	931	908	892	886	727
55°	712	703	686	668	660	637
65°	480	471	456	443	436	475
75°	251	248	241	232	235	268
85°	61	60	58	54	52	72
90°	0	0	0	0	0	

TEST NUMBER: P930257

CATALOG NUMBER: DFN2DS-HX4F0-040DS835-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1556.4	1556.4	1556.4	1556.4	1556.4
2.5°	1565.5	1558.0	1541.5	1556.4	1553.6
5°	1556.4	1550.5	1534.0	1545.9	1543.1
7.5°	1545.9	1537.0	1520.5	1532.6	1529.6
10°	1529.6	1519.1	1501.2	1513.1	1508.6
12.5°	1507.0	1498.1	1480.2	1487.7	1484.6
15°	1481.6	1472.7	1453.2	1459.2	1451.8
17.5°	1450.2	1441.3	1421.8	1429.2	1421.8
20°	1415.7	1406.8	1385.9	1390.3	1384.5
22.5°	1381.4	1367.9	1348.4	1348.4	1345.4
25°	1340.9	1329.0	1303.6	1306.5	1303.6
27.5°	1296.0	1285.5	1266.2	1261.7	1254.3
30°	1251.2	1239.2	1216.8	1212.3	1206.3
32.5°	1203.3	1194.4	1170.4	1161.4	1155.3
35°	1156.9	1142.0	1118.0	1109.0	1101.5
37.5°	1104.5	1091.0	1067.0	1056.6	1049.1
40°	1050.7	1038.6	1014.6	1001.3	995.3
42.5°	998.3	986.2	962.4	947.3	938.4
45°	941.4	931.0	908.4	892.1	886.0
47.5°	886.0	875.5	851.6	835.1	826.2
50°	827.6	820.1	799.2	778.2	770.7
52.5°	770.7	760.3	740.9	724.4	713.9
55°	712.5	703.4	685.5	667.5	660.1
57.5°	654.0	646.6	627.0	609.1	603.1
60°	595.6	589.7	568.8	552.3	547.8
62.5°	538.8	528.3	513.4	498.4	492.4
65°	480.5	471.4	456.5	443.0	435.6
67.5°	420.6	413.0	399.7	389.2	383.2
70°	365.2	359.2	345.7	335.2	329.3
72.5°	308.4	302.3	294.9	284.4	279.9
75°	251.4	248.5	240.9	232.0	235.0
77.5°	200.5	194.5	191.5	187.0	182.6
80°	149.7	148.1	145.1	140.7	137.7
82.5°	101.8	101.8	100.4	94.3	94.3
85°	61.3	59.9	58.4	53.8	52.4
87.5°	27.0	24.0	21.0	16.5	14.9
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930257

CATALOG NUMBER: DFN2DS-HX4F0-040DS835-FLL

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	11.79	13.40	12.16	13.72	14.03	11.35	12.96	11.71	13.27	13.58
	3H	13.54	14.99	13.92	15.32	15.68	13.05	14.50	13.43	14.83	15.19
	4H	14.19	15.56	14.59	15.90	16.28	13.69	15.06	14.09	15.41	15.78
	6H	14.66	15.92	15.07	16.29	16.68	14.15	15.42	14.57	15.79	16.18
	8H	14.80	16.01	15.22	16.40	16.80	14.30	15.51	14.72	15.90	16.29
	12H	14.89	16.05	15.32	16.43	16.86	14.38	15.54	14.81	15.92	16.35
4H	2H	12.35	13.72	12.75	14.07	14.44	12.00	13.37	12.40	13.71	14.09
	3H	14.33	15.47	14.74	15.87	16.27	13.92	15.07	14.33	15.46	15.86
	4H	15.10	16.14	15.53	16.55	16.99	14.68	15.71	15.11	16.13	16.56
	6H	15.70	16.60	16.15	17.04	17.50	15.27	16.17	15.72	16.61	17.07
	8H	15.89	16.73	16.35	17.18	17.64	15.45	16.30	15.91	16.74	17.20
	12H	16.02	16.78	16.50	17.26	17.73	15.57	16.33	16.05	16.80	17.27
8H	4H	15.38	16.22	15.84	16.66	17.13	15.00	15.85	15.46	16.29	16.76
	6H	16.09	16.79	16.58	17.28	17.76	15.71	16.41	16.20	16.90	17.38
	8H	16.35	16.98	16.86	17.49	17.97	15.96	16.59	16.47	17.09	17.58
	12H	16.55	17.11	17.06	17.60	18.16	16.14	16.69	16.64	17.18	17.75
12H	4H	15.40	16.16	15.88	16.64	17.11	15.04	15.80	15.52	16.27	16.74
	6H	16.13	16.77	16.64	17.27	17.76	15.77	16.40	16.28	16.91	17.39
	8H	16.45	17.01	16.96	17.50	18.06	16.07	16.63	16.58	17.12	17.68

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

7 of 7